Comment Set B8 – Coalition of Community Groups and Individuals

November 13, 2020

By Email: Sarah.Mongano@slc.ca.gov
and CEQA.comments@slc.ca.gov
Ms. Sarah Mongano
Senior Environmental Scientist/
CSLC Project Manager
Suite 100-South
100 Howe Avenue
Sacramento, Calif. 95825

Re: Stagecoach Solar NOP Comments

Dear Ms. Mongano:

We are a coalition made up of the following community groups, businesses, agencies and individuals: Lucerne Valley Economic Development Association (LVEDA), Homestead Valley Community Council, Lucerne Valley Market/Hardware, Church of Our Lord and Savior (Lucerne Valley), Johnson Valley Improvement Association, Yucca Mesa Improvement Association, Morongo Basin Conservation Association (MBCA), San Bernardino Valley Audubon Society, California Desert Coalition, Granite Mountains Desert Research Center, Basin and Range Watch, Friends of Big Morongo, Expert Appliance Service, Lucerne Valley Realty, The Rock Corral Ranch, Jubilee Mutual Water Company, Inc., Center Water Company, Inc., Bill Peterson, Alyn Peterson, Pat Flanagan, Neil Nadler, Frazier Haney, Brian Hammer, Sue Hammer, Robert L. Berkman, Sharon Dove, Susan Blair, Barry Blair, Randy Polumbo, Nicole Hallam, Gregg Hallam, Kathryn Anema, Sheila Bowers, Jenny Wilder, Ed Ruscha, Elizabeth Stewart, Matthew McCarthy, Raymond M. Gagne, Jr., Gene Parsons, Star Decker, Kathy Ridler, Rod Ridler, Sheri Bush, Barbara Idouchi, Aaron Idouchi, Lorraine M. Cross, Richard Selby, Roger Peterson, Jennifer Bolande, Sara Fairchild, Meg Foley, Jack Unger, Rick Sayers, Dennis Morrison, Linda Morrison, Theresa Taylor, Todd Jones, Ann Garry, Dave Garry, Paula Deel, Paul Deel, Cindy Charlton, Neville Slade, Tamara Slade, John Smith, Bryan Baker and Betty Munson. Together, we represent a broad spectrum of residents, businesses, organizations, recreationists and conservationists in the High Desert of San Bernardino County (the "County"). There are scores of like-minded persons and organizations with similar views on the proposed Stagecoach Solar Project (the "Proposed Project"), but, given the time constraints imposed upon us, only a handful of them were able to sign onto this letter.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

As you may recall, several of the above-referenced organizations and individuals made verbal comments at the October 28, 2020 public scoping meetings concerning the issues and concerns that must be addressed in the Environmental Impact Report (the "EIR") for the Proposed Project, the proposed Edison regional substation (the "Calcite Substation") and the generation transmission line (the "Generation Transmission Line") that would link the Calcite Substation to the Proposed Project. Some of our comments also addressed the environmental effects of the utility-scale renewable energy projects that would be enabled by approval of the above-referenced development, including the three utility-scale solar projects (in addition to the Proposed Project) under application in Lucerne Valley (those three utility-scale projects, and the further utility-scale projects that they and the Calcite Substation would enable, will be referred to below as the "Cumulative Projects").[1] All of our comments expressed opposition to the proposed new development.

The California State Lands Commission (the "CSLC") sent out a Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting (the "Notice"), dated October 13, 2020. The Notice states that the CSLC, "as lead agency under the California Environmental Quality Act (CEQA), will prepare an Environmental Impact Report (EIR)" with respect to the Proposed Project. In this letter, we will further comment on the proper scope of the CEQA-mandated inquiry that must be undertaken and incorporated in that EIR. Only by preparing an EIR that comports with the scoping comments stated in the referenced oral comments, and in this letter, can the CSLC, as the designated lead agency, prepare an EIR that fully and accurately reports the full range of "unavoidable and significant" impacts that the Proposed Project, the Calcite Substation, Generation Transmission Line and Cumulative Projects would inflict on sensitive human and natural communities, locally and regionally. B8-1

It is particularly critical that a full and proper, CEQA-compliant EIR be prepared given that:

(1) the Proposed Project, if approved, would fundamentally and irrevocably industrialize over 3,000 acres of crucial Lucerne Valley desert habitat – and provide justification for the Calcite Substation and Generation Transmission Line needed to connect it with the Proposed Project. This would, in turn, foster the siting of additional nearby utility-scale Cumulative Projects that could then interconnect to the grid through the Calcite Substation, thereby transforming huge swaths of Lucerne Valley into an industrial zone that would inevitably destroy its human and natural communities. The Proposed Project, and the three utility-scale renewable energy solar projects that are currently under application for Lucerne Valley, would totally repurpose over 8,136 acres of desert land in Lucerne Valley;

---

[1] LVEDA made its scoping comments through its president, Chuck Bell. MBCA made its verbal scoping comments through its president, Steve Bardwell. Lucerne Valley Market made its verbal scoping comments through its director, Linda Gommel.

We request that all future notices and communications pertaining to the Proposed Project be directed to our representatives, Chuck Bell and Steve Bardwell, at the following email addresses: chuckb@sisp.net and steve@infinityranch.net.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

(2) the Proposed Project site consists of an essentially undisturbed alluvial valley that is highly environmentally significant in terms of habitat connectivity. The mountains that all but surround the project site are federally-declared and protected Areas of Critical Environmental Concern ("ACECs"). One of those ACECs, the "Ord-Rodman National Conservation Lands," is a part of the National Conservation Lands System, and hence has elevated environmental significance and protection. B8-2

(3) the Proposed Project site also falls within the Multi-Species Habitat Conservation Plan/Natural Community Conservation Plan ("MSHCP") which the County and the Town of Apple Valley have long been co-developing. As stated in the Planning Agreement between the Town of Apply Valley and the United States Fish and Wildlife Service ("USFWS"), the MSHCP will conserve "approximately 44,000 acres of identified wildlife linkages that connect its plan areas to approximately 2.4 million acres of conserved habitat in the Mojave Desert, at the intersection of three significant wildlife linkages that are not only important to the region but also the Mojave Desert at large;" B8-3

(4) the Proposed Project site is within the County-recognized Lucerne Valley Community Plan Area. The County's Renewable Energy and Conservation Element ("RECE") – specifically its Policy 4.10 -- expressly prohibits the development of utility-scale renewable energy projects within Community Plan Areas like Lucerne Valley; and B8-4

(5) the Proposed Project, the Generation Transmission Line, Calcite Substation and Cumulative Projects (the Generation Transmission Line, Calcite Substation and Cumulative Projects will be referred to collectively as "Related Development") would be built in an area that hosts a well-established human community which, while dispersed over a fairly large area, is substantial in the aggregate. By way of an example, the Proposed Project site is only approximately 2,600 feet from St. Joseph's Monastery, an extensive 80-acre Catholic religious community/monastic facility (and church) that has made Lucerne Valley its home since 2005. B8-5

The EIR must acknowledge, in its "Mandatory Findings of Significance" section that the Proposed Project – even if it were not barred outright by the RECE and environmental strictures -- would have a host of negative, unavoidable and highly-significant impacts across the board. In order to be CEQA-compliant, the EIR cannot paper them over with the usual suite of band-aid mitigation measures that are typically proposed for desert utility-scale projects. B8-6

1. A Description of the Proposed Project

Construction on the scale contemplated for the Proposed Project and Related Development would clearly generate a full panoply of significant and unavoidable impacts that must be carefully assessed in the EIR. The sheer magnitude of the proposed development can be discerned from the project descriptions published by the CSLC.

A. <u>Project Descriptions Provided with the CSLC's "Environmental Justice Outreach Letter" and in the Project Application</u>.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

According to the project description included with the CSLC's "Environmental Justice Outreach" letter, dated February 19, 2020 (the "EJ Outreach Letter"), the Proposed Project would consist of a 5,359-acre utility-scale renewable energy (solar panel) facility and a 7.6-mile 220 kV Generation Transmission Line to the proposed Calcite Substation. The EJ Outreach Letter states that the project area would be 3,600 acres, with "associated infrastructure to occupy approx. 1,750 acres." It is not clear from the EJ Outreach Letter whether that acreage figure is meant to encompass the land needed to construct the Generation Transmission Line and the equipment and structures making up the Calcite Substation. Its buildings would be approximately 10 to 80 feet tall, while transmission line structures would be 50 to 180 feet tall, according to the DEIR (p. 3.1–38) for the Ord Mountain solar project. B8-7

According to the "Aurora Solar LLC (a subsidiary of Avangrid Renewable LLC) Application for Lease of State Lands (August 2016)" (the "Application"), the Proposed Project would produce up to 200 MWs (using fixed-tilt or tracking solar panels) on minimally disturbed land west of Hwy. 247, south of Stoddard Ridge, west of Black Mt. and north of Sidewinder Mt. (these two mountains are part of the Granite Mountains).

The Proposed Project site – which consists of only minimally disturbed mature creosote bush scrub that is hundreds to thousands of years old – is all but surrounded by DRECP-declared ACECs. This is depicted on Figure 4 of the attached environmental justice letter, dated April 30, 2020, which was sent to the CSLC by a coalition of High Desert residents, businesses and organizations (the "EJ Letter"). As also indicated on Figure 4, the Proposed Project site is in the midst of an important wildlife corridor which is incorporated in the DRECP as the "Desert Linkage Network." Lucerne Valley hosts arms of this network that provide passage from the San Bernardino Mountains north through the basins and ranges connecting with China Lake North Range and the southern Sierra. B8-8

Each of the solar panels making up the Proposed Project would require support structures and footings, as well as extensive perimeter fencing, lighting and access/service roads. This would require the grading and removal of the existing desert soil and the plants that anchor it.

The Proposed Project would be of such magnitude that, according to the Application, it would have: (1) an on-site operations and management building for the life of the project with up to 10 permanent full-time employees (a typical utility-scale project does not require any full-time, on-site employees); and (2) its own 34.5/220 kV substation on a 5-acre site for the purpose of stepping-up energy generated onsite to 220 kV for connection to the Generation Transmission Line.

The Application proposed three alternate routes for the Generation Transmission Line. One would traverse BLM land in the Granite Mountains (which is designated by the DRECP as an ACEC) almost exclusively; a second proposed route would be mostly on BLM land (with two short stretches over private County lands, including a final easterly run from BLM land in the Granite Mountains to the Calcite Substation); and a third proposed route would run mostly on private County land in the valley between the Granite Mountains and Ord Mountains. The Application states that transmission poles would be dug into the ground off-site by drilling and foundations would be established for the Generation Transmission Line.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Both the EJ Outreach Letter and the Notice indicate that the project proponent has settled on a proposed route for the Generation Transmission Line that would run through the above-referenced valley, which is the route that would inflict the most environmental harm on Lucerne Valley's environment and residents, especially those living in the relatively narrow inter-mountain area between the Granite Mountain and Ord Mountain ACECs; it would also mean that the Generation Transmission Line would run alongside (and, in places, over) Hwy. 247, which has been designated by the County as a scenic highway (and which is now in the final stages of obtaining inclusion in the State Scenic Highway system, a designation which would provide protection against development that would ruin the desert and mountain vistas that draw motorists to Lucerne Valley and support its economy). B8-9

B. <u>Project Description As Per the Notice</u>. B8-10

The Notice provides a description of the Proposed Project that differs in some respects from that provided in the EJ Outreach Letter and in the Application.

