

Defenders of Wildlife ~ Audubon California ~ California Native Plant Society ~ Center for Biological Diversity ~ Natural Resources Defense Council ~ Sierra Club ~ The Wilderness Society

Dave Harlow
Director, Desert Renewable Energy Conservation Plan
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512
DHarlow@energy.state.ca.us

March 13, 2013



Dear Dave,

Thank you for the opportunity to submit additional comments on the "Description and Comparative Evaluation of the Draft DRECP Alternatives" ("December Draft"), released on December 17, 2012. Our organizations support the concept of the DRECP as a way to facilitate responsible and sustainable renewable energy development in order to meet the state's renewable energy mandates and needs while simultaneously providing lasting conservation for species, natural communities and ecological processes in the California deserts. For this reason, we continue to dedicate substantial resources toward achieving this outcome for the DRECP. The enclosed comments aim to inform the DRECP planning process going forward and we are available to answer any questions about our comments.

Sincerely,



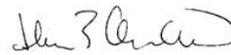
Kim Delfino
California Program Director
Defenders of Wildlife



Garry George
Renewable Energy Director
Audubon California



Greg Suba
Conservation Director
California Native Plant Society



Ilene Anderson
Biologist/Public Lands Desert Director
Center for Biological Diversity



Helen O'Shea
Director, Western Renewable Energy Project
Natural Resources Defense Council



Barbara Boyle
Senior Campaign Representative
Beyond Coal Campaign, Sierra Club



Sally Miller
Senior Regional Conservation Representative
The Wilderness Society

I. Introduction

In our previous letter submitted on January 23, 2013, we focused on those issues that need to be addressed prior to choosing a preferred alternative, which included the need to: (1) establish biological goals and objectives, (2) ensure durable conservation, (3) establish a scientifically meaningful conservation strategy, (4) ensure Desert Conservation Lands (DCLs) have a clearly identified management structure and purpose, (5) ensure that every alternative be able to meet BGOs regardless of DFA configuration or size, and (6) provide meaningful incentives to make DFAs attractive to industry. We understand the DRECP is under an aggressive timeline and may need to select a draft preferred alternative before these elements are completed; however, we strongly recommend that these issues be addressed as soon as possible.

The issues raised in our January 23 comments relate to and align with our previous letter submitted on December 14, 2012, "Essential Elements of a Successful DRECP," in which we identify nine elements that are required to make the DRECP a success from our perspective. We continue to believe these elements are critical to the success of this plan and will base our analysis of future DRECP documents on this framework. Therefore, we urge you to re-visit this letter in addition to the more specific comments included in this letter.

In this document, we include (1) some general comments and recommendations on the December Draft (p. 2-12), (2) a comment table where we have provided more specific comments on certain sections of the document (p. 13-42), and (3) attachments with specific information related to species conservation or Appendices included in the December Draft. The attachments include the following:

1. Mojave Ground Squirrel (p.43)
2. Desert Bighorn Sheep (p.46)
3. Desert Tortoise (p. 49)
4. Transmission (p. 52)
5. Energy Projection Analysis (p.55)
6. New Vegetation Mapping (p.59)
7. Durability of Conservation Designations on Public Lands (p.60)
8. BLM Land Use Plan Designations: Terminology and Hierarchy (p.63)

We are not including comments on every section and appendix that was presented in the December Draft for a variety of reasons. Some of the information did not pertain directly to the mission and interest of our organizations while other sections are very important to us, but we are either still developing comments (Appendix J & K) or have decided to wait until a more complete conservation strategy with SMART BGOs is developed. We have not commented on Appendix B, because in the absence of a synthesis describing what the tables of numbers mean for conservation on the ground, we are unable to provide helpful feedback on this section.

II. General Comments on the December Draft

1. Stakeholder involvement. In previous comment letters, we have repeatedly requested a longer review time for interim DRECP documents. We understand that the DRECP is on an accelerated timeline, but we generally need *at least* a month to review and respond comprehensively to large and complex documents such as the December Draft. Before the Draft EIS/EIR is released this year, *we encourage the agencies to release sections of*

the document and analyses as they are available so that we can review and inform the process incrementally as the planning process continues.

As has been mentioned by other DRECP stakeholders, it would be extremely helpful if the DRECP clearly denoted the role of the stakeholders by establishing guidelines for engagement and by identifying clear timelines for stakeholder involvement throughout the duration of the plan.

2. Document Transparency and Clarity. We understand that the December Draft is an interim document, but we think that any document produced by the REAT agencies or consultants should *strive to clearly explain and describe the key decision points, the methods and the reasoning behind certain decisions*. We strongly agree with the feedback included in Section 3.1 of the Independent Science Panel's Final Report submitted on November 9, 2012 regarding necessary changes in document organization and style in order to increase transparency and clarity. Below are a list of more specific recommendations related to document transparency and clarity based our review of the document:
 - i. *References*: Ensure the references in the text are appropriately used and cited in the literature cited section. In the Introduction, in particular, it was unclear how references were being used and many were not included in the literature cited section.
 - ii. *Organization and Style*: It was often unclear how a particular section provides a clear contribution toward the DRECP goals. Much of the document still "vaguely describes planning components and processes, with no clear depiction of the strategic vision or goals they intend to attain, how they relate to other Plan components, how various goals or actions may compete with one another, or the rationale, data, methods, and uncertainties involved." (ISP Final Report, 2012) We agree with the suggestion that each section of the report should *clearly state the goals of the section and how it relates to overarching goals of the DRECP*. This will greatly improve the readers' ability to understand how the different pieces of the document fit together.
 - iii. *Section and Page Numbering*. The way the pages are numbered makes it confusing and difficult to reference page numbers when discussing topics with colleagues. Numbering of sections and sub-sections is irregular, making it difficult for the reader to follow the organization of the document and refer to various sections within the large document. Many appendices (some such as App. D which are very lengthy), also lack indices and page numbering which makes the information hard to cross-reference and utilize. In most EIR/EISs, the document is bookmarked with the titles of the different sections, which allows readers to view what information is included in the document and easily move to that section. Another option would be to hyperlink the different sections in the table of contents and throughout the text. Ensuring the DRECP has an excellent technical editor is essential for producing a readable and accessible document of this size.
 - iv. *New, Revised, and Old Information*. Due to the fact that many of us have been reviewing DRECP documents for the last couple of years, it would be helpful to know what information is new in the most current document, what information is revised and what information is being incorporated from previous documents.

This would allow for more effective and efficient review of DRECP documents going forward.

- v. *Maps and Tables*. All maps need to include Highway 62, which traverses through the Morongo Basin, the region that supports large resident, temporary and tourist population due to the presence of Joshua Tree National Park and the Marine Corps Air Ground Combat Center in Twenty-nine Palms. This has been mentioned previously in stakeholder and public comments and is a necessary and easy fix. Maps should also include towns and other defining features to make them more understandable to stakeholders and the general public.

The document relies heavily on tables and matrices of acreages and other information without any explanation regarding why or how the information was derived, and without any synthesis of the information in terms of its relevance or significance to meeting plan goals. Tables of acreages that have little or no frame of reference or accompanying synthesis are largely unhelpful in our effort to review the different alternatives.

3. Conservation Strategy. We cannot stress enough the importance of having a clear and transparent conservation strategy so that all parties understand what the covered species are, what conservation actions will be required to meet plan goals and how those actions will be implemented. Without this information, stakeholders and the public will struggle to understand what the plan is aiming to achieve and how it plans to do it; and as a consequence, question the effectiveness of the plan in providing lasting conservation of natural communities and covered species throughout the planning area. The following are elements of the conservation strategy that we have not seen to date, and that we feel are essential to developing a successful conservation strategy:
 - i. *Finalized Biological Goals and Objectives at the Regional and Sub-regional Level*. We continue to wait for both plan-wide and sub-regional BGOs to be finalized for the plan. Sub-regional goals are especially important for species whose ecology and natural history differs across the plan area. For example, the burrowing owl population in the Imperial Valley is ecologically different from burrowing owl populations in other parts of the DRECP plan area; thus, BGOs and conservation actions specific to the sub-region are required to meet overall goals for the species.
 - ii. *Conservation Principles for the Reserve Design*. We support the incorporation of the eight conservation principles listed in Appendix C of The Nature Conservancy's comments on the December Draft (January 31, 2013) into the Biological Reserve design Context and the Conservation Area Reserve System for each alternative.
 - iii. *Response to ISP Final Report*. We strongly recommend providing documentation for how the DRECP is currently responding to or plans to respond to the ISP Final Report. This report provided very clear and straightforward guidance for the DRECP on how to draft a scientifically credible conservation plan and documentation of how it is being addressed should be made a priority so that stakeholders and the public have confidence that the plan is working toward becoming scientifically credible.
 - iv. *Species Models*. The DRECP is making assumptions about species habitat distribution and species occurrence based on landscape-based models that cover the entire DRECP plan area. These models are not accompanied by a functional analysis nor are they being ground-truthed with real data, both of

which would indicate how well the models are predicting actual occurrences on the ground. We strongly recommend that the DRECP take the time to ensure the conservation reserve design is based on accurate and functionally-relevant species distribution models to ensure that conservation is directed in the areas that will provide the greatest benefit to species and their habitats.

- v. *Marxan*. Marxan was run with conservation targets that were “rule of thumb” and not based on vetted BGOs. If Marxan is to be used in planning the reserve design, it needs to be re-run after: 1) the models have been analyzed for functional relevance; and, 2) once habitat conservation targets have been finalized.
4. CEC Energy Calculator. The CEC calculator continues to include assumptions that are either faulty or undocumented which results in over predicting the amount of energy generation needed by California and from the Plan Area through 2040. We understand the need to allow for the state to meet and hopefully exceed its GHG reduction goals; however, using an energy calculator that is based on faulty or undocumented assumptions is not acceptable and could require creation of more DFA land than is necessary and thereby preclude the state from achieving its habitat and species protections goals under the NCCP. As with the conservation strategy, the DRECP needs to be transparent and clear in its methods for calculating the energy generation requirements and subsequent level of development. Furthermore, since we continue to believe the energy demand forecast overestimates the need for energy generation, we recommend prioritization of the DFAs based on levels of wildlife conflicts. Low conflict DFAs should be developed first, and if demand for energy generation is ultimately lower than expected, lower priority DFAs will not need to be developed.
5. Analyses Missing from the December Draft. There are several omissions from the December Draft that should be included as the planning process moves forward. These include:
 - i. *Biological Analysis of DFAs*. After the BGOs have been completed, we support the recommendation of the The Nature Conservancy to run an analysis within each proposed DFA to determine if any of them preclude the ability to meet any of the BGOs. If any of the DFAs preclude the ability to meet plan-wide or sub-regional goals, these DFAs need to be modified appropriately.
 - ii. *Water Resource Impacts*. The December Draft does not include a section related to water resources affected in the plan area. There should be additional sub-sections in both Sections 3 and 4 on water resources, including groundwater, seeps, springs, and other hydrological features. Water resources are scarce and valuable to plants and wildlife in the desert, thus this analysis is an essential element to the overall evaluation of alternatives.
 - iii. *EPA Sites Analysis*. We understand through conversations with DRECP staff that the EPA sites have been analyzed for inclusion in the proposed DFAs; however, the December Document clearly lacks documentation regarding how this analysis was completed and the rationale for inclusion or exclusion of EPA sites. It is essential that the DRECP include clear and transparent documentation of how the EPA’s Renewable Energy Siting Tool is being utilized within the DRECP.
 - iv. *White or Undesignated Areas*. The DRECP should do further analysis on the areas marked as “white areas” in the draft alternatives. These undesignated areas contain biological and cultural values that may not be mapped due to lack of information or data. These areas need to be re-analyzed with clear

documentation for why they were classified as “undesigned”, whether it is due to lack of data or other reasons.

- v. *Transmission for Alternatives 4 and 7.* The next iteration of the document should include potential impacts from transmission for all alternatives so that stakeholders are able to compare and contrast the impacts due to increased transmission for all the alternatives.
 - vi. *Climate Change Impacts.* The December Draft lacks an analysis of how climate change impacts to species in the desert will be addressed throughout the life of the plan. The location of high quality habitat across the desert region is likely to change due to climate change and areas set aside for conservation may not provide the necessary habitat requirements for species survival. These impacts require technical analysis and input from scientific experts in climate change biology.
 - vii. *Other considerations:* In addition to the analyses that should be done related to biological impacts, we recommend conducting analyses looking at the impacts to non-biological resources in the desert such as the tourism economy, the National Parks, Monuments and wilderness, including designated wilderness areas, wilderness study areas and lands with wilderness characteristics.
6. Additional public workshop recommendations. We recommend the DRECP hold additional public workshops to address specific topics as they relate to the DRECP planning process and plan goals. These workshops include:
- i. *Private Lands.* Considering the huge opportunity private lands offer for siting renewable energy facilities on disturbed or degraded lands, and considering that conservation of some covered species in the plan will involve private lands, we believe it is absolutely essential that the DRECP continue to prioritize holding a private lands workshop in the DRECP plan area. We are disappointed that no private lands workshop has been rescheduled after the last date was cancelled.
 - ii. *Wind Energy.* On January 22, 2013, environmental NGOs, CalWEA and AWEA submitted joint comments to the DRECP related to lack of analysis appropriate for wind energy development that considers the unique risks and requirements associated with this technology. In that letter, we recommended DRECP hold a public workshop to address these concerns and we continue to believe that this is an important next step.
 - iii. *Climate Change.* A climate change workshop should include people from the scientific community with technical and scientific expertise in climate change biology, climate change modeling and conservation planning. There are many strategies that can be used to design a reserve that considers potential climate change impacts and the best way to ensure the conservation reserve achieves plan goals is to receive input from experts in this field.
 - iv. *Adaptive Management and Monitoring.* This is an essential part of the plan, as it informs how the plan will ensure that conservation actions are carried through and plan goals are achieved throughout the life of the DRECP.
 - v. *Public Workshop in Desert Communities.* The planning process has primarily been concentrated in Sacramento and Ontario, while the impacts and effects of the plan will be felt primarily in the desert communities. Additionally, due to the lack of transparency and clarity in many of the DRECP planning documents, as well as their size and complexity, the planning process may not be clearly understood by the public at large. It is essential that DRECP workshops are held

in several communities so that local residents and elected officials have an opportunity to understand the plan, how it will affect them and how they can participate in the planning process. We recommend at least one workshops be held in each of the affected counties.

7. Increased coordination and communication between DRECP and other planning processes. DRECP has an opportunity to better coordinate with existing planning processes and better align with previously completed planning processes. The DRECP needs to ensure that planning actions and conservation actions are consistent with previous plans, especially the CDCA plan and its amendments, including the intent and purpose of previously implemented management actions across the plan area. In the same manner, the DRECP should be cognizant of other ongoing or concurrent planning efforts that affect the resources the DRECP plans to protect (ex: CalFire, Imperial Irrigation District MSHCP, etc).

Additionally, BLM recently published its Sonoran Desert Rapid Ecoregional Assessment and indicated it would be used in development of the DRECP. This assessment includes the Sonoran ecoregion in the DRECP planning area. BLM is also preparing an assessment covering the Mojave ecoregion that will address a majority of the remaining portion of the DRECP planning area. These assessments are comprehensive and address conservation, change agents, threats and climate change. Please indicate how the Sonoran Assessment will be used in developing the DRECP alternatives and how the Mojave assessment will be used given that it has not yet been published.

III. **Comments on Alternatives**

At this point in the DRECP process, without clearly defined BGOs and conservation strategy, we are unable to comment specifically on any of the alternatives in particular; however, we offer the following comments on the alternatives (both considered and not considered) as a whole.

1. Alternatives not Considered

- i. *Distributed Generation Alternative.* We concur that achieving the State's carbon reduction goals exclusively with distributed generation (DG) is highly unlikely. However, we believe DRECP should entertain an alternative which recognizes current state policies and goals regarding DG. Existing State policies support about 9,000 MW of renewable DG to be built within this decade, and the Governor has proposed a target of 12,000 MW by 2020. These policies require an average of a 900 MW to 1,200 MW per year rate of installation, which would equate to 27,000 MW to 36,000 MW by 2040. While this represents a high DG deployment, it will occur if current policies are extended for the currently planned rate of deployment for this decade (even if there is no further growth in the rate of deployment after 2020).