According to the Notice, the Proposed Project and associated infrastructure would be constructed on approximately 1,950 acres within an approximately 3,000-acre project area, with a 5-acre 34.5/220 kilovolt (kV) onsite electric substation and a 5,000-square-foot operations and maintenance building ("O&M Building"), a battery storage facility up to 200 MW and 100 acres in size, solar resource and meteorological measurement stations, a septic tank system and leach field serving the O&M Building, permanent groundwater wells, or an onsite water tank using water transported from offsite providing water for the O&M Building and to wash the PV panels.

According to the Notice, the 220 kV Generation Transmission Line would be 9.1-miles in length, and the proposed Calcite Substation would be seven acres.

The CLSC's Notice also acknowledges that the Proposed Project site includes land in addition to "state school" land under its jurisdiction. As stated in the Notice (on p. 1 of its attachment):

> "The Project area boundary encompasses five sections of undeveloped State land under the jurisdiction of the CSLC, as well as 640 adjacent acres of private land owned by Aurora Solar, LLC [which is the developer]. Private lands and federal lands managed by the U.S. Bureau of Land Management are adjacent to the Project area."

While none of these inconsistencies materially alter the severity or scope of the impacts that the immense Proposed Project, Generation Transmission Line and Calcite Substation would have, the EIR must provide a full, final and definitive description of the Proposed Project that resolves all such inconsistencies.

2. The EIR Must Thoroughly Consider the "Indirect and Secondary Effects," "Growth-Inducing Impacts" and Overall "Cumulative Effects" of the Proposed Project. B8-11

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Under Section 15358(a)(2) of the CEQA Guidelines, indirect or secondary effects "may include growth-inducing effects and other effects related to induced changes in the pattern of land use… and related effects on air and water and other natural systems, including ecosystems." B8-11 cont.

The CEQA Guidelines further note that indirect or secondary effects include "an indirect physical change in the environment...which is not immediately related to the project, but which is caused indirectly by the project." (Section 15064 (d)(2)).

CEQA requires analysis of cumulative impacts and mitigation of such impacts where needed. Cal. Pub. Resources Code § 15130. The EIR must do a complete job of evaluating the Cumulative Projects, including (but not limited to) the utility-scale projects that are currently (and will likely be) under application in Lucerne Valley, and meaningfully analyze their cumulative impacts to resources in the desert areas of California, as well as the cumulative impacts from the many proposed transmission, military expansions and other development projects.

Further, CEQA requires that the EIR give full consideration to "growth-inducing impacts." Specifically, CEQA Guidelines, Section 15126.2(d), says that environmental documents must ". . . discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment . . ." Included in this analysis must be this question: Does the Proposed Project and Calcite Substation encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively?

Still further, CEQA mandates a consideration of "cumulative effects" of the Proposed Project. Section 15355(b) of the CEQA Guidelines says that "the cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects."

Section 15131(a) states that an "EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated social changes resulting from the project to physical changes caused in turn by the economic or social changes." As stated in Section 15131(b), "[e]conomic or social effects of a proposed project may be used to determine the significance of physical changes caused by the project."

The EIR must provide a well-considered discussion of the many direct, and indirect or secondary, growth-inducing – or cumulative – effects of the Proposed Project and Calcite Substation, as well as of the Cumulative Projects themselves.

A. <u>The Proposed Project Would Be Used to Validate the Proposed Calcite Substation, Which Could, in Turn, Be Cited as Justifying the Revival of the Coolwater-Lugo Transmission Project</u>. B8-12

The Proposed Project is being cited by Southern California Edison ("Edison") as justification for establishment of the Calcite Substation in an ecologically fragile portion of

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

North Lucerne Valley. The Calcite Substation is touted for its close proximity to the Pisgah-Lugo transmission line, and, if the Proposed Project were to be approved, it would be only one Generation Transmission Line away from it.

B8-12 cont.

Edison's website makes no bones at all about why it thinks a new Calcite Substation should be established in Lucerne Valley: "[t]he project will connect [i.e., encourage the proliferation of] new renewable generation projects in the San Bernardino County High Desert to the transmission grid."

The DEIR for the Ord Mountain Solar Project contains a key sentence (p. 5-4) that acknowledges that the Calcite Substation would be the linchpin for the industrialization of Lucerne Valley:

> "While Calcite Substation may not induce growth, it could accommodate the development of renewable projects in the Lucerne Valley area, because it would serve as an access point to SCE's transmission grid. For example, the Sienna Solar project is also currently proposed in Lucerne Valley and, similar to the Ord Mountain Solar project, is reliant on the development of the Calcite Substation to be a viable project."

The following conclusion flows unavoidably from the above-quoted sentence: the Calcite Substation could accommodate utility-scale projects in addition to the Proposed Project, such as the Cumulative Projects, and it will induce further utility-scale development in the region.

The prospect of a new Calcite Substation has in fact triggered an influx of proposals for utility-scale facilities in its vicinity: (1) the Proposed Project; and (2) there are three other utility-scale solar projects currently under application (which are considered as being among the Cumulative Projects, as that term is used in this letter): (1) Sienna Solar North, East & West (which would consist of four separate solar generation facilities totaling 1,630 acres); (2) Ord Mountain Solar (483 acres); and (3) Calcite Solar I (which would consist of four separate solar generation facilities totaling 664 acres). Those three projects (whose locations are depicted in red on the maps attached to the EJ Letter as Figures 3 and 5, under the legend: "Proposed County Projects"), together with the Proposed Project, would totally repurpose over 8,136 acres of desert land in Lucerne Valley as industrial sites.[2] Their effects would extend far beyond the project footprints, and the interstitial land – the land that falls between and around the projects --

[2] Proponents of the Ord Mountain and Calcite Solar I projects have put them on hold for the time being, according to the "County of San Bernardino Land Use Services Planning Division Renewable Energy Projects as of March 2020." Nevertheless, they are still very much in the approval "pipeline." Savvy large-scale renewable energy developers file applications to establish "grandfather" status for their projects, and then put them on hold to serve strategic aims. The developers of Ord Mountain and Calcite Solar I might be waiting to see whether political momentum would be generated by approval of the other proposed Lucerne Valley projects. If that happens, you can bet that the "holds" would then be lifted.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

would also be rendered uninhabitable, ecologically dead and visually unappealing due to its unfortunate proximity to the industrially-altered project sites.

B8-12 cont.

Edison is attempting to propel all four Lucerne Valley utility-scale projects into existence by proposing to build the Calcite Substation in order to interconnect them to the grid. The Calcite Substation is so integral to the Ord Mountain Solar project that it is considered a connected project for CEQA review.[3] The green-lighting of any of the four proposed Lucerne Valley utility-scale projects would be cited by Edison as justification for the new Calcite substation. Approval of that substation would, in turn, encourage approval of the four projects, as well as a cluster of additional utility-scale generation facilities in its vicinity.

In short, the Proposed Project – which is the biggest by far of any of the Lucerne Valley utility-scale projects currently under application -- would, if approved, be key to transforming the region into an industrial zone (with Lucerne Valley at its epicenter) characterized by vast complexes of solar panels, graded/scraped land, a honeycomb of roads for construction, maintenance, cleaning and security and a web of visually-intrusive (and electrical field-producing) lines crackling and humming overhead.

With a bevy of new utility-scale projects in the pipeline all clustered around a Calcite Substation – a substation that would provide a critical infrastructure link for new transmission lines -- Edison may well attempt a revival of the highly controversial, intensely opposed: (1) Coolwater-Lugo Transmission Project, which proffered – as one of its chief justifications – the dubious proposition that new transmission would be needed to interconnect posited renewable energy projects to the north, east and south of the Granite Mountains; and (2) the proposed Desert View super-collector electrical substation (at Desert View Road and Milpas Road in Apple Valley), which was to be a relay point for Coolwater-Lugo Transmission Line.

In short, the EIR must carefully consider that approval of the Proposed Project would have an enormous "growth-inducing impact." The EIR must also thoroughly analyze the impact of Coolwater-Lugo, and discuss alternatives that do not open the floodgates to more industrial-scale development.

---

[3] The Draft Environmental Impact Report (the "DEIR") for the Ord Mountain project, which states (in its section 2.1) with respect to the "Calcite Substation Project" (which is described in Appendix K of the DEIR) that "[b]ecause it is a necessary infrastructure improvement to allow the proposed solar and energy storage project to connect to the grid, the Calcite Substation is a connected project for CEQA review."

The referenced proposed Lucerne Valley solar projects are, in turn, cited by Edison as justifying construction of the new substation. As stated by Edison representative, Jennifer Cusack (at a December 6, 2016 public meeting in Lucerne Valley), "we [Edison] have to interconnect new projects."

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B. Approval of One Utility-Scale Renewable Project in the Desert Has the "Secondary Effect" of Creating a "Beach-Head" for the Proliferation of Other Such Projects in Its Immediate Vicinity, All of Which Incrementally Industrialize Hitherto Intact Desert Parcels, Thereby Creating Classic "Induced Changes in the Pattern of Land Use."

B8-13

Desert areas, wild or rural in character, have little attraction for industrial-scale renewable energy facilities, like the Proposed Project, so long as no means exist to deliver the electricity to the grid. Hence, proponents of new renewable energy projects seek to site them next to substations (either those which are in existence or which are predicated on approval of one or more utility-scale projects), or next to other existing renewable energy facilities in order to "piggy-back" on transmission lines connecting their neighbors' renewable projects to the grid. Hence approval of one utility-scale renewable project in the desert has the "secondary effect" of creating a "beach-head" for the proliferation of other such projects in its immediate vicinity, all of which incrementally industrializes hitherto intact desert parcels, thereby creating classic "induced changes in the pattern of land use."

Such projects, because they result in profound and permanent destruction of the natural environs, are often posited as rendering the surrounding desert lands "disturbed," i.e., these parcels can be mischaracterized as biologically-defunct, "damaged goods" no longer possessing environmental, aesthetic and recreational worth. Therefore, they are often mistakenly deemed ripe for more large-scale commercial development, regardless of their existing rural desert designation and irrespective of the above-referenced land use policies dedicated to protecting that character. In short, land use planners' perceptions as to a parcel's environmental, aesthetic and recreational value are strongly influenced by the level of development activity on other nearby parcels, and this is why it is so important that the EIR fully and comprehensively assess the cumulative, growth-inducing effects of the Proposed Project and Calcite Substation, as well as the cumulative, growth-inducing effects of the three other above-referenced utility-scale solar projects under application in Lucerne Valley and of other such projects they engender in the region (of which fall under the definition of Cumulative Projects, as used in this letter).

There are still further "secondary" and "growth-inducing" effects. Once utility-scale renewable projects begin to move in, rural residents move out; this is true because such projects have historically made bad neighbors. The exodus of rural residents would, in turn, accelerate the process of industrialization as renewable project proponents seek to develop former, so-called "disturbed" home-sites.

Attention must also be given to the growth-inducing effects in the arena of inter-connection and transmission, and the ensuing "closed loop" effect, in which a remotely-located generating project like this one is used as a justification for the construction of extensive, environmentally-threatening transmission facilities, which in turn become a justification for more generation plants, and so on. Thus, what on the surface is a generation project having a footprint of "only" approximately 3,000 acres becomes a continuous trigger for more and more transmission and generating projects. CEQA requires an analysis of such secondary effects and growth-inducing impacts, because otherwise these very real consequences grow and multiply "in the cracks" between one project and the next, never undergoing direct scrutiny.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

In short, the enabling of new utility-scale renewable projects, like the Proposed Project, which, in turn, enable new transmission infrastructure projects like a Calcite Substation (that, in turn, beget even further renewable energy Cumulative Projects), would have an obvious "secondary effect" and an "induced change in the pattern of land use." Section 15358(a)(2). The environmental impact of each new generating plant on the desert is large and enduring. Thus the enabling of utility-scale renewable energy projects causes "an indirect physical change in the environment . . . which is not immediately related to the project, but which is caused indirectly by the project." (Section 15064 (d)(2)). The EIR must discuss these crucial factors and their implications. B8-13

Moreover, as part of an "Environmental Justice" analysis (which is more fully addressed below in Section 12), the EIR is required to address the long-term and short-term effects that a proliferation of centralized energy generation facilities would have on the economic welfare of the County's residents. The County's economy is heavily dependent on tourism. It has been estimated at **$1 Billion *per year*** according to a University of Idaho study discussed in Basin Energy Assessment Team's "Renewable Energy Analysis" (October 2013). As part of an effort to promote tourism, Hwy. 247 has been proposed as (and is under consideration for) designation as an official state scenic highway; filling adjacent desert lands with vast new solar fields and transmission would create visual blight that will detract from that effort. B8-14

As will be discussed below, the Proposed Project and Calcite Substation would require extensive scraping, grading and excavation for trenches. This intensive and obtrusive activity would destroy the surface soil on the majority of the 3,000 plus acres involved, which would result in permanent loss of a fragile mini-ecosystem, and the loss of carbon dioxide sequestration capability, which in this desert happens below the surface.[4] Moreover, the required grading and trenching would destroy the vital caliche surface layer and the micro-biologically-rich subsurface of the proposed site. The desert has been likened to a "reverse rain forest," where the most biologically productive systems – the root systems – are underground. B8-15

Hence the EIR must assess, in terms of cumulative effects, the degree to which the Proposed Project and Related Development would lead to a release, rather than a reduction, of greenhouse gases, and these offsetting negative effects must be carefully quantified in the EIR. (The capacity of the Proposed Project and the Related Development for releasing dust, Valley

[4] The EIR must include in its analysis a study of the degree to which the desert's natural ability to sequester carbon would be lost. See "Solar Power in the Desert: Are the current large-scale solar developments really improving California's environment?" UC Riverside. The authors of this article, Michael F. Allen and Alan McHughen, point out in their study, among many other things, that the benefits of reduced GHG emissions from a large-scale solar project are finite, because the project has a limited life, whereas the detriments caused by the destruction of soils entailed by the building and maintenance of the power plant and the related transmission facilities are extremely long-term. "Understanding the lifespans of the solar plants, compared with this long-term slow C [carbon] balance is a critical need for determining if these solar developments represent a net long-term reduction in greenhouse gases." The article concludes that solar projects represent a net loss in that respect.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Fever spores and fine particulates, among other things, must also be addressed in the EIR.) B8-15 cont.

Another aspect of this Proposed Project and Related Development sure to create a cascade of increased environmental problems is that any perimeter road around the project would invite and enable OHV use on the adjacent open desert. The EIR must also address this issue. B8-16

3. The EIR Must Thoroughly Consider All of the Substantial Adverse Effects that the Proposed Project and Related Development Would Have on Natural Communities and Wildlife Connectivity Corridors. B8-17

Given their sheer magnitude and proposed locations, the Proposed Project and Related Development would have substantial and unavoidable adverse effects on irreplaceable habitat, on sensitive or special status plant and animal species, on natural communities and on recognized wildlife corridors. But the proponent of the Proposed Project, having responded in the Notice to five of the six questions posed (they are derived from Section IV of CEQA's Environmental Checklist), declined to state whether the Proposed Project would:

> "d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?"

The EIR cannot, if it is to be CEQA-compliant, side-step meaningful study of this issue. The Proposed Project, Generation Transmission Line and Calcite Substation would be located within scientifically-recognized -- and federally and state-sanctioned -- wildlife corridors and linkages, and in close proximity to extremely sensitive habitat where state and federally listed Special Status Species and covered species are present and/or very close by, such as bighorn sheep, desert tortoises, golden eagles and Bendire's Thrasher. In fact, the area is considered core habitat for golden eagles.

The high biological value of the area in question, in terms of habitat connectivity and species sustainability, is confirmed by the following nationally-recognized scientific studies and maps:

1. The SC Wildlands "California Desert Project" (Penrod et al. 2012), which depicts the "Desert Linkage Network," and SC Wildlands "California Desert Connectivity Project" (Kristeen Penrod et al. 2012) – which is lauded in the draft DRECP as providing "a comprehensive and detailed habitat connectivity analysis for the California deserts" (App. Q (Sections 3.4.1 and 3.4.2)) – and depicts the "Desert Linkage Network." This linkage network reflects the interconnections between individuals of a species and among species, with a focus on how they subsist, migrate and procreate over time as part of a desert knit together by

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

connectivity corridors; [5]

B8-17 cont.

2. Ms. Penrod's report for the Alliance for Desert Preservation, which embodied her comments on the draft DRECP (a copy of which is attached to this letter), expanded the linkage network depicted in the above-referenced publication, and demonstrates that almost all of Lucerne Valley should be protected from large-scale development as part of a far-reaching wildlife linkage network integral to connecting the intact landscape block of the San Bernardino Mountains with the desert region to the north;

3. "Desert Bighorn Sheep Intermountain; Unfiltered Core Habitat, DRECP" map, prepared by the California Dept. of Fish and Wildlife,[6] which are considered to have a "Very High" to "Moderately High" habitat on the Granite Mountain and Ord Mountain ACECs. The Granite Mountain ACEC nearly touches the Proposed Project site;

4. Bighorn Sheep Intermountain Habitat (California Dept. of Fish and Wildlife 2013);

5. "Golden Eagle Nest Occurrences, DRECP map" (prepared by the California Dept. of Fish and Wildlife) and "DRECP Species Distribution Map for Golden Eagles, DRECP map," prepared by Conservation Biology Institute (CBI). SC Wildlands has stated, in a comment letter, dated November 10, 2020, submitted to the CSLC regarding the Proposed Project (the "SC Wildlands 11/10/20 Letter," a copy of which is appended to this letter as Attachment 5 and incorporated in this letter by reference), that there are 40 golden eagle nests within an 11-mile radius of the Proposed Project, and that a number of bird species, particularly large-bodied raptors, have been recorded crashing into solar arrays or getting burned by the

---

[5] SC Wildlands also prepared written comments on the DEIR for the proposed Ord Mountain Solar Project, by way of a letter, dated November 16, 2018, which is attached hereto. Given that the sites for the proposed Ord Mountain Solar Project and the Proposed Project are fairly close to each other, Ms. Penrod's observations in that letter are equally applicable to the Proposed Project, and they are incorporated herein in their entirety by this reference.

SC Wildlands' letter commenting on the Draft EIR/EIS for the DRECP, dated February 19, 2015 (a copy of which is attached), includes maps and tables depicting the focal plant and animal species in the Desert Linkage Network in the environs of the Proposed Project, Generation Transmission Line and Calcite Substation, all of which demonstrate that the region around the Proposed Project site is high value natural habitat.

[6] This map, and the others referred to below in this section, are datasets on the DRECP

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-17 cont.

concentrated rays.[7]

6. "Wildlife Allocation (WA) and Areas of Critical Concern (ACEC) Designations, DRECP and Final EIS, LUPA, Final map," prepared by the California Energy Commission, the BLM, the California Dept. of Fish and Wildlife and U.S. Fish and Wildlife Service ("USFWS");

7. "Desert Tortoise TCA Habitat Linkages, DRECP" map, prepared by the U.S. Fish and Wildlife Service. Also, the USFWS has done an extensive study of desert tortoise linkages in the Ord-Rodman area, and identified the valley area where the Proposed Project would be located as vitally important to maintaining intact linkages;

8. Desert Tortoise TCA Habitat Linkages (Averill-Murray 2013, Croft 2013), and range-wide omnidirectional connectivity model for the Mojave Desert Tortoise (Gray et al. 2019); and

9. Desert Tortoise Modeled Future Distribution (Davis and Soong, for the DRECP).

The SC Wildlands 11/10/20 Letter confirms that the Proposed Project site would be located within, and interfere with, important wildlife corridors, and would seriously compromise habitat connectivity on a region-wide basis. Incorporating the studies referenced above, the letter cites (on its p. 6) a recent USFW Internal Discussion Draft, dated Sept. 25, 2020, entitled "Connectivity of Mojave Desert Tortoise Populations: Management Implications for

---

[7] Golden eagles (*aquila chrysaetos*) need ample foraging areas around their nests, and the Proposed Project and Related Development would markedly reduce such areas and threaten their survival. According to the Conservation Biology Institute and the California Natural Diversity Database (CNDDB) – which is a product of the California Department of Fish and Wildlife's Biogeographic Data Branch (BDB) – a foraging area with a ten-mile radius (from a given nest) is required. (The CNDDB is a computerized library of the status and locations of California's rare species and natural community types, and includes in its data all federally and state listed plant and animal species that are species of special concern or considered "sensitive" by government agencies and the conservation community, as well as candidates for such status.)

(The referenced DRECP map was created by merging the DRAFT__BRC__EagleNest__Data and Golden Eagle__DFG layers provided by the BLM. This data reflects nest locations recorded by various state agencies and their contractors during, among other time periods, 2008, 2010 and 2012.)