Additionally, many of the issues with DG identified in the December Draft, such as permitting inconsistencies, could, in fact, be addressed through the DRECP itself. Others, such as interconnection issues and improvements to the distribution system are being addressed at the California Public Utilities Commission and should be resolved in the next few years—relatively early in the lifespan of the Plan. Many of the financing issues identified as affecting

distributed generation are in fact common to all energy projects—expiration of the federal investment and production tax credits are two key examples of key financing uncertainties for large-scale renewable projects. Finally, wind deserves inclusion in the DG mix; the potential for this resource occurs throughout California and could address some of the geographic and resource diversity issues raised by the DRECP in rejecting a DG Alternative.

- ii. *Sierra Club Alternative*. The December Draft states that the Sierra Club Alternative is unattainable and inconsistent with the DRECP purpose and need because it will not meet the target of 20,000 to 22,000 MW in the DRECP region. However, we believe this is a mischaracterization—Sierra Club’s previous comments on this issue did not ask DRECP to analyze an alternative to its Acreage Calculator, but rather identified inconsistencies and errors in the Acreage Calculator which should be corrected for *all* DRECP alternatives. In fact, the most significant change proposed in the Sierra Club’s June 2012 letter was to use the most up to date demographic projections provided by the State Department of Finance (California Department of Finance, 2013). Since these comments, the demographic projections continue to fall. By continuing to use an outdated forecast, the December Draft overstates the expected 2040 State population by 6.5 million, roughly equivalent to the combined populations of Los Angeles, San Diego, San Francisco and San Jose.

Last summer DRECP agreed to use the most recent forecast data, but the current Appendix L reverts to the outdated numbers. We once again request that DRECP correct the population forecast as well as the additional errors and inconsistencies identified in our attached Energy Projection Analysis comments (see Attachment 5), such as assumed baseline net energy for load in 2010 which was overstated by about 10,000 gigawatt-hours. The fully corrected output should be applied to *all* Plan alternatives, not relegated to a single alternative which is then dismissed.

Given the uncertainty about total energy demand, we reassert our request for prioritization of DFAs and within DFAs, such that the lowest impact areas will be developed first, potentially leaving lower priority areas without development if demand for electricity is indeed lower than projected.

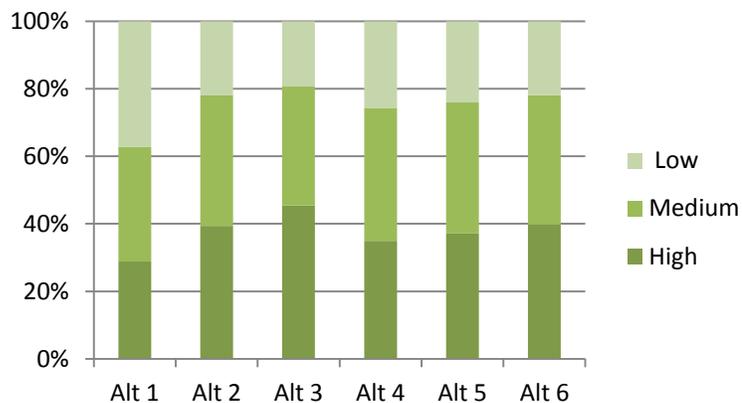
2. Potential Ecological Impact of DRECP Development Focus Area (DFA) Alternatives for the Tehachapi Region. We compared the six alternatives of the western-most DFAs to the results of the Wind, Wings and Wilderness study (2012) conducted by the Conservation Biology Institute (CBI). CBI’s assessed relative ecological value of sections of land is based on landscape intactness, connectivity, biodiversity, and level of disturbance.

Percentage of high, medium, and low ecological value within each DFA alternative is shown below:

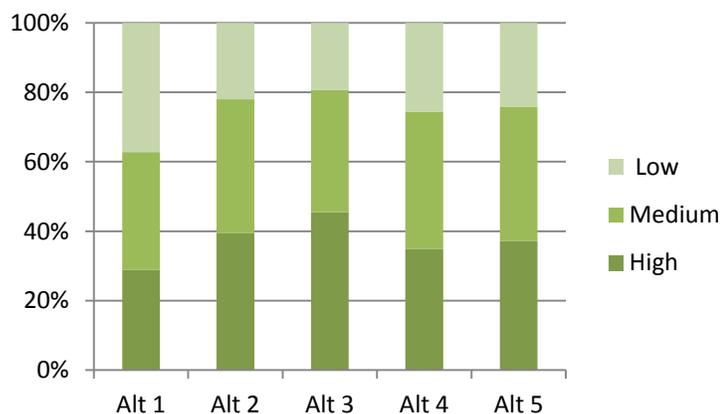
Percent Ecological Value			
	High	Medium	Low
Alternative 1	29%	34%	37%
Alternative 2	39%	39%	22%
Alternative 3	45%	35%	20%
Alternative 4	35%	39%	26%
Alternative 5	37%	39%	24%
Alternative 6	40%	38%	22%

These results indicate that all 6 DFA alternatives in the western Mojave encompass large amounts of land with high ecological value (29 – 45%), as per CBI’s ranking.

Percentages of Land in each of CBI’s three Ecological Value Categories for the Six Proposed Development Focus Areas within the Tehachapi Region.



Percentages of Land in each of the three Ecological Value Categories for the Five Proposed Development Focus Areas within the Tehachapi Region.



3. Specific Comments on DFA locations. In the absence of SMART biological goals and objectives, we are not able to comment specifically on the geographical representation of the DFAs and reserve areas on the landscape. However, we provide here a list of the conservation values on the landscape and highlight areas where these values are compromised due their inclusion in proposed DFAs. We have made an effort to look at all of the proposed DFAs in all alternatives; however, we focused primarily on Alternatives 1 and 2, and thus there most likely are proposed DFAs that overlap with conservation values that are not mentioned here.

Designated conservation management areas

There have been numerous efforts to plan for multiple uses within the California deserts, including setting aside conservation areas for species whose populations are declining in response to various threats and stressors. These areas include but are not limited to critical habitat designations, Wildlife Habitat Management Areas (WHMAs), Desert Wildlife Management Areas (DWMAs), Areas of Critical Environmental Concern (ACECs), Mohave ground squirrel conservation management area, and other planned management designations under the California Desert Conservation Area (CDCA) plan and its amendments. Development in these areas should be avoided unless more recent science shows that the area is no longer necessary to meet its original designated purpose and the overarching conservation goal for the desert.

Below is a list of proposed DFAs that conflict with these conservation designations:

- Rose Valley: MGS conservation area and WHMA
- Indian Wells Valley: Jawbone-Butterbrecht ACEC, MGS conservation area and WHMA, Red Mountain El Paso Raptor Breeding WHMA and Key Raptor Area
- Highway 395 corridor north of Kramer Junction: MGS conservation area and WHMA, desert tortoise ACEC
- Fremont Valley / Koehn Dry Lake: Koehn Dry Lake WHMA
- Riverside East SEZ: WHMAs designated in the NECO plan (2002).
- Imperial County: Flat-tailed horned lizard management areas (2003) in East Mesa, Ocotillo Wells, West Mesa

Species habitat

Habitat has been modeled for many species at various scales in the planning region. Species distribution models, such as the desert tortoise model (Nussear, 2009), predict where high quality habitat will occur based on a suite of climatic, topographic and geographic variables. These models can be used to guide development out of potential high quality habitat and should be considered in the development of the DFAs.

The following proposed DFAs overlap with modeled or known high quality habitat for sensitive species:

- Rose Valley: Suitable habitat for MGS (Inman et al. 2013; Leitner 2008)
- Mesquite Valley (variance lands): High quality modeled habitat for desert tortoise¹ (0.7 – 0.9, on a scale from 0-1); recent surveys for desert tortoise translocations suggest high density
- Fremont Valley (northeastern corner): Patches of high quality modeled habitat for desert tortoise adjacent to the Desert Tortoise Research Natural Area (DTRNA) and Critical Habitat. *DRECP should consult closely with the*

¹ All following references to modeled desert tortoise habitat refer to the Nussear model.

Desert Tortoise Preserve Committee and CDFW regarding parcels of desert tortoise habitat that these entities have or plan to acquire to increase conservation in the Western Mojave Recovery Unit

- Soda Mountains (variance lands): Modeled desert tortoise habitat of 0.7 and higher
- Pahrump Valley: High quality modeled desert tortoise habitat
- South of Ludlow (near Siberia project ROW): High quality modeled desert tortoise habitat; recent surveys suggest a high density population
- Blythe Mesa, McCoy Wash region: The dissected fans landforms feature (NECO Plan, 2002) supports viable desert tortoise populations and increase genetic connectivity across the landscape. *We request this landform be excluded from DFAs*

Landscape connectivity & intactness

There have been many efforts to map habitat connectivity, movement corridors and wildlife linkages in the desert. As with species models, these are structural and there have not been studies to prove their functionality. However, these linkage areas are based on an understanding of the species distribution, habitat preference, life history and ecology; and grounded in principles of conservation planning. Thus they deserve consideration in designating DFAs and conservation reserve areas. Additionally, the California desert region is unique in that large portions of it have experienced very little development relative to the rest of the country and these parts of the California deserts therefore represent an intact landscape with overall high biological and ecological value. Landscape intactness should also be considered in the design of the DFAs and conservation reserve.

Below are list of DFAs that are located in areas of habitat connectivity, movement corridors or wildlife linkages based on studies by Spencer et al. (2010), Penrod et al. (2012) and the USFWS (2012). Also included are DFAs that specifically disrupt the intactness of the landscape.

- Silurian Valley: Habitat linkages crisscross this valley (Penrod 2012); the area is undeveloped and in a natural condition and provides landscape connectivity between National Park, the Salt Creek ACEC, the Amargosa River and the Mojave National, and between the Avawatz Mountains, Silurian Hills and Kingston Range. A DFA in this location would impair the overall landscape intactness of this part of the desert, often called the "Baker sink"
- Lucerne & Johnson Valley: This area is a key connectivity area between the Mojave Desert and the San Bernardino Mountains (Spencer 2010 and Penrod 2012); consideration should be given to the need to maintain functional linkages for wildlife in the design of any DFA in this area
- Soda Mountain (variance land): USFWS modeled priority 1 habitat linkage through this region. The South Soda Mountains support a significant population of desert bighorn sheep as a result of a recent natural colonization from existing populations in the Bristol and Cady Mountains. CDFW has identified reestablishing a habitat linkage between the Soda Mountains and South Soda Mountains as a high priority to allow for gene

flow that was apparently lost due to a barrier created when the I-15 freeway was constructed²

- South of Ludlow (Siberia area): Modeled habitat linkage area (Penrod 2012) for desert tortoise and desert bighorn
- South of Bighorn Mountains Wilderness (Pipes Canyon): Numerous modeled linkages in this area between the Mojave desert and the San Bernardino Mountains
- Pichaco Mountains: Modeled linkage area (Penrod 2012 & Spencer 2010)
- East Riverside area: DFA Alternatives 2,5 and 6 have potential to preclude viable north-south habitat connectivity between the Sonoran and the Mojave deserts in an area spanning east from Joshua Tree National Park to the Colorado River

Landscape features and water resources that support biodiversity

Water in the desert is one of the main limiting resources for most wildlife; therefore biodiversity tends to be highest in areas that are associated with surface and near-surface waters. Thus, features such as riparian areas, seeps and springs, dissected alluvial fans and desert dry wash woodland tend to support higher levels of biodiversity than other areas. The DFAs need to be designed to avoid these areas.

Below is a list of DFAs that overlap with features that support higher concentrations of biodiversity:

- Rose Valley: Concentration area for birds during migration east of the Sierra Nevada and stopover due to extensive surface water and shoreline habitats at Little Lake and Haiwee Reservoir. Groundwater is limited in this area and further pumping of groundwater to support expanded renewable energy development would deplete this resource and threaten aquatic and wetland habitat at Little Lake.
- Soda Mountains: Groundwater pumping for development and maintenance of solar energy in this location could deplete springs nearby that support the endangered Tui Chub, desert bighorn sheep and other species
- Blythe Mesa / McCoy Wash: Dissected alluvial fans feature, lands containing washes that support desert ironwood, blue palo verde and smoketree
- Imperial Valley: Riparian drainages and shoreline habitats should have a buffer around them to ensure development does not affect or deplete the resources provided to numerous species of birds, reptiles and the endangered desert pupfish.

² For further information on the biological issues with this project location, please refer to the Scoping comments for the Soda Mountains Solar project submitted on behalf of Defenders of Wildlife, The Wilderness Society, National Parks Conservation Association, Center for Biological Diversity, California Native Plant Society, Natural Resources Defense Council, Sierra Club and California Wilderness Coalition on December 14, 2012.

IV. Comment Table

Below we provide document specific comments on the “December Draft” by section and page number:

Section Title	Section #	Page #	Topic	Comment /Recommendation
Introduction	1.1.1.1	1.1-1	BLM Purpose & Need	The BLM should ensure that the DRECP is consistent with BLM's wildlife policy, the purpose of which is to provide guidance to the agency in the conservation of the species, habitat and ecosystems found on BLM lands. The fact that the DRECP is implemented by both state and federal wildlife agencies in addition to the BLM should not diminish BLM's own responsibility, according to its wildlife policy, to ensure the DRECP conserves wildlife and habitat and provides a net conservation benefit to BLM Special Status Species covered by the plan. This should be included in the section on BLM's Roles and Responsibilities on p. 1.1-2.
Introduction	1.2.2	1.2-3	Conservation Planning Process	In general, we disagree with a planning approach for an NCCP whereby development acreage and amounts are defined before the conservation planning elements have been established. In this document, it is stated that all products of the conservation planning process are drafts and subject to further review and revision; however, it is our understanding that the location of the DFAs in each of the alternatives was, to some extent, based on the conservation planning process. This suggests that either 1) the alternatives were based on draft conservation planning process products; or 2) no consideration of conservation for covered species was considered in developing the DFAs. Either way does not give us confidence that the alternatives were structured based on a solid conservation strategy. Additionally, without a DRECP reserve design and BGOs, evaluation of the alternatives from a conservation biology standpoint is not feasible.
Introduction	1.2?	1.2-4	Elements of the Planning Process	Clarify if this is the DRECP conservation strategy or if it is referenced from another source. Clarify the actual process that DRECP is using, as it appears that the reserve designs have been proposed for each <i>alternative without species lists or BGOs determined</i> . It appears that what is written in this section is not what we have been seeing as the actual process used.

Introduction	1.2	1.2-4	Establish Preliminary Species and Natural Communities Coverage Lists	Include in an appendix or reference the screening document that was used to develop the covered species list initially. Will the DRECP be using Planning Species as recommended by the ISA in November 2010? Provide justification and explanation for use of planning species in the overall conservation planning process. Describe what analysis and evaluation process is currently being used to refine/change the covered species and community list.
Introduction	1.2	1.2-6	Gather Baseline Data	For most species and communities in the desert, there are data and information gaps related to how threats and impacts from the covered activities will affect the overall population of the species. These key data gaps should be acknowledged and transparently documented along with the research required to fill the data gaps.
Introduction	1.2	1.2-7	Develop Reserve Design	Need to explain the Conservation Area Reserve System and its components more clearly or reference where a more detailed explanation of it is in the document. DRECP also should provide a justification for why this is the best method to achieving the DRECP planning goals. Again, document should provide either written or hyperlinked reference to where readers can find more information on conservation actions.
Introduction	1.2	1.2-9	Conservation Analysis	It appears that this has not been completed within the current document. Please provide more information regarding how and when this analysis will take place and if there will be an opportunity for stakeholder participation and input.
Introduction	1.2	1.2-9	Adaptive Management and Monitoring Plan	This plan should be prioritized for development immediately. Renewable energy development at this scale in the desert is unprecedented and is an experiment that requires constant monitoring and altering of policies and management based on the impacts that are being observed on the ground. There remains a lot that is not understood regarding both the potential benefits and the impacts of large-scale renewable energy, thus an adaptive management plan is critical to ensuring that we are not causing unnecessary harm to species and wild lands.

Introduction	1.2	1.2-9	DRECP Conservation Strategy	The eight major elements of the DRECP conservation strategy <i>have not</i> "culminated" in a conservation strategy as far as we can tell from our reading in the document. It appears that some process, that did not involve finalized BGOs or a species list, resulted in the creation of a Conservation Area Reserve System & conservation actions; however, it is still very unclear and not transparent what process was used considering there are no BGOs and no finalized species list.
Introduction	1.2	1.2-10	Conceptual Conservation Planning Principles	Without finalized BGOs, how can DRECP know that the conservation actions will achieve the goals and requirements of the NCCPA, ESA and ISA 2010 report, as stated in this section?
Introduction	1.2	1.2-15 - 17	BGOs	Include BGOs for species, communities and landscapes at the sub-regional level as well to ensure species are not extirpated from one part of the desert region and preserved throughout their range.
Introduction	1.2	1.2-18	Reserve Design Process	Conservation designations under land use plans, such as the CDCA and its amendments (NECO, WEMO, NEMO) should be included in the first step evaluation along with identifying the LLPs and MEMLs so as not to undermine previous efforts to designate conservation in this region.
Introduction	1.2	1.2-7	Develop Reserve Design	Need to transparently explain how the HBS and MBS designations were developed or reference the appendix or section where the methods are provided. Also, considering that the BGOs have not been developed or finalized yet, it appears to us to be inaccurate to say "the Plan-wide Biological Reserve Design Context" is the reserve design for the whole Plan Area that was based on DRECP biological goals and objectives." DRECP needs to be transparent and clear with how the reserve design context was developed in the absence of finalized BGOs.
Introduction	1.2	1.2-8	Identify and Refine Conservation Actions	Without finalized BGOs, how can DRECP propose conservation actions that will achieve the BGOs? How do conservation actions fit into the overall structure of the conservation strategy? Are they for both ensuring conservation of protected species and for mitigation?
Introduction	1.2	1.2-11	Conceptual Conservation Planning	Cited reference (Groom et al. 2006) & (Soule & Wilcox, 1980) are not in the list of literature cited.

Introduction	1.2	1.2-11 - 15	Conceptual Conservation Planning Principles	Provide explanation for how each of the conservation planning principles was used in the DRECP.
Introduction	1.2	1.2-18	Reserve Design Process	"Marxan uses the distribution of all the GIS-based biological data and baseline Conservation Areas and then identifies clusters of habitat where the most efficient reserve design can effectively meet the quantitative conservation acreage targets that are formalized in the DRECP BGOs." - We have serious concerns with this process because: 1) The GIS-based species models are inaccurate and have not been updated; 2) the species list has not been finalized and is still under review; and 3) the BGOs have not been formalized and the targets used for Marxan were based on general targets in the form of percentages that ranged from 50-100% of the species inaccurately modeled habitat. This is inappropriate for use either as the basis of the overall biological reserve design context map or as basis for the Conservation Area Reserve System for each of the alternatives. In order for the DRECP to truly follow a systematic approach, the species/natural community list needs to be finalized, the species and community models adjusted according to the expert and science review, the biological goals and objectives finalized after stakeholder vetting and review, and the Marxan could use this accurate information to be run again to inform a reserve design context. Without accurate information, finalized BGOs and a finalized covered species list, the Marxan with Zones modeling process is useless in providing any valuable information to the reserve design process.
Description of DRECP Alternatives	2.2	2.2-3	Capacity/Capability/Expertise	Include in the list of expertise needed to implement DRECP: conservation planning, mitigation, transmission planning.
Description of DRECP Alternatives	2.2	2.2-4	Ability to raise funds	For the Draft EIS/EIR, there needs to be a clearer mechanism for how the DRECP is going to be funded in the implementation phase. This is absolutely essential to ensuring that the conservation actions are feasible and BGOs are being met.

Description of DRECP Alternatives	2.2	2.2-8	Proposed Covered Species List	Planning species can be used to formulate the reserve design even if they are not "covered species" under the plan. This is important to plan development because there are many species not included in this list that will be affected by covered activities. These species include: red-tailed hawk, white pelican, prairie falcon, species of invertebrates, additional plant species, and bat species, among others. Wildlife agencies need to clarify how they plan to deal with species for which impacts are expected but are not included as covered species due to lack of data and information that would authorize take or another reason.
Description of DRECP Alternatives	2.2	2.2-12	Conservation and Management Actions - Allowable Uses and Use Restrictions	Considering the conservation and management actions for the landscape-level processes, natural community groups and species are the foundation of the conservation strategy, the environmental stakeholders request an opportunity to review and discuss these and the finalized BGOs prior to the release of the draft EIS/EIR.
Description of DRECP Alternatives	2.2	2.2-17	BLM Incentives for Projects in DFAs	The incentives described in Table 2.2-3 are for DFAs in BLM lands only - what are the incentives for developing on private land DFAs? In order for the plan to make the most of the disturbed lands in the desert regions, these private land DFA incentives need to be established prior to the issuance of the draft EIS/EIR.
Description of DRECP Alternatives	2.3	2.3-2	Solar PEIS variance land screening	Additional criteria: 1) SC Wildlands mapped high and moderate priority parcels in the Morongo Basin: http://morongobasinopenspacegroup.camp7.org/ ; 2) USFWS modeled desert tortoise connectivity (Priority 1) and high quality contiguous habitat (Priority 2) lands; 3) Wildlife Habitat Management Plan Areas designated by BLM in the CDCA Plan, including Amendments; 4) Areas recommended for exclusion of renewable energy development by the FWS in biological opinions for solar energy projects (e.g., Dissected Fans as per NECO Plan amendments); 5) BLM designated Key Raptor Areas.

Description of DRECP Alternatives	2.3 - 2.9		Alternatives summary	The tables provided under each alternative include acreages of various different classifications of land. These tables are not helpful in evaluating the different alternatives because we don't know what the targets for acreages of habitat to conserve for various species, natural community groups or landscape processes. Also, the conservation designations are not clearly described thus the reader is not able to make evaluative comments on acres of land in certain designations.
Description of DRECP Alternatives	2.3 - 2.9		Alternatives summary	All of the maps should clearly show where Highway 62 is, as this is the main Highway to Marine Corps base and Joshua Tree National Park.
Description of DRECP Alternatives	2.3 - 2.9		Alternatives summary	Provide the information contained in the "Primary Features of each alternative" document in the introduction for each alternative description. Also provide the "name" of the alternative instead of just the number. This will help orient the reader and help the reader to understand the general motivation behind each alternative.
Affected Environment - Biological Resources	3.1-1		Regulatory Setting	Clarify that incidental take permits issued under Section 10(a)(1)(B) subsequent to approval of a Habitat Conservation Plan require the applicant to avoid and minimize adverse impacts to listed species to the maximum extent practicable .
Affected Environment - Biological Resources	3.1-1	3.1-2	Regulatory Setting	The mandate that all federal agencies use their authorities to conserve (recover) threatened and endangered species has been left out of the description. Conservation (recovery) of such species is the most important function of the Act. Add this to the description. See ESA Section 7(a)(1).
Affected Environment - Biological Resources	3.1.2	3.1-9	Physical Conditions	The Ecoregions and Subsections as delineated in Table 2-1 of the Baseline Biology Report (Dudek and ICF 2012) may be useful for some tasks, but they do not account for some important gradients and differences in climate and vegetation across the plan area. Precipitation patterns and variability across the plan area have a huge impact on species distribution and the climate section should be expanded to include this variability and how it affects species and their distribution in the plan area. For more information see the Independent Science Panel Report at pages 4-5 (ISP 2012).

Affected Environment - Biological Resources	3.1.1.2	N/A	Fur-bearing mammals	The document fails to reference the Protected Furbearing Mammals section of the California Code of Regulations, Title 14, section 460).
Affected Environment - Biological Resources	Table 3.1-1 Watersheds in the Plan Area	3.1-10	Watersheds	At least two of the watersheds have very limited areas within the DRECP (ex. Santa Clara – Callegas and the Santa Ana). There would be benefit to identifying watershed wholly within the DRECP area vs. watersheds on the edge of the planning boundary, not fully within the DRECP.
Affected Environment - Biological Resources	3.1	3.1-20	Cryptobiotic soils	1) cryptobiotic soils provide essential services including “safe sites” for seed germination (Belnap 2003) 2) Cryptobiotic soils also are important carbon sinks (Wohlfardt et al. 2008). This should be noted here and avoidance of such soils used as part of the “rule set” and impact evaluation of the DFAs (along with the benefits of holding soils in place for air quality issues in the California deserts, which are already out of attainment for PM ₁₀ emissions)
Affected Environment - Biological Resources	3.1	3.1-25	Climate change	More recent climate change models for the CA deserts need to be cited and incorporated: http://www.fs.fed.us/rm/pubs/rmrs_gtr285.pdf http://data.prbo.org/apps/bssc/uploads/Ecoregional021011.pdf http://www.fws.gov/southwest/ES/Documents/Barrows%202011.pdf http://www.blm.gov/wo/st/en/prog/more/Landscape_Approach/reas/sonoran.html

Affected Environment - Biological Resources	3.1.4	3.1-25	Peripheral populations	<p>The ecological importance of peripheral populations applies to both plants and animals living at the edges of their range throughout the Plan Area. The document provides the following concluding statement regarding peripheral populations, "[t]hus geographically peripheral populations in the Colorado/Sonoran Desert may prove to be just as important for long-term species' survival as larger core populations." [p. 3.1-25] This conclusion should not be restricted to the flora and fauna of only the Colorado/Sonoran bioregion, but should include the Mojave bioregion (and any other bioregions within Plan Area) as well. Additionally, CRPR 2 taxa (plants that are rare within CA but more common elsewhere) exist on the periphery of their range and are restricted and rare within CA. Several CRPR 2 taxa occur in extremely small numbers (3 or less documented CNDDDB Element Occurrences) AND these occurrences are all within the DREC Plan Area. Among the list of 65 plant taxa that CNPS submitted to the REAT in June 2011 as potential Covered / Planning species, we included 7 CRPR 2 taxa we found to be most at risk of extirpation from CA due to potential impacts from DRECP covered activities. These peripheral populations of rare plants (CRPR 2 taxa) should be examined as potential Covered or Planning Species under the DRECP.</p>
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<p>Affected Environment - Biological Resources</p>	<p>3.1.4.2</p>	<p>3.1-28 - 3.1-30 Table 3.1-6</p>	<p>natural communities naming conventions</p>	<p>The hierarchical relationships of natural communities as described in section 3.1.4.2 are very confusing. The different labels used to describe three hierarchical components of Natural Communities make it difficult to follow what is meant by "natural community." Hierarchical components are referred to as: General level / Mid-level /Third level; Communities / the Natural Community Group / Natural Community Elements; Natural Community - Land Cover / Group - Macrogroup / Alliances. Since the REAT technical team has cross-walked landcover classifications to the National Vegetation Classification Standards (NVCS), the Plan ought to conform to NVCS nomenclature of Macrogroup, Group, and Alliance when applicable. Since the coarsest hierarchical category referred to in the Plan is not actually a NVCS category (Communities), this category should just be called Land Cover Type in Table 3.1-6, and retain its generalized category labels (Dune Communities, Forest Communities, Riparian Communities, etc.). The remaining hierarchical categories could then be split into Macrogroup - Group, and Alliance categories.</p> <p>We also note that the number and categories of Land Cover Types listed in Table 3.1-6 (nine) are not consistent with the number and categories described in sections 3.1.4.2.1 - 3.1.4.2.10. In summary, the three hierarchical components of Natural Community described in section 3.1.4.2 are confusing and should be reviewed and revised by a technical editor in order to improve the understandability of what section 3.1.4.2 is attempting to convey.</p>
<p>Affected Environment - Biological Resources</p>	<p>Table 3.1-6</p>	<p>3.1-30</p>	<p>Land Cover & vegetation mapping</p>	<p>We remain very concerned that more contemporary vegetation classification and cover (and vegetation map) is not included. While we recognize that land cover is different than vegetation mapping, Table 3.1-6 exacerbates the misperception that the desert is "bare" by identifying over 6.2 million acres as <i>Rocky, Barren, and Un-vegetated Communities</i>. We continue to request that a vegetation map be created based on the vegetation mapping work done to date as recommended by the Independent Science Advisors.</p> <p>See Attachment 6 in this letter for more recommendations and comments on new vegetation mapping.</p>

<p>Affected Environment - Biological Resources</p>	<p>3.1.4.3</p>	<p>3.1-38 ff.</p>	<p>Natural communities and Subareas</p>	<p>Where new map data is available, the tables of section 3.1.4.3 that list vegetation types by DRECP Subarea should be updated to include a column that lists vegetation Alliances - at least the State and locally rare alliances - by Land Cover Type and by Subarea (e.g., Grassland Communities for the West Mojave and Eastern Slopes Subregion would include the locally rare <i>Eschscholzia californica</i> alliance in this new column. Concurrently, in Appendix E, conservation rule sets for State rare and locally rare vegetation Alliances should be developed that include rules for conserving quantitative targets based on higher % of acreages of rare types than for more common vegetation types. While the conservation of high/medium/low ratios is generally described in Appendix E, specific quantitative targets must still be defined.</p> <p>The Subarea acreage values in the tables of section 3.1.4.3 will need to be updated based on the vegetation structure reorganization as described by the last sentence on p. 3.1-38. It is unclear if or how the acreages listed in this document version were used to generate current modeling results, but models will need to be rerun once restructuring is complete.</p> <p>Dividing the DRECP into 10 Subareas helps differentiate local rarity of vegetation Alliances within the bigger plan area by allowing DRECP planners to focus on ecological and jurisdictional differences between widely distributed vegetation types. This in turn will help prioritize and apply conservation and management measures for rare vegetation types where needed. For example: Dune Communities include several rare dune vegetation alliances found in different Subareas, as well as alliances common to several Subareas.</p>
<p>Affected Environment - Biological Resources</p>	<p>3.1.5.3.5</p>	<p>3.1-72</p>	<p>Important Bird Areas</p>	<p>Both Global and State IBAs as designated by Audubon need to be included as key conservation areas. http://www.mapsportal.org/audubon_national_iba/</p>
<p>Affected Environment - Biological Resources</p>	<p>3.1.6.1</p>	<p>3.1-81</p>	<p>Covered / Planning Species for plants</p>	<p>Table 3.1-18 lists 19 proposed Covered / Planning plant taxa. From June-August 2011, CNPS submitted a list of 65 taxa to be reviewed for inclusion as possible Covered / Planning species to the DRECP Covered Species working group process. The 19 proposed taxa in Table 3.1-18 were included on our list of 65 taxa. What is the status of REAT review of the remaining 65 taxa?</p>

<p>DRECP Covered Species</p>	<p>3.1.6.1</p>	<p>3.1-81</p>	<p>Covered / Planning Species lists and Surrogates</p>	<p>Although there is no clear science that justifies the use of surrogate species in conservation planning for rare plants (Che-Castaldo & Neel, 2012), we recognize the reality that, due to resource and data limitations, conservation planning must look beyond a species by species approach in order to design an effective reserve for many target species. BGOs developed for surrogate species in the DRECP must include criteria that will provide indicators that BGOs are being met. Criteria should include:</p> <ol style="list-style-type: none"> 1. Suitable habitat that occurs in identified conservation reserve design 2. Measures that reduce or eliminate existing threats to the species 3. Measures that provide habitat enhancement through restoration 4. Monitoring and adaptive management requirements to ensure population trends indicate a Planning species is stable and/or recovering over time <p>A table that explicitly states the underlying assumptions whereby the conservation targets and management prescriptions developed for surrogate species will benefit the Planning species for which they are surrogates would be helpful to track and adaptively manage Planning species over the term of the Plan.</p>
<p>Affected Environment - Biological Resources</p>	<p>3.1.6.2</p>	<p>3.1-99</p>	<p>Modeling</p>	<p>The ISA strongly recommended using quantitative modeling for species. Expert models are still being used for some species despite the fact that adequate data points are available for quantitative models to be developed for covered species. It is unclear which type of habitat model is being used for which species (other than the USGS desert tortoise and Mohave ground squirrel [MGS] models). With regards to MGS, it is unclear which model (DFW or USGS or both?) is/are being used. Implementing statistical models for the species needs to be done and clearly identified as to methodology used, data sets etc. Because the modeling will be the basis for many development and conservation decisions, it is crucial that a clear/transparent methodology is implemented and documented in order for the interested public and decision makers to understand the strengths and limitations of the modeling efforts. This knowledge is key to evaluating the need for future habitat verification, additional data collection, adaptive management, and climate change modifications.</p>