We have been informed that, according to Larry LePre -- a biologist with the San Bernardino Valley Audubon Society -- there is an active golden eagle nest (in season) on Stoddard Ridge directly adjacent to (and less than a quarter mile from) the Proposed Project site, and that golden eagles regularly fly over that site to the Sidewinder Mountains (which are part of the Granite Mountains) to an alternate nest.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Maintaining a Viable Recovery Network," which "emphasized the importance of the State Lands Commission land proposed for Stagecoach Solar [Proposed Project site] to the desert tortoise." The SC Wildlands letter also noted that "[t]he desert tortoise is a corridor dweller that may take multiple generations to move between TCAs. In order to sustain desert tortoise populations, habitat linkages between TCAs must be wide enough to support multiple home ranges . . . Forcing desert tortoises to go around the fenced perimeter of the entire 1,950 acre proposed Stagecoach Solar project would create a significant barrier to movement of desert tortoises, especially dispersing juveniles, which could not be mitigated to a threshold that is less than significant." The SC Wildlands letter also observed that "bighorn sheep are extremely sensitive to habitat loss and fragmentation," and that "[m]aintaining habitat connectivity is one of the most important climate adaptation strategies." B8-17 cont.

The Desert Tortoise Council has submitted a CEQA comment letter to the CSLC regarding the Proposed Project, which is dated November 11, 2020. That letter is incorporated by reference into this letter.

The Burrowing Owl, Golden Eagles, Loggerhead shrike, Desert Tortoises, Bendire's Thrasher, Prairie Falcon and Mohave Ground Squirrel are not the only species that would be impinged upon by the Proposed Project and Related Development. According to the DRECP Data Basin, the following species have a very suitable habitat there or are known to have a presence: (1) Le Conte's Thrasher; (2) Kit Fox; and (3) American Badger. The Proposed Project site is in a moderately high-value "species stack" for eight to ten special-status species according to a DRECP Data Basin Map entitled "Covered Species Stack."

The referenced data and maps, and particularly the SC Wildlands reports and its 11/10/20 Letter, make it clear that the desert region surrounding the Proposed Project site is an intact, living and breathing biome that emphatically deserves the CSLC's protection, and that there will be dire environmental consequences if wildlife is kept from using natural features -- like the valley and dry lake bed between the Granite Mountains and the Ord Mountain ACECs -- for passage, forage and living habitat.

The Multi-Species Habitat Conservation Plan and Natural Community Conservation Plan being co-sponsored by the Town of Apple Valley (the "Town") and the County – which expressly includes the site of the Proposed Project -- is in full accord. The Town's NCCP Planning Agreement with the USFWS (April 2017) states that:

1. "The MSHCP/NCCP will also conserve approximately 44,400 acres of identified wildlife linkages that connect the Planning Area to approximately 2.4 million acres of conserved habitat in the Mojave Desert. ***The Planning Area is strategically located at the intersection of three significant wildlife linkages that are not only important to the region but also to the Mojave Desert at large*** [which are the San Bernardino-Granite Mountain Connection, the Northern Lucerne Wildlife Linkage/Wild Wash Linkage and Mojave River Corridor]**.** The identification and protection of these linkages will facilitate wildlife movement and gene flow across a wider regional landscape, making the entire region more resilient to the effects of

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-17 cont.

climate change by ensuring the long-term viability of six (6) Areas of Critical Environmental Concern" (emphasis added);

2. "[t]hese areas, due to the high degree of genetic diversity and divergence among species present, can be considered evolutionary hotspots (Vandergast 2013);"

3. "[b]ecause of the variation in elevation, slope, and aspect, the Town's Plan Area is composed of 21 plant communities recently mapped by the DRECP [which entailed evaluation for inclusion in the plan of "50 listed and/or sensitive species];" and

4. "[i]n 2005, South Coast Wildlands ranked this linkage as one of the top 12 southern California linkages for priority conservation. The linkage represents landscape-level connection between the coastal and desert mountains. It facilitates the direct dispersal and multigenerational movement of over 14 focal species, including the desert bighorn sheep, American badger, Pacific kangaroo rat and Joshua Tree . . ."

But the Proposed Project would interfere with wildlife movement in this critical confluence of wildlife linkages and destroy species-sustaining habitat there. The Proposed Project would effectively close off most of the northern tip of the narrow North Lucerne Valley, as it runs between the Granite Mountain and Ord Mountain ACECs[8], with miles of nine-foot high electrified security fencing (which would kill a wide array of avian and non-avian species). The Generation Transmission Line would, in turn, transect the entire length of that valley. The Calcite Substation and Ord Mountain Solar Project would all but occlude the southern mouth of that valley.

It is an unfortunate truism that, if you break one link in the connectivity chain, the whole chain falls apart, especially when facing the challenge of increasing climate change. As stated in SC Wildlands' letter commenting on the Draft EIR/EIS for the DRECP, dated February 19, 2015, "[e]nhancing connectivity and linking natural landscapes has been identified as the single most important adaptation strategy to conserve biodiversity during climate change." The EIR must thoroughly address these issues comprehensively, scientifically and honestly.

The EIR cannot side-step meaningful study of these effects by calling the sites of the Proposed Project, Generation Transmission Line and Calcite Substation disturbed land. The Application points to the presence of scattered homes in the area. But the presence of home sites there does not diminish the fact that the Proposed Project and Related Development sites are integral parts of an intact, living and breathing biome, as well as components of significant wildlife linkages.

---

8 The DRECP's "Relevance and Importance Criteria" for the Granite Mountains ACEC states that the "area is critical for bighorn sheep, golden eagles, desert tortoise and prairie falcons and several other species. Additionally, numerous rare and sensitive plants have major populations here, making the area regionally important."

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

The EIR will be deficient if it seeks to undermine the significance of such linkages by myopically focusing on on-site biological observations that are limited in scope and effectiveness, and that would almost certainly fail to identify something as nuanced as regional wildlife connectivity patterns. Biological observations – which would amount at most to a "snap-shot in time" species census of the Proposed Project site only (and maybe some adjacent lands) [9] – would be entirely superfluous given the publication of the above-cited *long-term, regional scientific* studies on biological connectivity in the Southern California deserts. In point of fact, an on-site wildlife census does not have even a fraction of the value of the published connectivity studies, which will be discussed in the following paragraphs.

B8-17 cont.

The Proposed Project and Related Development sites would be particularly bad places to construct utility-scale facilities and transmission infrastructure because, as will be discussed in the following section of this letter, they would be located in an area where there is a confluence of high wind erosion potential and erosive soils. Disturbance of topsoil on these sites, and destruction of vegetation that would otherwise anchor it, would produce a great deal of dust – dust that would essentially eliminate a large foraging area for a number of special status species (including birds and bats) in the surrounding area outside of the project footprint.

B8-18

As will be discussed in the following section of this letter, blowing dust has, unfortunately, been a frequent by-product of utility-scale projects in the County.

Glare coming off vast arrays of solar panels would also affect bird and bat species in the area, as would noise emitted by the Proposed Project and Related Development during construction, maintenance and operation. As noted above, the area is extremely quiet (readings of 22 decibels are not unheard of), and that quiet would most certainly be shattered by the construction, maintenance and operation of industrial-scale projects.[10]

B8-19

To summarize, in light of the confluence of factors cited above, the desert habitat comprising the sites of the Proposed Project and Related Development is just about the last place that large industrial generation facilities and transmission infrastructure should be constructed and operated. This, and the fact that a Calcite Substation would invite a parade of additional nearby utility-scale and transmission projects, create a number of extremely troubling consequences in terms of biological resources.

B8-20

---

[9] Even so, the biological analysis for the Ord Mountain Solar Project DEIR (the site for this project would be just east of the Calcite Substation), as limited as it was, verified (p. 3.3-13) that no less than "**seven special-status wildlife species were either observed or identified as having moderate to high potential to occur within the project sites**" (emphasis added), listing the Burrowing Owl, Golden Eagle, Loggerhead Shrike, Desert Tortoise, Bendire's Thrasher, Prairie Falcon and Mohave Ground Squirrel.

[10] The dust, glare and noise, and the visual blight created by the Proposed Project and Related Development would also damage the human communities in and around the Proposed Project area.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

In order to comply with CEQA, the EIR must analyze each of the highly significant impacts mentioned above. When factors, such as the presence of wildlife corridors, special species and critical habitat, are considered, it is clear that the Proposed Project and Related Development would inflict substantial and unavoidable biological impacts that could not be mitigated away.

B8-20 cont.

4. The EIR Must Independently Assess the Amount of Soil Disturbance and Vegetation Destruction That Would Be Caused by Construction and Operation of the Proposed Project and Related Development, the Amount of Dust and Valley Fever Spores That They Would Emit and the Extent to Which Human Health Would Be Compromised by Such Emissions.

B8-21

According to the Notice, the Application and the EJ Outreach Letter, construction and operation of the Proposed Project, Generation Transmission Line and Calcite Substation would involve extensive grading, scraping, grubbing, trenching and other soil disturbance, including that which would be entailed in (according to the Preliminary Plan for the Proposed Project) installing storm-water control basins. The Proposed Project site consists of several steeply-sloping planes that intersect to form an alluvial valley. Because solar utility-scale facilities require fairly flat sites, soil disturbance on a grand scale would be required to establish the Proposed Project.

Construction and operation of the Cumulative Projects would entail even more soil disturbance.

A. <u>The EIR Must Quantify the Volume of Soil and Vegetation That Would Be Disturbed</u>.

The Notice gives a faint idea of the scale of soil disturbance that would be occasioned by the Proposed Project, Generation Transmission Line and Calcite Substation:

> "Construction of the PV [photovoltaic] systems would involve clearing and grubbing [with "heavy equipment"] of existing vegetation, installing support racks, placing of modules and inverter units, trenching and installation of the underground collection system [which, according to the Notice, would link "the PV modules to the onsite substation"], and construction of internal service roads. Construction activities for the associated Project facilities would include: clearing and grading; construction of drainage components; foundation construction; development of staging areas and site access roads; and construction of the electrical substation, energy storage facility, O&M building, and transmission facilities. Security fencing would be installed around the perimeter of the Project infrastructure."

The Application acknowledges (on p. 6 of its Attachment E) that:

(1) "The use of access roads within the project would result in the generation of dust. Vehicles and equipment used during construction and operations would generate

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

dust during earth moving activities (construction) and, given the prevalence of unimproved dirt roads in the project area, regular travel from paved roads to project access roads by maintenance personnel would also generate dust;" and

(2) "The MDAQMD [the Mojave Desert Air Quality Management District] is in non-attainment under the NAAQS for ozone and PM 10 and the CAAQS from PM 2.5. While a PM 10 attainment plan was developed by MDAQMD in 1995 to achieve the PM 10 NAAQS, a plan was not developed for PM 2.5."

B8-21 cont.

The EIR must quantify with precision the volume of soil that would be graded, scraped and otherwise disturbed in the course of construction and operations of such facilities (as well as with respect to the Related Development), the number of acres of land that would be disturbed and the amount and types of vegetation that would be destroyed in the process.