Affected Environment - Biological Resources	3.1.8	3.1-103	Wildlife linkages & corridors	It is correct to look at both the temporal and spatial components of linkages, corridors and crossings. However, it is unclear how the temporal component of connectivity is being addressed. Additional clarifications on key migration times and places need to be incorporated or if unknown, a precautionary principle should be applied until clear, scientifically documented data are available.
Affected Environment - Biological Resources	Figures	3.1-119 ff.	Natural communities and other landcovers by Subarea	The resolution of polygons and coarseness of landcover types depicted in the maps of Figures 3.1-3 to 3.1-13 are not useful. How have these maps been used to develop DRECP DFAs and / or conservation reserve strategy? What conservation or development opportunities / constraints decisions have been made based on the information presented in these maps?
Affected Environment - Biological Resources	FIGURE 3.1-26	n/a	Overview map	Additional SC Wildlands linkage designs should be included: A Linkage Design for the Joshua Tree – Twenty-nine Palms Connection http://www.scwildlands.org/reports/JT_TP_Connection.pdf South Coast Missing Linkages: A Linkage Design for the Peninsular-Borrego Connection http://www.scwildlands.org/reports/SCML_PeninsularBorrego.pdf Also it does not appear that The California Essential Habitat Connectivity Project linkages are included in this figure.
Draft Analysis - Biological Resources	4.1	4.1-1	Conservation Area Reserve System	Military Expansion Mitigation Lands: We assume these lands, totaling approximately 102,000 acres, were acquired by the U.S. Army to mitigate impacts associated with the expansion of Fort Irwin. Please verify how these lands will be permanently conserved and managed for desert tortoise conservation. If these lands are transferred to BLM, please indicate how BLM will ensure their permanent protection and exclude multiple use activities that are not consistent with desert tortoise conservation. For these lands to fulfill the mitigation goals for expansion of Fort Irwin, they should be free of all human activities that do not contribute to conservation.

Draft Analysis - Biological Resources	4.1	4.1-2	Conservation Reserves	The durability of the Conservation Area Reserve System needs further analysis and verification that the following areas will be permanently protected from adverse impacts of multiple use activities: 1) Proposed Conservation (BLM LUPA Desert Conservation Lands designations; and 2) areas of Planned Conservation (HBS areas and MBS areas).
Draft analysis – Biological Resources	4.1.1.3	4.1-4	Direct impact distribution	While we recognize the strategy taken in estimating the direct impacts were distributed to the landscape, natural community, and species metrics based on the technology-specific proportion within the DFAs within each subarea, and that the document recognizes that resources are not distributed evenly across the landscape, the key fact is that development could still disproportionately affect certain species because of their distribution on the landscape. Clearly additional refinement of species actual on-the-ground distribution is requisite, as is the incorporation of indirect impacts.
Draft analysis – Biological resources	Table 4.1-8	4.1-10	Conservation of “hydrologic features”	<p>Hydrologic features are key components in the arid California deserts. Not only do they provide key habitat and resources for unique species, but the features themselves often drive landscape level functionality of that precious resource – water in the desert. Even the most conservative alternative conserves less than 60% of these features. That is unacceptable and a much higher level of conservation (90% or greater) is requisite for these rare landscape resources.</p> <p>In addition, while the document recognizes four major riverine systems in the plan area (Amargosa, Colorado, Mojave and Owens Rivers), it provides no safeguards for actually keeping water (surface and subsurface flows) in those rivers. Yet most all of the covered aquatic species depend on these important refugia. Groundwater pumping for covered activities has the potential to significantly impact the flows in these rivers and must be adequately addressed to ensure conservation of these crucial resources.</p>

Draft Analysis - Biological Resources	4.1	4.1-13	Habitat Linkages	Conservation of habitat linkages should not be based solely on Least Cost Pathways because these areas are based on models that represent the most restricted, ideal habitats for the target species. The analysis should be based on habitat suitability models or species distribution models that link the large contiguous blocks of undisturbed habitat.
Draft Analysis - Biological Resources	4.1	4.1-44	Desert tortoise	Habitat data used for the conservation analysis is insufficient to capture all of the important habitats supporting this species, as follows: 1) USFWS Least Cost Corridors is based on Priority 1 linkages - the Priority 2 linkages need to be included because they represent adjacent and contiguous high quality modeled habitat from the 2009 USGS habitat model with ratings of 0.6 and higher; 2) USGS habitat model ratings considered were not specified - habitat with a suitability rating of 0.6 and above should be used; 3) Recent desert tortoise protocol surveys have revealed relatively high desert tortoise populations in areas not included in Critical Habitat or DWMA's. Examples of such are from the Ivanpah SEGS, Calico solar and Siberia solar project sites.
Draft Analysis - Biological Resources	4.1	4.1-44	Desert tortoise	Conservation areas for desert tortoises, in addition to the above, should include lands identified by the USFWS as important to long-term recovery of the species in Conservation Recommendations contained in various biological opinions for solar energy projects.
Draft Analysis - Biological Resources	4.1	4.1-47	Desert tortoise	Under the section on Occurrences, please indicate what criteria were used to differentiate between "Historical" and "Recent."
Draft Analysis - Biological Resources	4.1	4.1-54	Bighorn sheep (Nelson's and Peninsular)	Define what "Occurrences" and "Recent Occurrences" of this species are.
Draft Analysis - Biological Resources	4.1	4.1-56	Mohave ground squirrel	Define what "Recent" and "Historical" occurrences of this species are.

Appendices	Appendix C		Nelson's bighorn sheep	Bighorn sheep occurrences, historic and recent, are indicated on various maps, but the occurrence data is incomplete. This may be due to reliance on the CNDDDB only. Occurrence data from CDFW needs to be obtained and incorporated into all the maps for covered species occurrences. An alternative method of mapping occurrences would be to delineate bighorn mountain ranges known to support permanent herds and insert the population estimates from CDFW (see Abella, R. et al., In press).
Appendices	Appendix C		Nelson's bighorn sheep Critical Habitat Linkages Map	Map appears to be mislabeled. What are shown are potential habitat linkages where metapopulation fragments might be reconnected. The critical habitat linkages should be those land areas known to be traversed based on sightings and radio telemetry. Other linkages based on models could also be mapped as "modeled linkages" as depicted in various linkage studies described in the Affected Environment chapter.
Appendices	Appendix C		Nelson's bighorn sheep habitat maps	Maps of Mountain Habitat and Intermountain Habitat should be reviewed for accuracy. For example, some Mountain Habitat is included in Intermountain habitat. Examples are: the Resting Spring Range NW of the Nopah Range mapped as Intermountain Habitat when it is actually Mountain Habitat; the McCoy, Little Maria, Big Maria, and Riverside Mts. included in a large polygon labeled Intermountain Habitat; a polygon including the Palo Verde Mts., East Chocolate Mts. as Intermountain Habitat connecting with the Chuckwalla Mts. In a corridor connecting the E Chocolate Mts with the Chuckwalla Mts., and the North Soda Mts. identified as Intermountain Habitat.
Appendices	Appendix C		Nelson's bighorn sheep Intermountain Habitat	Modeled Intermountain Habitat is missing, as follows: 1) large block of land between the Marble Mts. and South Bristol Mts., 2) land between the Marble Mts. and Clipper Mts., 3) land between the Old Woman Mts. and Ship Mts., 4) land between the Ship Mts. and southern Marble Mts., 5) land between the Old Woman Mts. and Turtle Mts., 6) a missing part of the habitat linking the Iron Mts. and Old Woman Mts., 7) habitat immediately north I-40 and west from the Dead Mts., 8) habitat connecting the S end of the Palen Range with the Chuckwalla Mts.

Appendices	Appendix C		Nelson's bighorn sheep Mountain Habitat	Revise Mountain Habitat map to include the following ranges which were included as Intermountain Habitat: 1) Resting Spring Range, 2) North Soda Mts., 3) Little Maria Mts., 4) Big Maria Mts., 5) McCoy Mts., Riverside Mts.
Appendices	Appendix C		Nelson's bighorn sheep Mountain Habitat	Some portions of Mountain Habitat have been excluded and show as small polygons in the following areas: 1)North Bristol Mts., 2) Complex of Old Dad Peak, Kelso Peak, Marl Mts. and Club Peak. These exclusion areas should be added as Mountain Habitat, thus forming a large important polygon of Mountain Habitat extending from ranges within the Mojave National Preserve, the North Bristol Mountains and the Cady Mountains.
Appendix C	Draft Species Habitat Model Results		General communities vs. NVCS classifications	Riparian Community, Dune Community, etc. are not NVCS classifications. The narrative on p. 3.1-28 state this distinction clearly. However, expert model inputs listed in Appendix C's Rationale and Revision Summary tables for some plant and animal species (e.g., <i>Opuntia bassilaria</i> var. <i>treleasei</i>) indicate NVCS_General "community" classifications as inputs. Avoid confusing terms by NOT referring to these general community types as NVCS types.
Appendix C	Draft Species Habitat Model Results	Figure SM-P2	Alkali mariposa lily	Model results using NVCS Macrogroup as Vegetation input: An NVCS Macrogroup classification represents a group of plant species that share diagnostic environmental characteristics that occur over a subcontinent range. Because this is such a broadly classified group, we question the usefulness of modeling potential habitat using NVCS Macrogroup as one of the modeling criteria. The map for <i>Calochortus striatus</i> habitat (see Figure SM-P2 for map), modeled in this way, is particularly unbelievable. What decision have or will be made based on modeling results illustrated in Figure SM-P2?
Appendices	Appendix E - Burrowing Owl		Habitat conservation	Use the best information and science that we have today to make a conservation plan that sets aside land for burrowing owl. There is half a million acres of really productive habitat for burrowing owl in Imperial Valley. If 50% of the agricultural lands are developed, mitigation becomes infeasible; therefore, the DRECP needs to ensure that a certain amount of irrigated agricultural land is maintained.

Appendices	Appendix E - Burrowing Owl		Landowner & Farmer Outreach	Include a conservation action that focuses on outreach to farmers in the area, or a "Working Lands Conservation program". Farmers are already conserving owls and have the potential to construct artificial nests and be stewards of their habitat in a very cost-effective and locally-based program. Conservation of burrowing owl in the Imperial Valley is dependent on the farmers' cooperation in the area. Outreach efforts to farmers could go a long way to ensuring long-term conservation for burrowing owls. Also, for conservation actions such as limiting rodenticide, it will take cooperation with farmers in order to implement this action. Additionally, science shows that 59% of the owls in Imperial Valley prey on insects, not rodents. Insects should be addressed.
Appendices	Appendix E - Burrowing Owl		Irrigation techniques	Flood irrigation minimizes the prevalence of rodent prey but maximizes the prevalence of insect prey which is probably why DRECP recommended sprinklers as a conservation action; however, drip irrigation allows for rodent populations to persist and is more water efficient. Increasing the rodent population may not be popular with the farmers in the region, and the insect prey base should be addressed. See above comment.
Appendices	Appendix E - Burrowing Owl		Size of reserve	The reserve has to be sufficiently large to ensure conservation is feasible this species. For example, 1000 acres in the Imperial Valley will not provide much, if any; conservation benefit to burrowing owls in the region as the entire irrigation and agricultural landscape has potential and current conservation benefits for owls. However, 1,000 acres in other places may have a real conservation benefit for the species.
Appendices	Appendix E - Burrowing Owl		Sub-regional goals	There is a need for sub-regional goals, especially for burrowing owls. Imperial Valley is ecologically different than other places and requires specific conservation actions and measures.
Appendices	Appendix E - Burrowing Owl		Evictions and translocations	Eviction from nests and translocations harm the individual being moved and should be considered "take", even if this is a measure being used to prevent or minimize mortality of owls on project sites.

Appendices	Appendix E - Burrowing Owl		Research	Research: DRECP should not set a requirement for research priorities because it would be very expensive to require certain research to be done. Additionally, the methods used to answer specific research questions should be left out of the document at this point. The focus should be on which questions to answer, while the methods should be left to the agencies to decide during implementation.
Appendices	Appendix E – Sand and Dune		General	Appendix E appropriately recognizes the physical processes that maintain dune systems and the need to minimize any disruption of sand transport areas. Unfortunately, the document provides no specifics about how to protect these areas and appears to simply be a collection of general statements that have appeared in earlier documents. We are concerned that adopting such general goals and objectives does not provide the necessary guidance for designing a strong conservation reserve and management actions to ensure preservation of this rare and important habitat type and natural community in the California desert.
Appendices	Appendix E – Sand and Dune Community	E-4	Private land conservation	Indicates that “Conservation and management actions on private land will be developed in partnership with counties and cities with land use jurisdiction over such lands.” Because the cities and counties are not yet “partnering” with the DRECP, this appears to be merely a hope. Even without participation of the cities and counties, the DRECP needs to include private lands within the analysis of the reserve design and alternatives to ensure that the plan adequately addresses natural communities on these lands.
Appendices	Appendix E – Sand and Dune Community	E-8	Control of invasive plants	Regarding the management of exotic species suggests removing exotics by burning and/or mechanical control—we strongly oppose this measure as it would only promote more exotic species/weeds. Chemical control has been shown to be effective in some instances. However, there is a need to have very clear assessment tools for whether any area of dune or sand source truly needs treatment for exotic species.

<p>Appendices</p>	<p>Appendix E – Sand and Dune Community</p>	<p>E-10</p>	<p>Sand transport corridors</p>	<p>States “Restrict development that interferes with fluvial and Aeolian processes (sand transport and deposition zone) to the edges (outer 10%) of the sand transport corridor. Project configuration must be designed to retain sand within the system and minimize downwind effects (minimizes interception and avoids diversion of sand).” However far more clarity is needed. For example, what is meant by the “outer edges” What if a majority of sand movement occurs along one of the edges of a particular sand or dune area? The intersection of the fluvial and Aeolian corridors might be considered the outer edge in some interpretations, but is where most sorting of particles occurs, and is the start of the Aeolian corridor—it is a critical area and should not be subject to development. We suggest the first sentence could be revised to include “except the original or terminal edges of each transport corridor type” at the end of the first sentence. We also strongly urge that no development occur within the sand transport corridor or deposition zone. If some disturbance is truly unavoidable then it should be restricted to the outer 5% edge of the dune and sand source community that is determined to have the lowest sand-movement rate.</p>
<p>Appendices</p>	<p>Appendix E – Sand and Dune community</p>	<p>E-41</p>	<p>Objective DUNC2.3</p>	<p>“Objective DUNC2.3: Decrease populations of common ravens in dune systems and adjacent areas where such impacts are a known or suspected cause of decline in dune wildlife species (e.g., Mojave fringe-toed lizard, flat-tailed horned lizard).” It is unclear the impact that ravens currently have on these lizards but they are not the only avian predators. It is important to remove existing artificial perches (e.g. fence posts, power poles) and prohibit the construction of new artificial perches within core habitat for these lizards and in and near sand movement corridors to lessen predation on these species from all avian predators. The expansion of populations of Common Raven is a solid measurement of the impacts of disturbance and this species is a good candidate for a Planning Species, as recommended by the Independent Science Advisors’ first document.</p>

Appendices	Appendix E – Sand and Dune Community		Roads in and near sand dune community	Recent information from the construction of the Colorado substation shows that roads in habitat may attract Mojave fringe-toed lizards and thereby can become a population sink for this species. The management actions for the Dune and Sand Source Natural Community should expressly limit roads in these areas and require any new roads to be fenced to protect MFTL and other wildlife. Fencing should be small enough gauge to inhibit wildlife movement onto the road but not so fine that it allows sand to pile up behind (which defeats the purpose). These measures will also reduce overall road kill and thereby reduce an additional subsidy for ravens and other predators.
Appendices	Appendix E – Sand and Dune Community		Mojave Fringe-Toed Lizard (MFTL)	In considering how to integrate the reserve design for Dune and Sand Source communities, the DRECP must also protect other habitat for the associated species such as the Mojave fringe-toed lizard. MFTL habitat is not limited to active sand dunes but also includes stabilized dunes, stabilized sand fields (or sandy plains) and ephemeral sand fields.
Appendices	Appendix E – Sand and Dune Community		Flat-tailed horned lizards	Flat-tailed horned lizards are not dependent on active blowsand areas but do require sand source and sand delivery systems to remain protected for long-term maintenance of the sand dunes and sand fields where it occurs. These areas must also be protected in addition to the dune and sand source areas in the DRECP.

<p>Appendices</p>	<p>Appendix E -</p>	<p>E-5</p>	<p>Objective L1.6</p>	<p>Objective L1.6 (p. E-5): unique landscape features also include State and locally rare vegetation Alliances, including but not limited to wash-related alliances mapped by new Vegetation Mapping (these are desert wash resource elements defined using NVCS).</p> <p>Re: "dense Joshua Tree woodland": Define "dense". Why only dense stands? What & cover is considered dense? What about sparser than dense stands of high quality showing regeneration? These would also be highly important conservation targets, particularly if they occurred at higher elevations (a Joshua tree climate change mitigation characteristic).</p> <p>An additional bullet point to be included after the bulleted paragraph on UPAs:</p> <ul style="list-style-type: none"> - Rare and unique vegetation types throughout the Plan area defined as vegetation Alliances by NVCS. These can be identified most easily in newly mapped areas in West Mojave and Chuckwalla Valley (Riverside East SEZ). These Alliances can also be identified in areas where Alliance level mapping has not been completed if vegetation field plot data (point data) exists for the latter areas and these data are correlated with new vegetation map datasets. Together, the new vegetation map polygons and older map field plot data for rare Alliances can be combined to provide as complete a distribution map for rare and unique vegetation types by Subarea. <p>Rare or unique vegetation Alliances (NVCS) are 2013 analogs to the UPAs of the 1980s in that rare Alliances represent unique vegetation stands within the Plan area. Because the ground-truthed spatial information for Alliances is mapped at a much finer scale than UPAs have been, rare Alliance data can be more accurate and useful for conservation planning at finer scales than UPAs. Both must be included as unique landscape features to be conserved as per Objective L1.6.</p>
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Appendix E		E-9	General Provision, bullet #1	We agree meta-population networks must be conserved in a manner that will maintain the representative distribution of a plant species' meta-population network across the Plan area. For example, conservation actions should avoid favoring conservation of populations within one Subarea while eliminating existing populations from other Subareas, rather, conservation actions should be implemented more evenly across a species' range. We are not certain, however, to which "standards and dimensions specified in the Plan" this General Provision refers. To make this provision more clear, future drafts should clarify more specifically what standards and dimensions are being referenced.
Appendix E		E-10	bullet #6: "Disturbance to ecosystem function..."	It is not possible to assess the usefulness of this provision without being able to review it within the context of "riparian, wetland and aquatic Conservation and Management Actions" referenced herein. We do not find those Actions described in this draft.
Appendix E		E-10	Survey Requirements, bullet #1	The Applicant should not be the one to determine whether or not protocol surveys for species / communities need to be done. Lead / trustee / responsible agencies must determine the need based on assessments performed by the Applicant. The language of this provision must be revised to reflect this.
Appendix E		E-11	Last bullet under Survey Requirements section	"...evaluated to determine the extent of [agency]..." what? Perhaps the word "jurisdiction" is missing here? "...per the latest guidance and consultation available from agency staff" which agency? CDFW and ACOE? This needs clarification.
Appendix E		E-11	Avoidance and Minimization Measures, bullet #3	Re: "Streams and washes of all sizes..." How would this be implemented on a project? Solar project sites (e.g., McCoy Solar) fail to avoid multiple washes of all sizes. How would a project like McCoy design and construct crossings? And ones that fulfill the requirements for crossings listed in this measure? While we fully support that concept, we would like more clarification on how this would work. This sounds more like an avoidance measure for temperate streams in urban settings applied to an ephemeral dryland stream context where braided channels become hard / impossible to avoid.

Appendix E		E-11	Avoidance and Minimization Measures, bullet #6	Re: the reference to Riparian, wetland and aquatic Conservation and Management Actions. Where are these described? This seems to be placeholder language, in which case it is not possible to fully evaluate this measure.
Appendix E		E-11	Avoidance and Minimization Measures, bullet #7	"Within the reserve system, projects will be located and configured...." Are projects allowed to be constructed in the reserve area? Are DFAs considered part of the reserve system? If not, why are projects going to be located in reserve system? We generally oppose development in the reserve areas.
Appendix E		E-12	Compensation Requirements, bullet #8	This provision assumes there will be at least 5:1 critical habitat lands available for compensatory mitigation. For endemic plant species with narrowly-restricted distribution this might not be the case. What if 5:1 acres of critical habitat are not available? What requirements would be placed on a project required to avoid critical habitat impacts?
Appendix E		E-13	bullet #2	"...unless the REAT agencies jointly agree and justify that adherence to these criteria is not in the best interests of species' conservation because..." - What would be the process by which REAT agencies would "jointly agree and justify"? - The reasons for not adhering to criteria must be more clearly defined.
Appendix E		E-14	Re: "mitigation for a specific project can be nested..."	"specific minimum retention requirements" are referenced. Where are these described in the document? While we fully support the requirement to conserve and retain rare alliances in principle, it is not possible to fully assess the usefulness of this provision without reviewing it within the context of the requirements referenced herein. The same comment applies to the "high / medium / low" mitigation ratio requirements. In principle this seems appropriate, however the details of the ratios must be considered to fully assess the provision.

Appendix E		E-41	"Objective FORC1.2"	Should be Objective DUNC1.3. What does this Objective accomplish in terms of conservation? This is far too nebulous and not prescriptive enough. What are the rule sets for these vegetation units? What % of occurrences (acres?) must be conserved, etc.? Does this list fully represent State rare (S1-2) and locally rare and important alliances that are associated with Dune systems in the Plan area? These and all rare natural communities should be included in the Subarea tables of natural communities provided in Chapter 3.1.4.
Appendix E		E-44	Development and Disturbance Limitations, bullet #4	Re: "...identifying all natural communities on project site...": This must be clarified to require the identification of all vegetation Alliances on project site, i.e., requiring vegetation mapping of project site to the Alliance level as per CDFW VegCAMP guidelines which are described via this VegCAMP website: [https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=54411&inline=1] .
Appendices	Appendix H		Marxan	In using Marxan, it is considered best practice to use well-defined, researched and justified conservation targets (acres or % of acres of habitat) that are derived from the plan's biological goals and objectives. Using the "rule of thumb" range of percentages for different categories of species is inappropriate because the "rules of thumb" are not justified or explained in any way, and ineffective because they produce a modeled result that is not useful to ensuring the plan achieves its biological goals and objectives.
Appendices	Appendix H		Iterative Reserve Design Process	We recommend that, in the iterative reserve design process, the location of conservation lands in relation to the needs of the covered species be given special attention. While it is important to meet habitat conservation objectives, the location of this conservation may be just as important.
Appendices	Appendix H		Systematic Conservation Planning with Marxan	On page H-2, it says "Marxan is a preferred approach for initial reserve design because it allows for incorporation of <i>a priori</i> identified BGOs (specified as quantitative acreage targets) for biological features." Marxan is only effective as a conservation planning tool if its inputs are clearly explained and justified. It is clear that the DRECP has not finalized BGOs, thus they have not been incorporated into Marxan and the result is based on unjustified "rule of thumb" targets.

Appendices	Appendix H		Table 1. Plan-wide Biological Reserve Design Context Map Categories	Recommendation: provide a more in-depth explanation in a "methods" section to explain the process used in the spatial analysis to identify high versus moderate biological sensitivity. The description is helpful; however, the actual method used to assign locations high or moderate is not provided. For example, are HBS areas those that simply have more modeled species habitat overlapping?
Appendices	Appendix H		Marxan	Recommendation: provide a justification for why Scenario 5 was chosen as the input for the iterative reserve design process. There is no explanation for why this scenario was chosen over the others.
Appendices	Appendix H		Iterative Reserve Design Process	In step 3, the "resource-focused reserve design checklist", the DRECP should include an evaluation of areas that have been identified as potential or actual conservation areas from previous HCPs, NCCPs or BLM land use plans.
Appendices	Appendix F		General	There are many assumptions included in the estimation of the distribution of renewable energy across the DFAs. How are these estimations informing the impact analysis and/or the conservation area reserve system for each alternative? Please clarify.
Appendices	Appendix F	F-2	Table 1. Describing the Assumptions and Rules for Distributing Generation across DFA	Rule 1: The assumption is false from the perspective of biological values - there are lands within DFAs that are less suitable for development from a biological standpoint than others. The same is probably true for renewable energy. Rule 2: How was the energy resource of each DFA calculated? Rule 3: Disagree with this assumption - hybrid generation can greatly reduce the footprint and increase the output of renewable energy. These systems should be promoted not discouraged. Rule 5: where are the multiplication factors and their justifications provided? It should not be assumed that the Solar PEIS identified zones of least biological conflict. Riverside east contains lands with high resource values including wilderness, biological, geological and cultural.

Appendices	Appendix I		General	<p>The process by which the pending projects were screened is not described in this appendix. For example, in the CDFW memo on the interim review process, it only lists projects into three categories, but does not explain how those lists were generated or by what process projects were screened. Additionally, it is clear that the DRECP has not finalized the BGOs for the plan, nor the covered species list, so how is it possible to know if projects do or do not conflict with the "preliminary conservation objectives"? Please provide further substantiation regarding the pending project process and what it means for how projects will be treated under the DRECP.</p>
Appendices	Appendix L	L-1, para 3	Renewable Energy Required to meet CA state goals	<p><i>"By using the calculator to develop and test multiple plausible future generation portfolios, staff estimated the amount of incremental renewable energy required in 2050 may be in excess of 400,000 GWh – roughly 10 times what is currently in place to serve California loads – with 194,000 GWh needed by 2040. "</i></p> <p>The amount of additional renewables needed by 2050 is outside the scope of the DRECP plan, and references to this should be omitted. The MW values included relate to earlier 2050 figures rather than 2040. This gross misrepresentation implies vastly greater energy need in 2040 than is really the case. Furthermore, the staff estimates for MW required in 2050 are speculative and depend on a number of aggressive, simultaneous assumptions.</p>
Appendices	Appendix L	L-1 para 3	Demand growth estimate	<p><i>"Demand Growth will be 1.5% per year, in line with recent economic/demographic projections."</i></p> <p>This is the same demand growth used by the Energy Commission's Demand Analysis Office. In January the Department of Finance released updated demographic information which reduced the population forecast in 2040 by 6.5 million from previous projections, which were themselves much lower than the CEC's estimate. The growth rate used by the DRECP needs to be reduced from the estimated 1.5% per year, to the most current forecast of 1.14% per year.</p>

Appendices	Appendix L	L-2	Hybrid and Fuel Electric Vehicle Assumption	<p><i>"18 million hybrid and full electric vehicles will be in use in 2040."</i></p> <p>This should be corrected to <i>"plug-in hybrid and full electric vehicles,"</i> to match the DRECP model. The fact that all these cars are assumed to use electricity from the grid is not clear in the existing text, since currently standard hybrids do not plug into the grid.</p>
Appendices	Appendix L	L-2	Energy storage assumptions	<p><i>"The percentage of total energy (net energy for load) needed to be stored will be 15% in 2040."</i></p> <p>This implies that 56% of variable generation will go to storage, which is excessive, particularly since 30% of the state's electricity is assumed to be derived from natural gas power plants in 2040, which should be able to back up a lot of intermittent renewables. The prior value used by DRECP for storage in 2040 was 10% of total statewide generation, which puts 37% of intermittent generation into storage. Since only 27% of total electricity is intermittent in the 2040 DRECP scenarios, even this figure seems very high. In any case, the DRECP should not assume 15% storage.</p>
Appendices	Appendix L	L-2	Distributed generation assumptions	<p><i>"Distributed generation will far exceed current targets."</i></p> <p>This is somewhat misleading since all current policy targets for distributed generation are only for the current decade, while the target policy year for DRECP is 2040 at which time the DRECP model assumes 21,500 MW of distributed solar PV. This implies installation of an average of about 700 MW per year--a significantly lower rate than is implied by current policies. Current adopted state policies support about 9000 MW of renewable distributed generation to be built within this decade, and the governor has proposed 12,000 MW by 2020. These policies require an average 900 MW to 1200 MW per year rate of installation, which would reach 27,000 MW to 36,000 MW by 2040 even if there is no further growth in rate of deployment after 2020. Historically, the average compound growth rate in demand for solar PV in California's IOU service territories has been 69% per year in the decade between 2002 and 2011.</p>

<p>Appendices</p>	<p>Appendix L</p>	<p>L-3; para 1</p>	<p>Energy Forecast</p>	<p><i>“CEC believes these conditions and forecasts are reasonable, especially for the purpose of making conservative planning projections for desert-based generation. However, as with any long-term planning exercise, substantial uncertainty remains. Major factors contributing to uncertainties in long-term supply and demand of electricity include the extent of electrification of the transportation sector, the possible retirement of existing nuclear and coal generation, and the success of the state’s energy efficiency and conservation efforts.”</i></p> <p>The model uses very aggressive assumptions--loading half of personal transportation onto the electric grid, retirement of all instate nuclear plants, and retirement of all coal plants. Furthermore, the model does not assume "success" of the state's efficiency programs, but rather models a significant shortfall from the state’s modest 1% per year goal based upon historical performance in the 1990s (when efficiency programs were almost abandoned), and in the first half of the 2000s (when funding for IOU efficiency programs was drastically lower than today).</p>
<p>Appendices</p>	<p>Appendix L</p>	<p>L-3; para 1</p>	<p>Hydro-power decrease</p>	<p><i>“Other uncertainties relate to the impacts of climate change which, for example, could reduce the amount of hydroelectric energy available, requiring the generation of even more energy from other zero-carbon resources to ensure GHG emissions targets are met.”</i></p> <p>Rather than treat decreased hydro as a generalized threat for an indefinite amount of higher need for renewables, DRECP should simply assume 25% less hydro as a conservative assumption.</p>

<p>Appendices</p>	<p>Appendix L</p>	<p>L-3; para 2</p>	<p>Energy integration</p>	<p><i>"Forecasters expect that challenges to integrating renewables may be solved, for example, through improvements that allow for large amounts of distributed generation, advances in energy storage technologies, using load shifting to smooth the peaks and valleys of electricity demand, diversifying the types of resources in the state's generation mix, and other measures. Additional generation above current projections may be needed, however, if barriers to integration are not otherwise solved."</i></p> <p>Clarify whether the statement that "additional generation above current projects may be needed" applies to central station generation only. Integration concerns apply to both central and distributed generation, and both face significant barriers that the state needs to address. However, only 10% of the state's electricity is assumed to come from intermittent distributed generation, and there is sufficient capacity in the model to back up most or all of this distributed energy with storage, if necessary. Furthermore, technologies exist today to address these issues, such as inverters that take curtailment instructions from grid operators, and bidirectional flow capability at substations.</p>
<p>Appendices</p>	<p>Appendix L</p>	<p>L-3; para 3</p>		<p><i>"Finally, the analysis is based on the electricity sector contributing to GHG emission reductions in proportion to the sector's total emissions. It is possible, however, that the electricity sector may be called upon to achieve more than its proportional share of emissions reductions if the industrial sector or, perhaps more likely, the transportation sector are unable to achieve their emissions reduction targets."</i></p> <p>The model includes an assumption of 18 million electric vehicles--half of the projected total number of passenger vehicles--in 2040. Because the DRECP model has electric vehicles as a primary driver of demand for renewable energy, suggesting the model does not include the transportation sector, as implied in the text, is inaccurate.</p>

<p>Appendices</p>	<p>Appendix L</p>	<p>L-6</p>	<p>Assumptions of CEC calculator</p>	<p><i>"Given the above assumptions, an expected reasonable range of generation capacity required from the Plan area is between 20,000 to 22,000 MW."</i> The expected and reasonable range of generation capacity required from the Plan area (20,000 and 22,000 MW) is based on faulty assumptions, many of which have changed since the last iteration of the calculator, including: 1) Demand for baseline year of 2010, which was based upon the 2009 CEC demand forecast, is overstated by about 10,000 GWh compared to the actual historical data in the 2012 CEC demand forecast (note: this error was not pointed out previously); 2) Demand growth rate has reverted to the previously disputed 1.5% per year with no adjustment due to the most recent Department of Finance demographic data; 3) Plug-in hybrid electric vehicles are projected to travel 90% of their miles on electricity, rather than the previously agreed-to figure of 72%; 4) Assumed energy to storage has increased from 10% or under to 15%. Thus we recommend prioritization of DFAs such that lower priority and lower priority areas within DFAs remain potentially undeveloped.</p>
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V. Attachments

Attachment 1

Mohave Ground Squirrel.