The EIR cannot satisfy its CEQA mandate by offering lukewarm, patently inadequate mitigation/dust control measures that blandly promise to achieve compliance with air quality rules by limiting emissions. The Application vaguely proposes "regular watering or other [MDAQMD Rule 403] dust preventative measures" (Application, Attachment E, p. 6). But, given that the Proposed Project, Generation Transmission Line and Calcite Substation contemplate development in an arid, wind-swept environment on a massive, regionally-transformative scale, following a similar approach in the EIR would cause it to fall far short of CEQA standards.[11]

B. <u>After Determining the Amount of Soil Disturbance and Vegetation Destruction That Would Ensue, the EIR Must Quantify the Volume of Dust and Spores That Would Be Emitted and Determine the Likely Range of Such Emissions</u>.

B8-22

Grading, scraping, grubbing and trenching operations on the scale being proposed would destroy "desert pavement," cryptobiotic soil crusts and soil-anchoring vegetation in an arid, wind-swept desert environment – within the Mojave Desert Air Quality Management District (the "MDAQMD") – which is already in non-attainment for PM-10 particulate matter (http://www.mdaqmd.ca.gov/index.aspx?page=21). Cryptobiotic soil crusts are an essential ecological component in desert lands; they are made up of below-the-surface communities of tiny, delicate plants, fungi and associated organisms that hold soils together that would otherwise produce fugitive dust. In other words, they are the "glue" that holds surface particles together against erosion, provide "safe sites" for seed germination, trap and slowly release soil moisture, and provide CO2 uptake photosynthesis. The presence of these biologically essential, yet easily

[11] The Proposed Project and related development are also located on over-drafted groundwater basins. The more water they propose to use in a losing battle with dust, the more this development would pose a significant and unavoidable impact to the water resources depended on by High Desert communities. This issue is addressed below in Section 9 of this letter.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

disturbed soil crusts is one of the reasons that, as noted in the DRECP, desert lands are notorious for being easily scarred and slow to heal.

B8-22 cont.

The EIR must describe and map the on-site cryptobiotic soil crusts in each proposed project site, and quantify the amount of soil crusts that would be destroyed and the degree to which this would cause the graded sites to lose their capacity to stabilize soils and trap soil moisture and cause increased dust and spore releases, among other things. The EIR also needs to map and describe desert pavements occurring on the proposed project sites, and they must also be evaluated for impacts. Like cryptobiotic soils, desert pavements stabilize the soil surface, prevent airborne dust, and are easily destroyed by construction. Quantitative acreage of naturally occurring desert pavement needs to be identified in the EIR.

Disturbance of desert soil inevitably stirs up the microscopic spores that cause Valley Fever, spores that can travel on the wind as far as 75 miles.[12] The EIR must quantify the amount of spores that would be released through construction and operation of the Proposed Project and Related Development. And the EIR must determine, based on that quantification (and an assessment of wind carry) how far and in what directions the spores would spread. In assessing environmental impact in terms of Valley Fever causation and dissemination, the EIR should be cognizant of what happened in the Western Antelope Valley, where soil disturbance resulting from large-scale renewable energy development, and from construction of SCE's grid line and power station infrastructure, is suspected of causing an outbreak of Valley Fever in that region.

B8-23

In assessing Valley Fever, the EIR cannot rely solely on studies of spore dissemination in natural desert settings because construction and operation of the Proposed Project and Related Development would create an artificial environment that would be much more conducive to the reproduction and spread of Valley Fever spores. They thrive on alternating periods of extreme wetness (typically, winter rains) and extreme dryness (summer heat). Water that would be used to temporarily suppress dust during the construction and operation of the Proposed Project and Related Development, and to periodically wash solar panels, would cause Valley Fever spores to propagate more often and in greater volumes than they would in a natural setting.

The need to quantify and assess the spread of dust and spores is particularly important given that the Proposed and Related Development would be located in an area of high wind erosion potential, according to the "Soil sensitivity factors for the DRECP" map and the "Confidence levels for sensitive soil factor maps for the DRECP." Because the contemplated construction would disturb many thousands of acres of desert soil and eliminate ranks of vegetation (and root systems) that would otherwise anchor soil with a high aeolian dust potential (PM 10 and PM 2.5), it would lead to the release of large and unhealthy volumes of dust and Valley Fever spores into the local environment and surrounding communities, which include the

[12] The town of Lucerne Valley is very close by, and there are homes in the vicinity of the Proposed Project and its components.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Lucerne Valley Elementary and Middle/High School.[13]

B8-23 cont.

Without undertaking the analyses described above, the EIR will not have a valid basis for making an independent assessment of the volume of dust and spores that construction and operation of the Proposed Project and Related Development would release over time, or as to how far they would be spread. But, in order to do this, the EIR will need a valid baseline for such emissions for North Lucerne Valley. Unfortunately, the MDAQMD, which covers 20,000 square miles of desert terrain in the County and in Riverside County, cannot provide such a baseline, because the MDAQMD does not have any air quality monitoring stations there (the monitoring stations are located in Trona, Lancaster, Victorville, Phelan, Lucerne Valley (in the San Bernardino Mountains, near the Mitsubishi cement plant), and Twentynine Palms). In accord with a directive from the MDAQMD, County planners would nevertheless – unless the

---

[13] Utility-scale solar projects in the High Desert have proven to be bad neighbors, and none of them have lived up to their developers' promises.

The Soltec PV project in Newberry Springs has received a lot of negative attention. The developer reportedly promised that it would not scrape vast tracts of land, that the project would have minimal impact on vegetation and wildlife, and that mitigation measures (such as soils stabilization) would be implemented. None of this came to pass, and it has also become apparent that an unduly low estimate was presented, during the application phase, of the amount of water the project would consume.

The Agincourt and Lone Valley Solar projects in Lucerne Valley (on Camp Rock Rd.) – now known as "Lone Valley Solar" -- have been spewing dust, despite applying much more water than the developers projected.

Joshua Tree has not fared any better with three nearby utility-scale solar projects: Cascade Solar, SEPV8 Solar (Lear Avenue) and Indian Trail Solar. Once vegetation was removed to construct them, soils became unstable and dust and sand began blowing. Dust storms are now a regular feature during high wind events. Prescribed mitigation measures -- like watering exposed soil and ceasing construction if the winds exceed a certain level -- have proven completely ineffectual, if implemented at all.

Antelope Valley Solar Ranch, located in Lancaster, near Route 138, was built by First Solar, which seems to be the contractor of choice for many solar photovoltaic projects. The AVAQMD cited First Solar for violations of air quality standards on at least two separate occasions. The AVAQMD was quoted as saying that there was "a myriad of things [First Solar] could have done that we didn't think they were doing to prevent the violations."

These examples demonstrate that approving a utility-scale project based on even the most stringent-appearing criteria – such as a developer's pledge to use "best available practices" to achieve "mitigation" after the project is built – simply does not work. This underscores just how important it is that the EIR undertake a truly independent analysis on the subject.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

EIR were to acquire more data (as is suggested below) – use the Victorville station's dust emission readings and meteorological data, in order to estimate the Proposed Project's dust emissions, even though the conditions at the Victorville station differ night and day from those present in North Lucerne Valley in terms of soils and wind speeds and directions.[14] B8-23 cont.

Because emissions readings from the Victorville station do not provide a valid long-term baseline for North Lucerne Valley, the only way that the EIR could have made a valid and independent assessment would be to commission its own *long-term*, on-site air quality/dust monitoring at (and adjacent to) the sites for the Proposed Project and Related Development, and readings must be taken during a representative array of wind speeds/directions and meteorological conditions. Otherwise, the EIR's findings on dust emissions would amount to little more than poorly-educated guesswork.

In conclusion, the EIR must conduct an analysis of windblown dust and soil erosion that incorporates and investigates each of the points stated above, with respect to the Proposed Project *and* the Related Development (which would disturb thousands of more acres of soil in the adjacent desert valley area).

C. <u>After Determining the Volume of Dust and Spores That the Proposed Project and Related Development Would Emit, and the Extent of the Region in Which They Would Likely Spread, the EIR Must Assess the Resulting Effects on Human Health</u>. B8-24

Unless the EIR takes this final step – after completing and incorporating the assessments described above -- its analysis will be incomplete, and provide no guidance whatsoever as to the degree to which the Proposed Project and Related Development would endanger human life and health.[15]

---

[14] The Victorville station, which is located on asphalt and is 300 feet from a road that has an average annual daily traffic count of 1,000 vehicles, monitors a 0.3 to 3.5 square mile area with a relatively uniform land use. Hence it is no surprise that the station's monitoring records show zero (0.0) days above the 24-hour federal and state PM10 standards.

The technical information in this letter regarding the District's monitoring program is drawn from a meticulously researched March 22, 2017 article in the *Desert Report* (which is a publication of the Sierra Club), entitled "The Perfect (Dust) Storm – Fugitive Dust and the Morongo Basin Community of Desert Heights." Its author, naturalist Pat Flanagan, is a board member of the Morongo Basin Conservation Association.

[15] In terms of soils issues, the EIR must also consider the fact that Lucerne Valley is a known area of subsidence (https://ca.water.usgs.gov/mojave/mojave-subsidence-2004-2009.html).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Adjacent communities are entitled to real analysis and full disclosure on this subject, as is the County, given that residents' health would be directly threatened. Plain-wrap mitigation measures (such as limit construction hours, curtail construction during high wind events, put up dust screens and throw lots of water around whenever dust plumes rise, etc.) would fail to produce a proper EIR.

B8-24 cont.

5. The EIR Must Independently Assess the Extent to Which the Proposed Project and Related Development Would Have Substantial Adverse Effects on Visual Aesthetics.

B8-25

According to the "Stagecoach Solar Preliminary Project Design (Project No. 26303), dated April 7, 2020 (prepared by Westwood Professional Services, Inc.) (the "Preliminary Plan"), the Proposed Project would include many thousands of ground-mounted 18-foot high solar panels covering at least 3,000 acres, stations, an on-site collector substation, a Generation Transmission Line connecting the project to the proposed Calcite Substation, a network of access roads and 8-foot high, high-voltage, chain-link security fences (topped with another foot of barbed wire on top).

The Proposed Project would flank scenic Hwy. 247 and would seriously disrupt the view of the visually striking alluvial valley between the Granite Mountains, Stoddard Ridge and the Ord Mountains (i.e., the Proposed Project site), especially the picturesque and dramatic views enjoyed by motorists on Hwy. 247 (which is a County-designated scenic highway). This broad up-sloping valley, set off as it is by a curtain of jagged mountains, represents a significant geological feature in its own right.

On top of that, the Generation Transmission Line, which the Notice says will be nine miles long, would follow – and at some points cross over – scenic Hwy. 247, fundamentally and forever altering the desert landscape in a way that destroys its natural desert character and open space feel, as would the Calcite Substation.