Appendix E describes the Management and Conservation Actions, including Allowable Uses and Use Restrictions throughout the planning area. The following comments on Appendix E are specific to the Mohave ground squirrel.

A. General comments:

1. This section could be improved by replacing the lengthy and complex listing of known populations, linkages and corridors with a more detailed map containing the geographic features and names referred to in the text plus the linkage and corridor areas.
2. Although the USGS habitat model was used in preparing the MGS conservation strategy, it has only recently been made available to the stakeholders or the public. It is our understanding, based on Appendix E, that considerable more work on refining range maps and habitat categories remains to be done before this section is considered ready for public review. The habitat suitability maps in this section need to be refined based on the updated USGS model. The recently published habitat model for this species does not include a habitat suitability map; rather it contains a map of modeled suitable habitat without varying degrees of suitability.
3. Despite having made repeated comments and recommendations for inclusion and consideration of additional existing MGS information, this section and its references do not include BLM's West Mojave Plan and Appendix M (latter devoted entirely to MGS), nor does it include the MGS trapping results and habitat descriptions from BLM's 1980 field study as reported by Aardahl and Roush in 1985. Please utilize these documents in further refining and developing the MGS conservation strategy.
4. Prime and Viable Habitats appear to be defined largely by studies conducted by Leitner as reported in Leitner (2008) and subsequent camera detection projects conducted at the Desert Tortoise Natural Area and other sites. The concept and identification of "Core Areas" was contained in Leitner (2008) in which he identified several areas where MGS had been trapped or observed repeatedly over an extended period of time (e.g., Rose Valley/Coso, Little Dixie Wash). He explained that such Core Areas were identified based on studies to date and did not represent potential additional Core Areas that may be identified through additional field studies. Nevertheless, Core Areas appear to be influencing the conservation strategy even though it is likely many more such areas exist but have yet to be identified by field studies.

Furthermore, although MGS populations appear to persist in some habitats over extended periods of time, BLM concluded that this species was more of a habitat generalist and widespread rather than persisting in habitats containing winterfat and spiny-hopsage. Again, we

urge consideration and incorporation of BLM's West Mojave Plan Appendix M in further development and refinement of the MGS conservation strategy in the DRECP.

5. We are concerned over the lack of justification or methodology in identifying and delineating habitat linkages and corridors for MGS. A long list of these features is presented, but little, if any, scientific basis is given for their existence. Do these specialized habitats have certain features that make them distinctly superior in supporting MGS populations or movements? Does gene flow throughout the MGS populations occur on a "neighbor-to-neighbor" basis similar to that for desert tortoises? If so, then habitat linkages and corridors for MGS would need to support populations on a permanent or semi-permanent basis.

B. Specific comments on goals and objectives:

1. **Goal MGS1/Objective MGS1.1.** Conserve public lands through designated conservation or open-space areas suitable for MGS that are not already legally or legislatively protected, such as conservation easements, public Habitat Management (HM) lands, mitigation parcels, or local, State, or federal conservation lands (*e.g.*, lands set aside by local conservation districts, counties, non-profit groups, or local associations).

Comment: Please define the term "Habitat Management (HM) lands" and "federal conservation lands."

2. **Goal MGS1/Objective MGS1.3.** Conserve public or private lands with habitat that is contiguous with existing, encumbered, or required to be encumbered parcels of conserved habitat, or that contains a corridor to other conserved habitat, and that does not overlap existing, encumbered. Existing conservation lands include but are not limited to DOD land that is managed for conservation.

Comment: Please define or identify DOD land that is managed for conservation of the MGS.

3. **Goal MGS3/Objective MGS3.1.** Conserve habitat in areas that are zoned for compatible use (such as open space or recreation), within or outside of the historic range of MGS, that is considered by the best available science and habitat models to be suitable for MGS occupancy, including but not limited to the following areas:

Comments: In addition to conservation of habitat located north and east of Owens Lake, add higher elevations lands located east of Olancho that include Centennial Flat and the Darwin Plateau if the habitat suitability model rating warrants.

The habitat located west of Little Dixie Wash and extending east to the base of the Sierra Nevada is known to support MGS based on existing records. The entire southern Indian Wells Valley generally located between the Sierra Nevada and the El Paso Mountains should be included as suitable, high quality habitat.

4. **Goal MGS3/Objective MGS3.2.** Conduct research in areas outside of the MGS range that are potentially Viable for supporting populations or linkages or range extensions.

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Comment: Although studies and research are necessary in developing management and conservation plans and actions, we recommend they be given a lower priority at this time because of the immediate need to take actions to protect, conserve and restore high quality habitats known to support MGS based on existing survey records. At the appropriate time following substantial progress in implementing conservation actions, additional studies and research to determine if areas outside the known range support MGS populations can be performed.

Attachment 2: Desert Tortoise

Appendix E describes the Management and Conservation Actions, including Allowable Uses and Use Restrictions throughout the planning area. The following comments on Appendix E are specific to desert tortoise.

1. **Objective DETO 1.2:** Maintain connectivity within and among desert tortoise conservation areas as defined in the revised recovery plan by targeting land acquisition within the linkages identified by the U.S. Fish and Wildlife Service and ensuring no net loss of desert tortoise habitat within these linkages.

Comment: Specify what the linkages are that are proposed for conservation. We recommend that the Priority 1 and Priority 2 linkages identified by the USFWS be used.

2. **Objective DETO1.1:** Acquire, maintain, and protect suitable, intact habitat (e.g., USGS 2010) within desert tortoise conservation areas as defined in the revised recovery plan through strategic acquisitions, and incorporation into existing reserves and protected areas.

Comment: Define what constitutes “suitable, intact habitat within desert tortoise conservation areas.”

3. **Objective DETO2.1:** The quantity of desert tortoise habitat within each tortoise conservation area is maintained with no net loss until population viability is ensured.

Comment: Habitat quantity within conservation areas should be maintained in perpetuity and not simply until population viability is achieved. As written, viability would be undermined by allowing habitat loss. The goal of the plan should include desert tortoise recovery.

4. Desert tortoise management within BLM conservation lands

General Provisions:

- New ground disturbance is prohibited within portions of ACECs that have a habitat potential of 0.7 and above per Nussear et al. (2009) or most current revision.

Comment: We recommend no new ground disturbance in desert tortoise ACECs and in Priority 1 and Priority 2 habitat linkages identified by the USFWS that occur under the DRECP.

5. All projects that will displace desert tortoises and permanently remove occupied and/or suitable habitat may be subject to the most up-to-date USFWS translocation guidance. Project-specific modifications to translocation plans may be appropriate in coordination with USFWS and CDFG.

Comment: No projects that would result in loss of habitat or require translocation of desert tortoises should be allowed within conservation areas on BLM managed public land.

6. Compatible/Incompatible Uses:

Grazing: Cattle and sheep grazing may be compatible within some ACECs and will be consistent with decisions set forth in WEMO, NEMO, and NECO and other amendments. Efforts shall be made to minimize impacts by fencing, removing trespass cattle, retiring allotments through acquisitions from willing sellers or allotment exchanges to locations outside ACECs, or prohibiting supplemental feeding.

Defenders, et al.
March 13, 2013

Comment: Livestock grazing within desert tortoise ACECs is inconsistent with desert tortoise recovery as per the 1994 Recovery Plan, and acknowledged as such in the Revised Recovery Plan. Livestock grazing should be identified as an incompatible use and allotments affecting these ACECs should be permanently retired.

Comment: Livestock grazing should be identified as an incompatible use within Priority 1 and Priority 2 habitat linkages identified by the USFWS. Allotments within these linkages should be permanently retired.

Motorized vehicle access (travel management): New designated open routes are incompatible unless required for management purposes. Acquired lands must undergo a route designation process when added to the reserve system. This process would integrate the available routes on the acquired land into the surrounding route system and close all unnecessary, redundant, or damaging routes that are not consistent with management objectives. Motorized vehicle access will only be authorized on routes that are specifically designated as open. Use of undesignated routes and illegal routes is not authorized.

Comment: Lands acquired for desert tortoise conservation within desert tortoise ACECs and Priority 1 and Priority 2 habitat linkages identified by the USFWS should be designated closed to motorized vehicle use. Allowing for such use is inconsistent with desert tortoise recovery, fragments habitat, contributes to desert tortoise mortality, and defeats the purpose of the acquisitions.

Cumulative ground disturbance: For each conservation unit (e.g. NLCS, ACEC), the maximum total cumulative ground disturbance within any given, arbitrarily drawn Township (36 square mile are in either a circle or square shape) will not be allowed to exceed 10%.

Comment: This amount of allowable habitat loss within conservation areas is excessive. We recommend it be limited to 0.5%, the same limitation as proposed for habitat linkages.

Compensation Requirements: Land acquisition and implementation of management actions to fulfill ratio requirements for project-related impacts to desert tortoise must meet all of the following criteria:

Comment: We recommend that all compensatory habitat acquired to offset impacts from projects be permanently closed to uses incompatible with conservation including but not limited to motorized vehicle use, livestock grazing, supporting horses and burros and any activity that would result in habitat loss.

7. Alternative Specific Desert Tortoise Conservation Measures for alternatives 1 through 6.

Comment: Please provide an explanation and rationale for not using a consistent desert tortoise threshold in determining what habitat impacting projects (non-linear) would be allowed within conservation areas? The number ranges from 2 to 5. Please do the same for the compensation requirements, which range from 5:1 to 10:1.

8. Additional desert tortoise conservation action recommendations

We understand that within the western Mojave region, at a minimum, the Desert Tortoise Research Natural Area (DTRNA) shows indications that desert tortoise populations are reproducing more successfully and that the mortality of adults and sub-adults is lower. We attribute these positive

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indications to the long-term commitment by BLM in conjunction with the Desert Tortoise Preserve Committee to fully protect the area from various impacting land uses including livestock grazing, motorized vehicle use and mineral development.

We strongly recommend that conservation actions within all reserves established for the conservation and recovery of the desert tortoise include establishing a number of DTRNA-like areas, with the same level of land use restrictions, within each reserve unit (e.g., desert tortoise ACECs) as a means to accelerate recovery on a landscape scale. The size of the DTNA is approximately 30 square miles and the area has been fully protected by BLM from the incompatible uses identified above for approximately 35 years.

Attachment 3: Desert Bighorn Sheep

Appendix E describes the Management and Conservation Actions, including Allowable Uses and Use Restrictions throughout the planning area. The following comments on Appendix E are specific to desert bighorn sheep.

1. Scope of management and conservation actions. Management and conservation actions for desert bighorn sheep, as well as all natural communities including covered and planning species, should be described on a plan-wide basis rather than limited to Development Focus Areas (“DFAs”) as presented. As presented, the reader will likely assume that management and conservation is directed at DFAs rather than throughout the planning area. The approach to management and conservation for natural communities and species falling within DFAs should be a subset under the broader plan-wide approach. The NCCP Act requires that natural communities throughout the planning area are permanently protected sufficient to ensure the conservation of covered and planning species.
2. Specially designated habitats. For desert bighorn, two specially designated habitats are considered, Mountain Habitats (core areas) and Intermountain Habitats (connectivity linkages).
 - a. The term “core areas” is used repeatedly, but there is no explanation as to its definition or as a habitat designation by the California Department of Fish and Wildlife or other REAT agencies. If core areas are essentially defined by mountainous terrain with a minimum 15% slope, then that should be clearly stated. If the presence of desert bighorn, in addition to minimum slope requirement, in defining core areas, that too should be clarified.
 - b. The term “connectivity linkages” is used repeatedly, apparently intended to identify intermountain habitats. However, limiting conservation of such linkages to generally linear pathways of land with a minimum width of only 1.2 miles appears generally insufficient and clearly will not ensure that intermountain habitats are sufficiently conserved. We find no justification for the selection of linkage habitats having a minimum width of 1.2 miles and no supporting references or management documents indicating that such narrow pathways would ensure desert bighorn movements and gene flow between existing populations in mountainous habitats.
3. General comments on conservation and management of desert bighorn sheep. It appears Appendix E is intended to provide a framework, guidelines and actions for conserving and managing desert bighorn within the planning area. References to Wehausen 2012 are made in certain sections regarding delineation of types of habitats utilized. The framework, guidelines and actions associated with conservation of desert bighorn should be derived from and be consistent with the draft conservation plan prepared for the CDFW by Wehausen. We appreciate the many goals and objectives to be taken to manage and conserve bighorn throughout the planning area. We consider the following to be essential in preparing a foundation for conservation of this species:
 - Protect and maintain mountain and intermountain habitats to stabilize and increase populations, maximize intermountain movements and gene flow.

- Eliminate competition from domestic livestock by removing grazing and retiring allotments affecting the Ord, Newberry, Rodman, Old Woman, Kingston, Chocolate Mountain/Soldier Pass area in the Inyo Mountains and Sylvania/Last Chance mountain ranges.
- Remove impediments to movements within mountain and intermountain habitats such as fences, and restore critical habitat linkages currently blocked by impassible roads, freeways and canals.
- Restore naturally occurring water sources and protect from degradation due to water diversion, trampling and fouling from burros and horses.
- Eliminate burros and, or horses from the following areas: Argus, Panamint, Owlshhead, Quail and Granite Mountains.

4. Goals and Objectives for conservation of desert bighorn sheep:

- a. **Goal BISH1/Objective BISH1.1:** Conserve mountain habitat within occupied ranges for desert bighorn in the Plan Area. Target the following mountain range management units known to support bighorn sheep (defined by CDFG; listed below) as well as other mountain ranges throughout its range in the Plan Area.

Comments: The eight mountain ranges chosen are ones where hunting permits are issued by the CDFW, and are but are but a fraction of the ranges currently occupied. A list of occupied ranges is readily available from the CDFW and all of them need to be included under this objective. Certain occupied ranges may have a higher priority for management and conservation based on metapopulation processes and should not be prioritized merely because they are subject to permitted hunting. In addition, ranges should be added to the list that the CDFW considers as having a high potential for future occupation by desert bighorn.

At the bottom of page E-81 is a measure that would prohibit renewable energy development within two miles of a desert bighorn hunting zone. This recommendation should be modified such that all occupied ranges, and those having high potential for occupation, are included.

- b. **Goal BISH1/Objective BISH1.2:** Conserve intermountain habitat, including desert floor wash, for desert bighorn sheep throughout its range in the Plan Area, ensuring corridors of at least 1.2 miles in width, in the following areas and others needed to maintain connectivity:

Comments: Corridors 1.2 miles wide do not conserve intermountain habitat in most situations. Any such value is built on an unstated assumption that providing a corridor of some designated minimum width will provide adequate gene flow. There is no evidence that this is a valid assumption. The amount of opportunity to cross between ranges may have a great effect on crossing rates in addition to the resistance associated with distance between ranges. Cutting many miles of available corridor down to 1.2 miles may cut intermountain crossings down greatly and thus also gene flow that is so important to these sheep.

There is yet another factor to consider with regard to minimum corridor width – the perceived width to individual desert bighorn. If a solar or wind farm were located on either side of a corridor, the perceived corridor width would decrease with distance, eventually appearing to narrow to the point where no through corridor existed. To be effective, any designated minimum corridor width would need to be at its midpoint, from which it would need to steadily increase in width in both directions until reaching the intended mountain habitat. Additionally, the wider the valley the wider the most constricted middle corridor width would have to be for all such corridor to be equal from the perception of individual bighorn sheep.

In addition, the intermountain habitat is not used exclusively for movement and linkage. Lower elevation forage is essential for ewe nutrition during pregnancy and intermountain habitat provides this important forage especially during early spring.

- c. **Goal BISH1/Objective BISH1.7:** Increase the number of subpopulations in the metapopulations by restoring bighorn sheep to suitable but currently vacant mountain habitats that are connected to occupied areas by maintainable intermountain travel corridors.

Comments: This objective targets 16 mountain habitats that are associated with intermountain habitat linkages. We recommend that the ranges be ranked according to their suitability to sustain bighorn populations. Some may be suitable due to essential habitat elements including forage and permanent surface waters, such as the Sacramento Mountains, and the Ivanpah and Mescal Ranges. Some having essential habitat elements may be unsuitable in their current condition due to excessive burro populations, such as the Owlhead, Quail and Granite Mountains (within Fort Irwin). Lastly, some may be unsuitable in sustaining permanent populations due to lack of surface water, such as the Pinto, McCoy and Soda Mountains (north of I-15). It should be noted that the Soda Mountains south of I-15 has been recolonized and currently sustains a permanent population. We recommend using Wehausen's draft management plan for desert bighorn (Wehausen 2012) in preparing a list of ranges for restoring populations and the specific management actions that would be needed to make the ranges suitable in sustaining permanent populations.

Attachment 4: Transmission

Prioritizing Transmission to lower-impact areas within DFAs

Transmission projects currently have a long-lead time, and expediting transmission to the DFAs could be a key incentive for the Plan. The DRECP should describe the mechanisms to prioritize transmission infrastructure to the DFAs, and in particular to those lands identified as disturbed or degraded within the DFAs. The CEC should work with the California Independent System Operator (CAISO) and the California Public Utilities Commission (CPUC) to develop mechanisms to prioritize these projects, such as designating these disturbed or degraded areas within DFAs as policy-driven projects within its Transmission Planning Process (TPP).

Incorporating the DRECP with other transmission planning efforts

We recommend that the DRECP be fully integrated with the TPP. Additionally, the DRECP should look to and reference other state and regional long-term planning efforts affecting the plan area underway at the CAISO, the CPUC, the CEC, WestConnect and the Western Electricity Coordinating Council (WECC). Many regional reports and recommendations call for a large amount of transmission to come into the plan area, yet are not referenced in the TTG Report or elsewhere in the December Draft. Regional coordination could address many of the variability issues from integrating large amounts of renewables from the Plan Area. Much of this work is already underway and the DRECP does a great disservice by ignoring this work.

An analysis of transmission impacts must consider biological impacts.

The TTG Report uses total acreage as the only factor for determining transmission impacts (TTG Report, page 2). The full extent of transmission impacts for each alternative should be considered by the REAT in determining a preferred alternative (TTG Report, iii), and this analysis *must* include other metrics such as biological and other land-use conflicts as well as existing infrastructure. These factors have great impact, not only on the conservation objectives of the DRECP, but also on price, which can be a determining factor in transmission planning. Given the uniquely large amount of land use and biological information obtained as part of the DRECP, biological and land use information should be readily available. We also recommend that the DRECP utilize the recent Environmental Data Task Force report prepared for the WECC as an initial guideline to determine suitable metrics for determining transmission impacts and apply these metrics transparently.

TTG Report Assumptions, Page 2

The TTG Report assumes new transmission will be needed to serve 15,000 MW (assuming lines serving 7,500 MW are either approved, operational or under construction). This assumes that the total MW out of the DRECP area will be 22,500—over the high end of the current energy assumption of 20,000-22,000 MW. As discussed elsewhere in the joint environmental comments, this calculation rests on incorrect assumptions and outdated demographic information and should be re-calculated. Additionally,

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the TTG Report assumes 1,500 MW from DOD lands *added* to the high end of the DRECP number. This 1,500 MW should not be additive to the total MW assumed out of the Plan Area, which is based on demand. Moreover, an assumption that each project will require new transmission ignores existing capacity that may be freed up from fossil fuel retirements, decommissioning of renewable projects, and business and policy factors which favor upgrading existing lines. The TTG Report does not analyze what existing transmission lines will need to be upgraded anyway within the term of the DRECP to address issues such as aging infrastructure. In fact, the transmission analysis of Alternatives 1 and 3 assume there will be *zero* upgraded delivery lines (TTG Report, page 4), a finding that seems untenable given the term of the Plan. Moreover, the TTG Report does not look at non-wire alternatives despite recent FERC orders and other drivers requiring these to be a key element of current and future transmission planning. These options will certainly improve within the term of the Plan. The TTG Report likewise didn't consider high-voltage direct current transmission, which could minimize infrastructure, nor did it consider maximizing the size of transmission lines to allow for adding capacity later.

TTG Report, General

The TTG Report generally does not reference sources for their assumptions and formulae, and when sources are given, they are not dated. The TTG should base their assumptions and formulae on the most current applicable reports and studies from WECC, and the TTG Report should include references to verify this.

TTG Report, Page 1

The TTG did not analyze new Alternative 4. Transmission impacts should be a factor in determining a preferred alternative; therefore the transmission impacts of Alternative 4 must be analyzed.

TTG Report, Figures 1-6

Recognizing that the TTG is a conceptual exercise, the maps contained within the TTG Report should at least reference existing transmission infrastructure (including voltage) and land use designations, as well as the reserve design. This information is critical for assessing the feasibility of the DFAs. Moreover, by showing existing lines and their voltage, it should be possible to show which lines could be upgraded to a higher voltage.

TTG Report, Assumptions regarding Energy Displacement

The TTG Report assumes that renewable energy in the Plan Area will displace out-of-state fossil fuel resources but does not assume any out-of-state renewable resources will serve the Plan Area (page 12). This is inconsistent with the energy estimate in the December Draft documents which assume the importation of 25% of new renewables. The TTG Report should model the import of renewables from renewables-rich states such as Wyoming, Nevada and Arizona. The TTG Report looks *only* at the 2020 pre-renewable cases prepared by the California Transmission Planning Group (CTPG) to determine the availability of existing transmission capacity. This report is no longer used by the CAISO and is outdated. The TTG should compare more recent reports, including those prepared by the WECC, WestConnect and CEC. In particular, the 2012 WECC report should be incorporated. The TTG Report's equal split of

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displaced fossil generation within the four regions seems highly unlikely. The TTG should reference these assumptions and make sure the most current data and forecasts are used.

Attachment 5. Energy Projection Analysis: Estimating Future Generation Capacity Requirement from the Plan Area and Distribution of Renewable Energy across DFAs

The calculation of future electrical demand is a complex and critical matter underlying the very purpose and need for the DRECP. Much work has gone into developing the assumptions for the energy and acreage calculator (the "Calculator") by the CEC and DRECP staff and consultants, which we appreciate. There remain serious concerns, however, with both the assumptions used to model future electric demand, and with how the model's output is being characterized and translated to proposed actions. An additional concern is the fact that the public has not been provided the full suite of assumptions DRECP used to determine its stated energy targets, and we still have an imperfect picture of all model components.

Incomplete Information

The December Draft is mute regarding a number of assumptions used to derive its projections, including the total for and breakdown of distributed generation, as well as forecasted electricity demand from EVs. This is unfortunate, since these are big pieces of the puzzle and complete information is essential to fully understand and respond to DRECP's proposed energy target.

Appending the current spreadsheet model with a complete explanation of all the input values would have been helpful for stakeholders and other readers. Instead, we are given a set of conclusions with only some of the assumptions underlying them. We request that DRECP provide its current spreadsheet model and full set of input assumptions at the earliest opportunity, in order to allow stakeholders and the public at large adequate time to fully review and comment on this seminal component of the Plan prior to its being further set in stone in the CEQA/NEPA document.

Based on the incomplete information provided, however, it appears that certain critical inputs have reverted to their original values (i.e., from the first release of the Calculator's figures); further, it is not clear if agreed-upon corrections have been made, for example, regarding outdated figures for future demand growth and previously overstated energy usage for plug-in hybrids. We would like to know what, if any, corrections have been made, as we have ongoing points of concern with DRECP's estimates of generation needs for the state.

Demand Projection Continues to Rely on Outdated Population Forecast

The current DRECP draft summary of Sierra Club's comments in June 2012 mischaracterizes those comments as an attempt to increase efficiency values, when actually the main change proposed was related to projected demand as a result of using the most current *demographic information*.

The DRECP December Draft at p. L-2 states: "Demand Growth will be 1.5% per year, in line with recent economic/demographic projections used by the Energy Commission's Demand Analysis Office." This is the same growth rate used *prior* to our request to use updated demographic information released by the Department of Finance.

In May 2012, the state's Department of Finance (CA Dept of Finance, 2013) revised its population forecast dramatically downward, which should be a critical input for electricity demand. The newest forecast from January 2013 further revised the population downward, and predicts that the population of California will be 47.69 million in 2040 -- 6.5 million people, or 12.1%, less than the demographic assumption behind the outdated 2011 CEC forecast value of 54.22 million.

In reverting to the old forecast, the Calculator grossly overstates electricity demand in 2040 by roughly the equivalent of the combined population of the cities of Los Angeles, San Diego, San Francisco and San Jose, which is not supportable.

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The downward revision in the population forecast should be reflected in a proportionate reduction for 2040 compared to the prior DRECP assumption. Our estimate is that the electricity demand growth should be reduced by 0.32% to 1.18% per year, to reflect the fact that the 30-year average population growth rate from 2010 to 2030 has been reduced from 1.14% to 0.82%--a reduction of 0.32%.

The assumed efficiency savings of -0.83% per year should then result in a net growth (after efficiency savings) of 0.35% per year, and a cumulative net demand growth of only 11% between 2010 and 2040. These revisions preserve the same per capita electricity use in 2040 as in the initial DRECP model.

The DRECP is required to use the best available information and methods in preparing the HCP/NCCP. This applies not only to the Plan's science, but to all elements of the NEPA/CEQA review. This includes the projection of future electrical demand, which affects the purpose and need for the Plan. We once again request that DRECP incorporate the most recent and best population forecast for California, found on the Department of Finance website:

<http://www.dof.ca.gov/research/demographic/reports/projections/>.

Rate of Energy Efficiency Deployment

As we noted in the past, in the context of meeting its commitment to reduce greenhouse gas emissions, California must have robust energy efficiency. Yet the December Draft assumes the same 0.834% per year figure for energy efficiency savings used in the original early iteration of the Calculator that the CEC prepared for the DRECP. This rate is only slightly better than the twenty-year historical average (1990-2010) and falls short of the adopted state policy for 2020 which requires about 1% savings per year additional to the committed savings in the 2007 forecast.

Given the aberrant period during the 1990s when efficiency efforts were greatly reduced, we maintain that 0.834% is a modest efficiency rate. For comparison, as of 2011, seventeen states were projecting significantly more electrical sector efficiency savings between 2011 and 2020 than California—several are planning more than double the CEC's estimate. Yet the DRECP is reluctant to assume even meeting the state's adopted goal of 1% per year in this decade. Longer term, expert analysts have recommended an efficiency savings rate of 1.3% per year as technically necessary to reach the state's 2050 goal of 80% GHG reduction. While acknowledging that such a high rate "is historically unprecedented over a sustained period," the authors nonetheless point out that "This level is...consistent with the upper end of estimates of long term technical EE potential in recent studies."³

Energy efficiency is one of the most valuable tools available for reducing GHGs. Further, it is often the lowest cost resource, and a prudent investment to avoid the energy losses and high infrastructure costs of remote generation requiring hundreds of miles of new or upgraded transmission. We have an obligation to maximize the least expensive options to protect utility customers, particularly people with low and fixed incomes.

Energy efficiency also produces the fewest impacts on the environment with virtually no effects on ecosystems and wildlife. As we increase our RPS in the future, energy efficiency becomes even more essential, not just from an environmental standpoint, but also from the standpoint of economics and

³*The Technology Path to Deep Greenhouse Gas Emissions Cuts by 2050: The Pivotal Role of Electricity*, James H. Williams,^{1,2} Andrew DeBenedictis,¹ Rebecca Ghanadan,^{1,3} Amber Mahone,¹ Jack Moore,¹ William R. Morrow III,⁴ Sneller Price,¹ Margaret S. Torn^{3*} ¹Energy and Environmental Economics, ²Monterey Institute of International Studies, ³Energy and Resources Group, University of California, Berkeley, ⁴Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory; Scienceexpress, November, 2011, p. 3.

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reliability. In sum, it is reasonable to assume that California will at a minimum achieve its stated energy efficiency goal.

Base Load Generation

Given the DRECP model assumptions regarding retirement of other forms of base load generation, including retirement of all in-state nuclear, it will be critical to develop replacement base load generation in order for the grid to be able to function with high penetration of renewable energy. We concur with the concept that geothermal generation should be a constant in all alternatives.

Although geothermal resources are geographically constrained, they are abundant (a stated 350,000 acres) in the Plan area, and they are essential to promote. This can be done by incentives and by prioritizing geothermal areas for transmission.

Originally, the DRECP model assumed 3500 MW of geothermal energy would be developed in California, of which 2800 MW would be in the DRECP. In the December Draft the geothermal generation assumption is similar. However, a value for biomass was not given in Appendix L. We request that the calculations that are used for these base load resources be more fully explained.

Electricity Needs for Electrification of Transportation

Electrification of transportation is an important element in the state's carbon reduction program, as well as an important potential driver of future electric demand. Our comments have relayed concerns about the assumptions used in prior iterations of the model, and the CEC staff agreed to modify the percentage of miles driven on electricity (the "utility factor") from 0.90 to 0.72. However, it appears that corrections to the utility factor were not carried forward. Again, full disclosure of the current spreadsheet model and assumptions is necessary. This is not a question of a Sierra Club alternative, but rather is a correction to the CEC model.

Amount of Distributed Generation

The December Draft doesn't clarify total renewable distributed generation (DG) assumed for the state as a whole, or what portion of that would come from the desert region. Instead, Appendix L asserts that DG will exceed current targets.

However, current targets are only for the current decade, while the DRECP extends to 2040. We request the DRECP to clearly state its DG assumptions and the rationale for those numbers. Furthermore, we estimate the state's current Zero Net Energy goals will require over 15,000 MW of residential rooftop solar PV, and additional rooftop PV for commercial buildings. We have recommended that DRECP include at least enough rooftop PV in the Calculator to meet minimum requirements of the State's adopted Zero Net Energy Buildings policy.

Amount of Energy Storage

In contrast to prior iterations of the Calculator, the new assumption for storage is 15% of total energy in 2040. As explained in the text-specific notes in the table, this amount is excessive, and would translate to more than half of intermittent renewable generation being stored.

Distribution Profiles

Rule 4 (no overlapping acreage) merits further scrutiny. We support conjunctive use of land by solar and wind projects, and potentially geothermal fields as well. This should be encouraged where feasible and where otherwise benign to terrestrial and aerial habitat. Overlapping use is also an excellent mechanism to minimize environmental impacts across the landscape, and coincidentally to potentially

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minimize mitigation costs. Although the opportunities for conjunctive use may be limited, we recommend revisiting this rule to determine an appropriate factor to account for its potential.