The Application itself acknowledges:

(1) (on p. 2 of its Attachment E) that "components of the proposed solar farm could obscure existing resources visible from the highway and detract from existing scenic views. Therefore the change in views from motorists passing along SR-247 will need to be further evaluated in the environmental documentation prepared by the CSLC;" and

(2) (on p. 2 of its Attachment E) that "the proposed solar farm would introduce new vertical elements into the landscape that would alter the existing natural character of the project area. The alteration to community character resulting from development of the State lease lands with solar energy generation uses will need to be further evaluated in the environmental documentation prepared by the CSLC."

The Cumulative Projects – including the ones under application for the Lucerne Valley – would be even more visually intrusive. The Ord Mountain Project and Calcite Substation, for

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-25 cont.

example, would all but occlude the narrow valley running between the Granite and Ord Mountains by flanking the east and west sides of Hwy. 247. The other Cumulative Projects would lie within the playa of an enormous ephemeral lake – Lucerne Dry Lake -- which is a recognized, occasionally-flooded Lacustrine wetland. As such, it most certainly qualifies as a geologically significant feature and scenic point of interest, without even considering the fact that it is flanked by a dramatic mountain landscape.

In short, the EIR must acknowledge, and discuss the fact, that the massive Proposed Project and Related Development would, by industrializing a beautiful, essentially undeveloped natural desert landscape, degrade scenic vistas and completely spoil the existing visual character and quality of the project sites and their surroundings. The EIR cannot whitewash these significant and unavoidable impacts by proposing that new buildings and transmission towers be painted in desert hues and the new development be obscured by fencing.

Nor can the EIR center its aesthetics analysis on the notion that, because there are dispersed rural residences, transmission lines and roads in the area that would be affected by the Proposed Project and Related Development, this disqualifies it from having visual appeal worthy of CEQA consideration and protection. That the area shows limited effects of the hand of man does not warrant the conclusion that it is no longer undisturbed natural area. It is in fact almost entirely a scenic natural open space setting, i.e., a very pleasing and essentially undeveloped natural desert landscape.

The EIR cannot analyze loss of viewshed in terms of whether the Proposed Project and Related Development would block views of the surrounding mountains, as if the valley areas and Lucerne Dry Lake region – merely because of its relative flatness, typical dryness and absence of forests – is unworthy of consideration.

The EIR must provide "Elevation" diagrams or other depictions of what the massive structures comprising the Proposed Project and Related Development would actually look like from a variety of vantage points, and photo simulations as to what the solar fields might look like at a distance will not suffice. Without such diagrams, no visual assessment could be considered complete and informative.

Moreover, the EIR must commission and incorporate a topographical viewshed analysis that depicts the extent to which the Proposed Project would be visible throughout the region, as well as the number of homes and residents that would be within the affected viewshed.

The EIR must assess the impacts that the Proposed Project and Related Development would have on motorists' views from Highway 247. A major effort is underway to promote tourism in Lucerne Valley, the main thrust of which is an ongoing campaign to have Highway 247 designated as part of the State Scenic Highway System.[16] Highway 247 is the major traffic

[16] The County has already designated Hwy. 247 as a scenic highway, which, as per General Plan Policy OS 5.3, means that it is a "roadway that has scenic and aesthetic qualities that over time have been found to add beauty to the County" and that this designation "applies all applicable policies to development on these routes . . ."

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

artery through Lucerne Valley, connecting the 15 Freeway at Barstow with Highway 18 (which extends southeasterly to the San Bernardino Mountain resorts); Hwy. 247 is also the major roadway to and from points east, such as Johnson Valley, Joshua Tree National Park, Landers and Morongo Basin. Designation of (and promotion of) Hwy. 247 as a State Scenic Highway would certainly draw more motorists and be a great boon to the local economy. The protection against industrialization that such a designation would extend to adjacent desert lands would also draw investment in and expansion of Lucerne Valley's tourist economy. Potential industrialization has long cast a depressing shadow over its economic development.

B8-25 cont.

But eligibility for official inclusion in the State Scenic Highway System depends on the state's determination "based on the amount of natural landscape visible by motorists, the scenic quality of the landscape, and the extent to which development intrudes upon the motorist's enjoyment of the view." An influx of vast new solar fields and transmission infrastructure would create visual blight that would detract from, if not derail, that effort (which is now in its final phase[17]), as would the Generation Transmission Line. As noted above in Section 3, it would follow (and be visible from) Hwy. 247 for much of its length. The Calcite Substation, and related transmission, would also be very close to and visible from Hwy. 247, which would further detract from the area's appeal.

Heavy equipment and water trucks used during the construction and operation of the Proposed Project, Generation Transmission Line and Calcite substation would also likely cause major damage to state and County roads in Lucerne Valley (County roads are not built to support that kind of weight). As it stands now, governmental budgets are barely sufficient to keep those roads in repair to support local residential use. The Proposed Project and its progeny would also, by generating traffic through the commercial portion of Lucerne Valley, create a traffic safety issue given that there is only one four-way stop (with a short turning radius) in that locale. Any loss or substantial interruption of a major vehicular artery serving Lucerne Valley would directly impinge on the local economy, and result in a grave environmental injustice to the community.

B8-26

In short, the EIR must take serious consideration of the fact that the Proposed Project and Related Development would conflict with: (1) the County's scenic route designation for Highway 247; and (2) the state's declaration that the entire length of Highway 247 is part of the State Scenic Highway System and is eligible for official inclusion therein (and that Highway 247 is currently under consideration for designation as an official State Scenic Highway), which was the result of the state's determination that, "based on the amount of natural landscape visible by motorists, the scenic quality of the landscape, and the extent to which development intrudes upon

B8-27

[17] A committee of local residents (drawn from the communities served by Hwy. 247), acting under the auspices of the County, is now in the process of refining, as per the state's comments, the extensive and meticulous documentation it has submitted in support of the scenic highway application.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

the motorist's enjoyment of the view," the region has high scenic value.[18] B8-27 cont.

6. The EIR Must Include a Complete and Comprehensive Assessment as to the Extent to which the Proposed Project and Related Development Would Conflict with the Planning Goals and Policies Enunciated by San Bernardino County. B8-28

According to California Code of Regulations Section 15125(d), an "EIR shall discuss any inconsistencies between the proposed project and applicable general plans, specific plans and regional plans." More specifically, according to Item X(b) of Pa. G to the CEQA Guidelines, EIRs must address the following question: "[does the proposed project] conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?"

Policy 4.10 of the County's Renewable Energy and Conservation Element ("RECE") bans new utility-scale renewable energy projects in community plan areas and areas zoned Rural Living. The sites for the Proposed Project and Generation Transmission Line are located in the Lucerne Valley Community Plan area. This is also the case for the sites targeted by the Cumulative Projects.

But Policy 4.10 is hardly the only policy or plan that the proposed development conflicts with. The Proposed Project and Related Development would also be incompatible with the County's "Solar Ordinance,"[19] as well as policies and plans described below. The EIR must give serious consideration to each of these conflicts. None of these policies, plans and ordinances can be readily circumvented by obtaining discretionary land use entitlements.

A. <u>The RECE</u>.

The EIR must consider the extent to which the Proposed Project and Related Development would conflict with the RECE, given that one of the RECE's guiding principles

---

[18] According to Item X(b) of Pa. G to the CEQA Guidelines, EIRs must address the following question: "[does the proposed project] conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project . . ."

[19] The County's Solar Ordinance requires, among other things, that "[i]n order to approve a commercial solar generation facility, the Planning Commission shall . . . determine that the location of the proposed commercial generation facility is appropriate in relation to the desirability and future development of communities, neighborhoods, and rural residential uses, and shall not lead to loss of the scenic desert qualities that are key to maintaining a vibrant desert tourist economy by [making required findings and considering, among other things, 'the location of other commercial solar energy generation facilities that have been constructed, approved or applied for in the vicinity . . .']" (Amended Solar Ordinance 4213 (2014) 84.29.035).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

includes keeping utility-oriented projects separate from, and sufficiently buffered from, existing communities to avoid adverse impacts on community development and quality of life. As noted above, the EIR must also consider the extent of the conflict between the Proposed Project and Policy 4.10.

B8-28 cont.

Moreover, the EIR will have to address the conflict between the industrial development being proposed and the policies and goals – the "core values" -- reflected in the RECE, especially given that they embody a hard-won, set-in-concrete consensus between the County's populace and its governing bodies, one that was forged over many arduous years of public meetings – in the Countywide SPARC, REVEAL and Community Plan processes -- regarding how the County's planning vision should be cast.[20] This is confirmed in the discussion appended to subsection (d) of CEQA Regs. 15125, which states, in relevant part – while referring to regional plans developed "as a way of dealing with large-scale environmental problems" -- that "[w]here individual projects would run counter ***to the efforts identified as desirable or approved by agencies in the regional plans***, the Lead Agency should address the inconsistency between the project plans and the regional plans." (Emphasis added.)

The policies and goals embodied in the RECE are discussed below.

The RECE clearly evinces an intention by the County to foster community-oriented solar and to all but ban further utility-scale solar projects. In so doing, the RECE cites the many virtues of community-oriented solar: it promotes energy independence, reduction of the need for new transmission, the sustaining of sensitive natural resources and habitats and local economic growth. In that regard, the RECE promotes as a primary "core value" the need to maintain a "high quality of life for residents of the County," as well as the need to bar renewable energy projects that "substantially conflict with surrounding land uses, especially existing communities or residential areas where residents object to the visual character of RE projects." The County clearly recognized that approval of even one utility-scale solar facility can be the catalyst for rapidly transforming a desert region into a *de facto* industrial energy generation zone.

Reflecting the County's strong bent against utility-scale generation, the RECE sets out strict siting criteria for such facilities; in fact, they are so strict --- when it comes to areas like Lucerne Valley – that they *de facto* banish utility-scale projects from them. RE Policy 5.2 of the RECE, as well as RE Policy 5.4.2, strongly encourage utility-scale generation on the five areas identified in the County's Resolution (which is discussed below). RE Policy 5.4 makes it clear that utility-scale development elsewhere will be required to meet a higher standard of evaluation

---

[20] To show just how far we have come in reaching this consensus, one need only look at the County's February 24, 2015 Renewable Energy and Conservation Element Framework: Purpose, Values and Standards, which commenced with the ominous assertion that the State's renewable (RPS) energy mandates have "major implications for [the County] and its people." The Framework's basic thrust was that, in order to comply with those mandates, vast areas of the County would -- subject to some ameliorating siting standards – would have to be sacrificed to utility-scale development. By way of contrast, the RECE calls for confining them to five specified fairly remote areas (this point will be discussed below).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

for appropriate site selection, and that a "two-step application process" will be required in order to evaluate site selection early in the process. The EIR must take cognizance of the fact that, if the Proposed Project application were run through that two-stage process, it would never pass the first stage in view of the RECE's stringent site selection criteria (of course, it would be precluded by Policy 4.10 anyway). B8-28 cont.

The lands in the vicinity of the Proposed Project site host a dispersed, yet well-established desert rural community, as well as scientifically-recognized wildlife corridors that are also acknowledged by our federal and state governments. Among other things, as noted above, the area is considered core golden eagle habitat for the western Mojave Desert. It is a natural desert setting inhabited by, among other things, climax vegetation which provides habitat, foraging and connectivity for a host of threatened species.