Minimum Requirement for Insolation

Please provide the basis for the stated minimum insolation requirement of 6.5 kilowatt-hours/ square meter/day for solar generation. Solar PV is clearly economic with less insolation, as demonstrated in and around the Central Valley where large PV projects are being constructed with lower levels of insolation.

Acreage per Megawatt of Solar Plants

We appreciate the DRECP's prior correction of the land intensity of solar energy, and reiterating this assumption in the December Draft. However, without the spreadsheets it is not clear whether this is accurately reflected in the current DRECP acreage results, as there was previously a discrepancy between what was stated in the documentation and the numerical calculations for solar energy.

Wind Resource Potential

The December Document measures the available wind resource using 50 meter wind speed maps. However, according to NREL: "Areas with annual average wind speeds around 6.5 meters per second and greater at 80-m height are generally considered to have a resource suitable for wind development. Utility-scale, land-based wind turbines are typically installed between 80 and 100 m high."

http://www.windpoweringamerica.gov/wind_resource_maps.asp?stateab=ca

It would be consistent and more understandable, thus, if DRECP used 80 meter (or 100 meter, if available) wind speed data for the Plan area rather than 50 meter.

MWs vsGWh

We concur that total energy production, GWh, is the true measure of the value of a given renewable technology, whereas nameplate generation, MW, is only partially informative regarding acreage of generation facilities, but is less relevant in respect to electrical energy need and carbon reduction goals. We support presenting both values, but the GWh value should be the one that is measured against the forecast need, rather than an artificial presumption regarding MW of capacity, unless specific capacity factors are demonstrated.

Attachment 6. New vegetation mapping

As described in the first paragraph on page 3.1-29, the State standard for vegetation mapping defines natural communities as vegetation Alliances based on the NVCS, and vegetation alliances are given rarity ranks based on Natural Heritage ranking rules.

State rare Alliances

These are natural communities that are rare throughout California and have a State heritage rank of S1-S2. These alliances are identified as "Rare vegetation community S1 S2" in the new vegetation map under the heading "Conservation" in the map's attribute table.

Locally rare Alliances

As with individual species living on the edges of their range, natural communities (defined as vegetation Alliances) some more common plant assemblages occur rarely within the DREC Plan area. These are natural communities that might carry a State rank of S3-S5, but whose occurrences within DRECP Subareas are rare. Examples include California poppy wildflower fields (*Eschscholzia californica* alliance), and desert grassland communities that occur in Antelope Valley, and Joshua Tree (*Yucca brevifolia* alliance) stands throughout the Plan area. Locally rare natural communities that are not within LLPs should be especially identified for conservation actions. These alliances are identified as "Locally rare or important vegetation community" and further filtered as "Locally rare or important vegetation community High Quality" in the new vegetation map, under the heading "Conservation" in the map's attribute table.

New vegetation map polygons and associated attribute data identify precisely where rare natural communities are, and where the higher quality remaining portions of these rare vegetation types occur within newly mapped areas. When considering how BGOs for rare vegetation alliances will be incorporated into reserve design, the REAT can identify and prioritize the conservation of higher quality occurrences of both State and locally rare vegetation alliances based on the amount (acreage) and quality (see polygon attributes) of vegetation stands mapped.

Until a wall-to-wall alliance level map is available for the DRECP area, more coarse hierarchical components of natural community categories (NVCS Group and Macrogroup classifications) must serve as the best available NVCS units. However, in several DRECP Subareas where no alliance level maps currently exist, there are mapped field plot survey data available (e.g., MDEP field plot data, NECO field plot data) that can be cross-referenced with the new Vegetation Map database to help identify if and where vegetation alliances of high conservation value (State rare and locally rare) occur within more coarsely mapped Subareas. The REAT should incorporate both new vegetation map data and older field plot survey data where available to generate as complete a distribution map for rare alliances in the Plan area as possible.

These comments reiterate CNPS's comments submitted to the DRECP on April 11, 2012 regarding the draft BGO Memo, and the need develop appropriate BGOs for state and locally rare vegetation alliances/natural communities. Our April 11, 2012 comments also included a list of rare natural communities listed according to the general community categories to which they align (e.g., Dune Communities, Riparian Communities), although the new vegetation map data might include additional rare alliances.

Attachment 7: Issues Regarding Durability of Conservation Designations on Public Lands and Protection of Conservation Investments on Public Lands

In response to the “Description and Comparative Evaluation of Draft DRECP Alternatives” document that was released this past December, the Memorandum of Understanding (MOU) between the Bureau of Land Management (BLM) and California Department of Fish and Wildlife (CDFW) that is routinely referred to as the “durability MOU” (included as Appendix J in the December Draft), and the recent BLM guidance on the grazing legislation (IM No. CA-2013-006), released December 21, 2012.

Below we detail some concerns with each of these documents in the context of providing durable conservation for the DRECP that includes conservation efforts on public lands.

MOU and Durability

We recognize that the durability issue is complex and that it is not new. Further, we understand that the MOU reflects several years of discussion and represents real progress in terms of BLM and DFW negotiations. We also understand that the MOU is not intended to be the last word on this key topic of the durability of conservation designations on public lands or protecting conservation investments and efforts on public lands. However, to put it bluntly, the MOU document fails to adequately address this key issue.

In response to earlier concerns we raised with the REAT agencies about the MOU’s treatment of durability, we were told to look at the December Draft and specifically to its proposed treatment of conservation lands managed by the BLM. We have done so and determined that the December draft alleviates none of the questions that we have previously raised regarding this major issue. It continues to rely on designations at the plan level (and only the plan level) to meet the mitigation needs associated with alternate levels of renewable energy development in DFAs and other development associated with the plan.

Plan level designation is, as we have previously acknowledged, a critical part of the concept of durability but it is not, and cannot be, sufficient to meet applicable federal and state conservation objectives because plan level designations can be changed in the future by plan amendments. While such changes would require a NEPA process and potentially additional ESA consultation and compliance, there is no prohibition on the BLM making such changes in the future that could undermine both the conservation reserve design and significant conservation investments in public lands (for example, investments of time and effort in restoration on existing public lands or investments in mitigation lands where private lands within or adjacent to public lands are acquired and eventually transferred to BLM for consistent management).

We were particularly disappointed by the fact that, with the exception of grazing due to the recently enacted legislation, the December Draft does not address this critical issue of durability. At best, the document appears to assume that management protections will endure over time and fails to acknowledge or address what would happen if the management proscriptions were later changed by plan amendment. Moreover, the December draft does not talk about any tools that could be used to ensure greater durability of the conservation designations such as mineral withdrawals. The December draft also fails to address measures to limit other activities in addition to renewable energy development that can the undermine conservation value of the conservation lands. Such measures could include for example, limiting the density of off-road vehicle routes in sensitive areas and limiting transmission lines in conservation areas.

Another major concern we have that is related to the durability issue involves the fact that the December document proposes *reducing* existing protections in a number of areas that are currently protected thus, leaving those areas with lesser protections. For example, several alternatives contemplate reduced protections in areas that are currently designated via land use plans as DWMA's and Mojave ground squirrel management areas. It is precisely because of the ability to make such changes to land use plans that we reject the notion that land use plan amendments (LUPAs) can adequately provide durable protection.

Similarly, at least two alternatives would reduce protections for areas that are subject to contracts with third parties, i.e., Sikes Act contracts and/or memoranda of understanding, including the Desert Tortoise Research Natural Area.⁴ First, we do not see how these contracts can be vitiated or ignored by the agencies. Second, if the agencies believe that these contracts that provide significant conservation value can be ignored, then it is clear that other contracts and MOUs can similarly be ignored in the future. The conservation community cannot be expected to believe that any LUPA, MOU or a Sikes Act agreement will provide durable conservation value in the future if the agencies are now so willing to set aside existing designations and contracts.

Grazing Retirements

With regard to the grazing retirement guidance provided in IM No. CA-2013-006 (interpreting PL 112-74, 43 USCS § 1781a), we have several concerns regarding how this guidance relates to the DRECP.

- The IM is appropriately strong on the Secretary's obligation to terminate grazing permanently on allotments for which grazing permits or leases are relinquished.
- The IM is less strong on the non-discretionary obligation to allocate the forage on those allotments to wildlife use, however, and appears to add additional restrictions beyond the statutory language. The phrase in the statute "make the land available for mitigation by allocating the forage to wildlife use" is not complex and clearly contemplates that the forage will be allocated to wildlife use regardless of whether the lands are later utilized as mitigation opportunities or not. The discussion under "project mitigation" on page 5 of the guidance is particularly problematic as it implies that BLM does not have an obligation to allocate the forage to wildlife use unless it is identified as mitigation for a particular project and for use as forage for a particular listed/proposed/candidate species. This interpretation in the IM is wholly inconsistent with the statutory purpose and the statutory language which clearly states that the action the BLM must take is "allocating the forage to wildlife use"—the statute does not state that BLM must only allocate the forage for wildlife use if the lands are in fact utilized for mitigation, it only requires that they be available for mitigation, and the statute does not state that the allocation of forage is only for ESA listed, proposed or candidate species, it states that forage will be allocated for wildlife use which can include any wildlife species (for example many non-listed species may utilize such forest in the California desert including desert bighorn sheep, mule deer, and migratory birds). Similarly, the discussion of "multiple use" on page 5 of the IM is also inconsistent with the statutory directive. While it is true that any additional restrictions that BLM may put in place to protect the mitigation value of the forage for wildlife use will need to be carefully considered by BLM and that those possible restrictions on other uses may affect

⁴ Other areas that are treated this same way include at least one research natural area and a long term conservation area, the Poppy Preserve. As noted elsewhere in these comments, we strongly object to the inclusion of part of the DTNA in a DFA and urge that it be removed before publication of the draft DRECP.

the valuation of the forage, nothing about that valuation or “making the lands available for mitigation” allows the BLM to delay the allocation of the forage for wildlife use as soon as the permit or lease is terminated

- Further, under the statute, forage must be allocated to wildlife use “consistent with any applicable Habitat Conservation Plan, section 10(a)(1)(B) permit, or section 7 consultation.” Under this language, an existing HCP, permit or section 7 consultation, need not to have anticipated the allocation of this specific forage to specific species of wildlife for the allocation of forage to be consistent with it and no HCP, Plan or section 7 consultation is needed in order for the BLM to allocate the forage on retired allotments to wildlife use. Only where an applicable HCP, permit, or section 7 consultation exists, addresses grazing retirement, and could arguably be said to be inconsistent with the allocation of forage to wildlife use would a new HCP, permit or section 7 consultation be needed.
- The IM’s treatment of BLM’s role in the valuation issue is entirely unclear and appears to require that the valuation for mitigation is done before the forage is allocated to wildlife (which as explained above is inconsistent with the statutory language). While it is undoubtedly true that the valuation is a complex issue and that other agencies may need to be included in that discussion, that valuation can be done at any time, before the lease or permit is donated or after—there is nothing about the immediate allocation of forage to wildlife use at the time the permit is donated that should affect the valuation. The IM also fails to address the kinds of issues that would affect valuation such as, for example, whether or not private water rights were established on the allotment and if so, the current status of those rights. For example: whether those water rights are now retained by private parties with the risk of future development; are now held by another public agency or conservation organization, or land trust for conservation; or are now being deeded to the BLM for the benefit of the public lands and resources thereon.

The IM’s interpretation of grazing leases and permits that are covered – i.e., “existing permits and leases” – appears to be limited in ways not supported by the statute. First, there are several allotments in the CDCA that are entirely missing from the Attachment 1 list although these allotments still “exist”. Second, several allotments that have been purchased for conservation and retirement under the CDCA plan terms in the past but never retired by BLM are not listed. We are particularly concerned that the failure to include all “existing” allotments risks creating a two tiered system where allotments that are no longer active but not formally retired could “spring back” into existence at any time and where some allotments are retired under the CDCA plan terms and others are permanently terminated under the new statutory language. Neither of these outcomes would ultimately benefit conservation efforts on public lands nor provide consistent management direction on public lands in the California deserts.

Attachment 8. Land Use Plan Designations: Terminology and Hierarchy

We have several concerns regarding the proposed Land Use Plan Designations on public lands. We have raised many of these concerns previously with BLM and the REAT agencies and are consolidating those comments below.

- **Issue: Dual Designation NLCS and ACEC:** We object to the proposal to have newly NLCS designated lands lose their ACEC designation. ACEC is a statutory designation under FLPMA that has a long history and many ACECs were designated in the California desert over many plan iterations. We are extremely concerned that, if these historic ACEC designations are not carried forward whether on their own or as a dual ACEC/NLCS designation, there is a high risk of losing historic continuity and obscuring the basis for the ACEC determinations under the Desert Plan and CDCA planning documents which are different than the factors used for NLCS determinations. We have been told that the REAT agencies prefer the single designation because they are worried about double counting or other accounting “difficulties” when there are dual designations. This is not a good reason to limit dual designations—it can be fixed with simple accounting – it is merely arithmetic, not an insurmountable problem.

BLM plans often incorporate overlapping designations because different designations serve different purposes, and management is often limited to protect only those values relevant to those particular designations. Preserving management tailored for specific resources, such as those identified as needing special management in ACECs, is consistent with BLM’s multiple-use management. BLM has often used layering as a way to address management of overlapping resources on public lands. Different program goals, objectives, and actions often apply to the same area of public lands and management designations often result in layering.

Solution: We suggest maintaining all existing ACEC designations as dual designations where there is overlap with any other land use designation.

- **Issue: The Use of Special Recreation Management Areas (“SRMA”) as a Conservation Designation:** The use of SRMA as a conservation designation is confusing to the public—the plain meaning of the words leads most people to believe that this designation is to protect recreation not to limit recreation and other uses to protect other public lands resources. The SRMA designation refers to conservation of recreational opportunities in the desert, not conservation of biological resources and thus should not be considered a biological conservation tool. We have had several recent experiences in discussions with energy industry representatives where they specifically argued that they should be allowed to develop in SRMAs because “there is not much recreation in that area.” These statements and others show how the SRMA designation terminology can easily be misinterpreted and does not alert industry or other members of the public to the actual type of management that the BLM intends for these areas.

Solution: Designate areas proposed for biological conservation as ACECs: Areas where special management is needed to protect resources and their values.

- **Issue: Failure to address motorized recreation.** The current SRMA designation fails to distinguish between areas designated for motorized vehicle use and areas designated for hiking and other non-motorized uses (such as the Pacific Crest Trail). Because the former will clearly provide much less in the way of conservation than the latter, this information must be made public and reflected in the impact analyses of the various alternatives.

Solution: Special Recreation Management Area (Motorized Recreation) “SRMA(MR)”: Areas where special management is needed to protect conservation of resources from motorized

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recreational uses. **Special Recreation Management Area (Quiet Recreation) "SRMA (QR)":**
Areas where special management is needed to protect conservation resources and quiet recreation including hiking, camping, and equestrian use.

Issue: Use of SRMA designation as an overlay in existing ACECs. We are concerned that the December document is proposing to provide the SRMA areas more protection than Areas of Critical Environmental Concern (ACECs). For example, in the December document utility scale renewable energy development is excluded in all SRMAs, but not in all ACECs. See, e.g., p. E-9 (stating that utility scale will not be allowed under certain circumstances). The designation and protection of ACECs is called for by the Federal Land Policy and Management Act, 43 U.S.C. § 1712(c)(3), and the statutory language clearly provides authority to protect such areas from the kinds of impacts that large-scale renewable energy development could unquestionably have on these "important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes," 43 U.S.C. § 1702(a). In contrast, there is no express statutory basis for SRMAs which are found solely in the BLM planning handbook.

Solution: Conservation management should be strengthened in ACECs. Renewable energy development should be excluded in all ACECs and SRMAs. Moreover, SRMA designations should only be relied on for conservation in areas that are not already designated at ACECs.

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