The siting of the approximately 3,000-acre Proposed Project would compromise the County's above-referenced "core values." If utility-scale renewable energy projects are allowed to invade a rich and living desert biome like the one at hand[21], a welter of renewable energy projects could be ushered in that end up being inimical to the letter and spirit of the goals and policies stated in the RECE. And piecemeal, inconsistent renewable energy development could ultimately defeat the central purpose behind formulating the RECE, which is to create and implement a comprehensive planning vision for renewable energy development that serves the needs of all businesses and residents of this County.

The EIR must include an assessment of the degree to which the Proposed Project (along with the Generation Transmission Line and Calcite Substation) would conflict with the policies and goals stated in the RECE. Fundamental to a meaningful conflict analysis will be the following over-arching principle in the County's land use regime: in view of the harm that industrial operations (like the Proposed Project, Generation Transmission Line and Calcite substation) visit on the visual integrity, economy, social ecology and environmental health of rural residents, they do not make good neighbors.

B. <u>The Countywide Plan</u>. B8-29

The EIR must assess the conflict between the Proposed Project and Related Development and the County's recently-adopted Countywide Plan.

Goals and policies found in Lucerne Valley's now-rescinded Community Plan (the "Community Plan") -- which provided protection against industrial development that would

---

[21] RE Policy 5.2 also contains a catch-all category for "other sites proven by a detailed suitability analysis to reflect the significantly disturbed nature or conditions" of the specific land types enumerated in RE Policy 5.2, i.e., waste disposal sites, mining sites, airports, etc. But, as indicated above, the lands comprising the Proposed Project site do not begin to resemble heavily degraded lands of the type listed, so the EIR would have to explain why the Proposed Project would qualify under the catch-all category (or acknowledge that it would not).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

destroy the rural character of the community -- have been moved to the "Policy Plan" portion of County's recently-enacted Countywide Plan (see the County's published Matrix in that regard).

B8-29 cont.

In that regard, the Policy Plan states (in its p. 8) that:

> "In particular, Policy LU-4.5 directs the County to ensure that new development is consistent with the physical and historical character and identity of an unincorporated community planning area. This policy also directs the County to ensure consistency with the values and aspirations as defined by each community in their Community Action Guides.[22] To further assist the County in determining the consistency of new development with a community's character, Table LU-3 identifies key characteristics and features that new development should reinforce and/or not detract from in order to maintain and protect the identity and character of the community planning areas."

Table LU-3 of the Policy Plan identifies the following "Key Characteristics and Features" of rural desert communities (which includes Lucerne Valley):

- "A rural lifestyle characterized by the predominance of large lots, limited commercial development, and the prevalence of the desert landscape and natural resources.
- Abundant views of open spaces, natural features, and dark skies.
- Scenic, natural, and/or recreational features that serve as the foundation of the community's local economy and attract tourists.
- Small businesses that serve local residents and visitors, compatible with the natural environment and surrounding uses.
- Mining of mineral resources with minimal negative impacts on local residents."

In that same vein, Goal LU-4 of the Policy Plan calls for land use decisions that enhance the "preservation and enhancement of unique community identities and their relationship with

---

22 The Lucerne Valley Community Action Guide ("CAG") makes clear that "Lucerne Valley is a high desert community that strongly values the natural beauty of the surrounding desert/mountain landscape. Fiercely independent and protective of its rural character, the community strives to promote responsible and sustainable growth while safeguarding both the desert lifestyle and the environment." This is also reflected in the CAG's "Community Focus Statement A: Maintain the rural character of the community" and in its "Community Focus Statement B: Promote responsible and sustainable development consistent with Lucerne Valley's rural character."

In light of Policy LU-4.5's invocation of the CAG, the EIR must also address the incompatibility between its statement of goals and aspirations and industrializing Lucerne Valley through utility-scale solar and infrastructure development.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

the natural environment."

B8-29 cont.

Industrializing Lucerne Valley, through approval of the Proposed Project and Related Development, would clearly re-purpose the entire region and run contrary to the Policy Plan's pronouncements on retaining the rural lifestyle, scenic views and open space enjoyed by residents of the County's desert communities.

The Policy Plan includes other policy/goal statements indicating that utility-scale solar and related infrastructure projects are incompatible with Lucerne Valley. They include, among others:

1. Policy NR-3.3, which requires the County to "sustainably manage and conserve land within or adjacent to locally-, state-, or federally-designated open space or resource conservation areas [the Proposed Project and Related Development sites are located immediately adjacent to the Granite Mountain and Ord Mountain ACECs and within the boundaries of the MSHCP];"

2. Goal NR-4, which calls for preservation of "[s]cenic resources that highlight the natural environment and reinforce the identity of local communities and the county;"

3. Policy NR-4.1 ("Preservation of scenic resources"), which states that "[w]e consider the location and scale of development to preserve regionally significant scenic vistas and natural features, including prominent hillsides, ridgelines, dominant landforms, and reservoirs;"

4. Goal NR-5 ("Biological Resources") calls for "[a]n interconnected landscape of open spaces and habitat areas that promotes biodiversity and healthy ecosystems, both for their intrinsic value and for the value placed on them by residents and visitors;"

5. Policy NR-5.1 ("Coordinated habitat planning") provides that "[w]e participate in landscape-scale habitat conservation planning and coordinate with existing or proposed habitat conservation and natural resource management plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting;"

6. Policy NR-5.7 ("Development review, entitlement, and mitigation"), which provides that "[w]e comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes comply with existing law regarding species protection;" and

7. Policy LU-4.7, which calls for minimizing "light pollution and glare to preserve views of the night sky, particularly in the Mountain and Desert regions where dark skies are fundamentally connected to community identities and local economies."

The EIR must consider the extent to which the Proposed Project and Related Development would conflict with the above-cited portions of the Policy Plan, especially given that such development would represent an abrupt and pronounced departure from the rural desert character of the surrounding area and would advance the industrialization of the desert, all of

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

which would encourage further consumption of irreplaceable, community-defining natural open space and scarce resources like water.[23] The EIR must also address the conflict between the proposed development and the County Development Code, including (but not limited to) the following: Section 82.19.40 of the County Development Code (development criteria within scenic areas); Section 84.29.035 (required findings for approval of commercial solar facilities) and Section 84.29.040.

B8-29 cont.

C. The Supervisors' February 17, 2016 Resolution and DRECP Position Paper.

B8-30

The EIR must consider the conflict between the Proposed Project (and its progeny) and the land use policies and goals stated in:

(1) the February 17, 2016 Resolution of the County's Board of Supervisors (the "Resolution"), which designated five sites -- which are seriously degraded, away from Lucerne Valley and other population centers, and relatively close to existing transmission – as the only places that utility-scale should go, subject to the project's otherwise satisfying the County's criteria; and

(2) the "County of San Bernardino Position Paper on the Draft Desert Renewable Energy Conservation Plan," dated February 3, 2015 (the "Position Paper"), in which the County stated that the communities of Lucerne Valley, Newberry Springs, Stoddard Valley, Johnson Valley and Apple Valley are not appropriate for Development Focus Areas ("DFAs"), which are places in which the DRECP would allow utility-scale renewable energy projects to be established.

In order to comply with Section 15125(d) of CEQA, the EIR must specifically address the inconsistency between each of the above-referenced preservation-oriented land use policies and goals and the Proposed Project and Related Development. In order to pass muster under the CEQA – and in view of the fact that the proposed 3,000-acre utility-scale solar project (and pendant Calcite Substation) would industrialize a large portion of Lucerne Valley – it is especially crucial that this analysis be forthright, in-depth and meaningful.

(1) The Resolution.

In the Resolution – which is entitled "Establishing the County's Position" -- the County's Board of Supervisors designated five sites (as referred to in the RECE's Policy 5.4.2) -- which are seriously degraded, away from population centers, and relatively close to existing transmission – as the places that utility-scale should go, subject to the projects otherwise satisfying the County's criteria. The Resolution was adopted by a unanimous vote. Neither the Proposed Project, nor the Related Development, would be located in or near any of the five designated sites that have been deemed appropriate for solar energy development. On top of that, the Proposed Project, and the other proposed Lucerne Valley utility-scale projects, would

[23] Water usage issues will be discussed further *infra.*

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-30 cont

need ancillary facilities, i.e., the Generation Transmission Line and the Calcite Substation, in order to be viable.

In selecting those areas most amenable to utility-scale projects, the Board of Supervisors gave attention to such important factors as close access to transmission, no adjacent human communities and the prevalence of severely degraded biomes. The Supervisors quickly eliminated Lucerne Valley and the other North Slope communities (of the San Bernardino Mountains) because of high conflicts with these factors. The Supervisors were further guided by these two sets of maps:

(1) a map included in Kristeen Penrod's above-mentioned (SC Wildlands) "California Desert Connectivity Project" (Penrod et al. 2012); and

(2) DRECP Databasin maps showing: (a) the DRECP's DFAs, Variance Lands and General Public Lands (Unallocated Lands) overlaid on the Desert Tortoise TCA Habitat Linkages; (b) the ACECs (Areas of Critical Ecological Concern) and NLCS (National Landscape Conservation System) areas under the DRECP where utility-scale would be prohibited; (c) Overdraft Groundwater Basins in the County; (d) Conservation Values; (e) Special Recreation Management Areas/Extensive Recreation Management Areas; and (f) existing transmission.

Those maps – and the fact that Lucerne Valley, Apple Valley, Johnson Valley and Morongo Basin, among others, host well-established towns and dispersed desert rural communities that would be negatively impacted by industrial-scale renewables (among many other considerations, utility-scale facilities like the Proposed Project draw from already overdrafted groundwater basins) – compelled the conclusion, through a simple process of elimination, that the County's north and eastern slope valley areas must be kept off-limits to such large-scale development; they also confirm that there are highly degraded, transmission-adjacent, former and current industrial, mine and brownfield sites further north -- near Trona, Hinckley, North of Kramer Junction, El Mirage and Amboy -- where such development could be permitted, i.e., the five sites designated in the Resolution (which are referenced in RECE Policy 5.4.2).[24]

The County's above-referenced valley areas, including Lucerne Valley, have a very unique and precious, yet extremely fragile, attribute that provides a high quality of life for their residents (and that makes them such appealing places to visit and, hence, such a boon to the tourist industry): they host well-established, dispersed desert rural population clusters that thrive amid functioning desert sub-ecosystems, which, in turn, are part of the largest intact biome in the western states, i.e., the Mojave Desert. If this harmonious convergence of human and natural communities were to be allowed to disappear, it would be gone forever. So the County stepped

[24] The five sites also have the virtue of being located: (1) over ample groundwater supplies (moreover, the groundwater underlying the Trona, Hinckley and Amboy sites is non-potable, and can only be put to industrial uses); (2) outside of any military flight corridors; (3) on land that has a flat enough gradient to host utility-scale solar development; and (4) away from communities affected by utility-scale development.

Comment Set B8 – Coalition of individuals and community groups (cont.)

in to protect this irreplaceable community resource through the Resolution, as well as by way of its Position Paper and RECE (as was discussed above). B8-30 cont.

The EIR must address in depth the obvious and unavoidable conflicts between the Proposed Project and the County's planning preferences and priorities, as expressed in the Resolution.

(2) The Position Paper.

The Resolution was not the first time that the County has articulated its foremost values and priorities in terms of siting large-scale renewable projects. In the "County of San Bernardino Position Paper on the Draft Desert Renewable Energy Conservation Plan," dated February 3, 2015, the County stated that the communities of Lucerne Valley, Newberry Springs, Stoddard Valley, Johnson Valley and Apple Valley were not appropriate for DFAs, which are places in which the DRECP would allow utility-scale renewable energy projects to be established.

In issuing its Position Paper, the County was clearly seeking to protect the human and natural communities of its east and north slope valley regions by putting them off limits to industrial-scale development, which directly conflicts with the desire of the project proponent to develop an enormous 3,000-acre utility-scale facility in the heart of Lucerne Valley. In order to comply with CEQA, the EIR must analyze this conflict.

D. The EIR Must Address the Manner in Which the Proposed Project, Generation Transmission Line and Calcite Substation Would Conflict with the MSHCP Being Jointly Developed by the County and the Town of Apple Valley. B8-31

The Proposed Project would be located right in the midst of the Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (the "MSHCP") that is being jointly developed by the County and the Town of Apple Valley (the "Town"), and it would be, at the very least, closely flanked by the Generation Transmission Line and Calcite Substation. The MSHCP covers the Granite Mountains, which are within the Town's designated sphere of influence, and extends over the western portion of the Lucerne Valley community plan area. This conservation plan balances the communities' recreational and economic needs with landscape-scale conservation needs, climate change and protection of species diversity. The plan is designed to accomplish this by maintaining connections with multi-generational wildlife linkages extending across the Mojave Desert.

The MSHCP is a highly-evolved conservation plan, and the County and the Town are

Comment Set B8 – Coalition of individuals and community groups (cont.)

committed to launching and implementing it.[25] The MSHCP, and their design overlays -- the overlays are based on published species connectivity studies developed at the landscape level by recognized wildlife biologists, as well as from local, boots-on-the-ground surveys -- were designed to link up with and complement adjacent, vital wildlife corridors and habitats (for, among other animals, bighorn sheep, the golden eagle and desert tortoise) which run through the Proposed Project site. The Proposed Project and Related Development would, by completely occluding these linkages and habitats, impinge on, and conflict with, the habitat design embodied in the MSHCP. B8-31 cont.

The EIR must address the direct and irreconcilable conflict between the policies and purpose of the MSHCP and the industrialization that would be wrought by the Proposed Project and Related Development, which would entirely unravel the MSHCP's carefully calibrated species conservation design, destroy critical natural habitat and drive endangered species out of the region.

E. <u>The California Protected Areas Database (CPAD)</u>.[26] B8-32

The California Protected Areas Database (CPAD) designates as protected open space sizeable parcels of BLM "Open Access" land in and around the Proposed Project site. The referenced BLM land could not be preserved as protected as open space and for open access purposes if it were to be occupied or flanked by industrial energy generation/storage and transmission facilities, and crisscrossed with collector lines and access roads.

The CPAD database and map show that there are parcels of BLM "Open Access" land in or near the sites of the Proposed Project and Related Development which would be compromised by such development.

---

[25] Policy NR-5.1 ("Coordinated habitat planning"), of the County's Policy Plan – which is the general plan portion of the County's recently adopted Countywide Plan -- provides that "[w]e participate in landscape-scale habitat conservation planning and coordinate with existing ***or proposed habitat conservation and natural resource management plans*** for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions; and for land development and infrastructure permitting." (Emphasis added.)

Policy NR-5.1 makes it clear that the County is not willing to make land use decisions that step on the toes of habitat conservation plans, even those – like the MSHCP -- that are in the works and yet to be formally adopted.

[26] CPAD is, according to the state's official website, a "GIS dataset depicting lands that are owned in fee and protected for open space purposes by over 1,000 public agencies or non-profit organizations. CPAD depicts the wide diversity of parks and open spaces in California, ranging from our largest National Forests and Parks to neighborhood pocket parks."

Comment Set B8 – Coalition of individuals and community groups (cont.)

The EIR must carefully consider the direct conflict between the open space designation accorded by CPAD and the intensive re-purposing of the entire area that would be occasioned by the Proposed Project and Related Development. B8-32 cont.

7. The EIR Must Thoroughly Consider "Significant and Unavoidable Impacts." B8-33

Section 15126.2(b) of the CEQA Guidelines requires that an EIR discuss significant impacts associated with the project that cannot be avoided, even with the implementation of feasible mitigation measures.

The EIR must acknowledge that the Proposed Project and Related Development would industrialize, i.e., fundamentally and inevitably destroy, the playa, valleys and open space area making up Lucerne Valley. The wholesale industrialization of an entire region of fragile desert would certainly unleash a cascade of significant and unavoidable impacts across the board on, among other things, air quality/health, biological resources, soils and the viability of local groundwater basins.

The EIR must also provide a thorough and cogent discussion as to how or whether – several decades in the future – the developer would be willing and able to commit the enormous resources needed to restore the region. Even more fundamentally, the EIR must thoroughly consider whether, as a matter of biological science, the region could ever be restored to its undeveloped natural desert state, especially given the massive amount of industrial infrastructure that would be installed in creating the project. The EIR must consider whether this fragile and unimaginably complex eco-region could ever be re-built from its biological base upward, and whether critical wildlife corridors could ever be restored after the existing flora and fauna had suffered local species collapse.

In short, the EIR cannot avoid discussing the reality that all this would be practically, financially and scientifically impossible, and that future generations would be committed by the Proposed Project and Related Development to continuing use of Lucerne Valley as an industrial zone.

8. The EIR Cannot "Tier Off" the DRECP. B8-34

The EIR cannot simply "tier off" the BLM-only DRECP, as though much of the environmental analysis required for the Proposed Project has already been performed and is widely-accepted and endorsed. According to Figure 2 (DRECP LUPA Major Land Allocation) and Figure 10 (DRECP LUPA Renewable Energy Designations) of the DRECP Record of Decision (September 2016) – which depicts the final extent of the Development Focus Areas ("DFAs") declared by the DRECP – the Proposed Project site is not within the boundaries of any recognized DFA.

Even if it was, "tiering" off the DRECP would not be appropriate. The sudden, last-minute decision by the REAT agencies to sever everything but BLM land from the DRECP –

Comment Set B8 – Coalition of individuals and community groups (cont.)

after many years of touting the all-inclusive scope of the DRECP – reflected a sharp reaction by the California state REAT agencies to objections and criticisms from local governments, and from numerous scientific and community groups, who questioned the legitimacy of such a large-scale, zoomed-out approach to environmental and land use questions, the long-term impact of which would be felt at the local level. The draft DRECP triggered thousands of critical comments, many of them focused on the lack of "boots on the ground" analysis, and the failure to bring in an understanding of how entire ecological systems function, including (but not limited to) sensitive wildlife corridors. Further, San Bernardino County on more than one occasion formally expressed its concern to the REAT agencies that DRECP was disregarding the County's guiding land use principles and preferences as they related to balancing developmental and environmental values. B8-34 cont.

The DRECP applies only to BLM-administered lands, while the Proposed Project is located on state and unincorporated county land. Hence the DRECP cannot be characterized in the EIR as a "major guiding document" when it comes to considering whether or not utility-scale development is to be permitted on unincorporated county land, and the DRECP holds no sway as to the CSLC's obligations under CEQA.

In short, to the extent that the County elects to "tier off," i.e., piggyback on, any of the DRECP's findings, conclusions or implications in formulating the EIR, the EIR will be non-compliant with CEQA.

9. The EIR Must Thoroughly Examine the Amount of Water Required for the Construction, Operation and Maintenance (including Ongoing Dust Suppression) of the Proposed Project and Related Development, as Well as the Impact Such Widespread and Intense Industrial Activities Would Have on Development on the County's Finite and Already-Threatened Groundwater Resources. B8-35

The Proposed Project and Related Development (as currently proposed) would be located on an over-drafted groundwater basin – the Este Sub-basin -- according to the "Overdraft Groundwater Basins, DRECP" map, and directly in the middle of the groundwater sub-basin referred to on Figure 5 as the "North Valley Subwatershed" of the Lucerne Lake Watershed Area (this sub-basin was geo-processed from a digital elevation model), a copy of which is attached to the EJ Letter, which is appended to this letter. The Proposed Project and Related Development would compromise the underlying groundwater reservoir by drawing immense volumes of water for its construction and operation.

The Proposed Project and Related Development would also reduce groundwater recharge through removal of vegetation, alteration of the land through grading and covering the land with impervious surfaces, all of which would alter the relationships between rainfall, runoff, infiltration and transpiration. In other words, with native vegetation scraped off the immense project sites, there would be nothing to retain the rainwater flowing down from the surrounding mountains towards the center of the North Valley Subwatershed, so, instead of percolating into the aquifer, it would flow out of the north valley area.

Comment Set B8 – Coalition of individuals and community groups (cont.)

The Application discloses that the Proposed Project alone would require large volumes of water: water consumption during the construction phase alone is estimated at approximately 1,200 acre-feet (AF) for dust suppression and earthwork over an approximately 18-month period.

B8-35 cont.

The Application also specifies that the Proposed Project's permanent employees would perform in-place panel washings every 6 to 8 weeks using a tanker truck, and smaller "satellite" panel washing trucks (each panel washing truck would carry water treatment equipment and truck-mounted panel washing booms or module cleaning robotics). On-site water storage tanks may be installed to facilitate washing and to support fire suppression. The "operations & management" building for the project would include a groundwater well to provide potable water. There would also be septic tanks and a leech-field.

The Application estimates that on-site operations would use up to approximately 46 acre feet ***per year*** rounded up to include the potential for domestic use.[27] The Application provides no estimate as to the volume of water needed to prevent fugitive dust, particulate matter and spores from blowing off the 3,000-acre site during the life of the Proposed Project, and the developer has not specified whether it would make any efforts in that direction. Of course, no amount of water would, after the arid, wind-prone site is denuded and disturbed through construction, operation and maintenance, be sufficient to prevent fugitive matter from being wind-borne across the region.[28]

In short, as alarmingly high as the Application's water use estimate is, it most likely

---

[27] As stated below in this letter, PV panels washed six times per year would consume .15 acre feet per year per megawatt of generation, which would mean that washing the panels for the Proposed Project's 200 MWs would consume at least 30 AFY.

[28] To put things in perspective, 1,000 acre-feet of water is enough to fill four Rose Bowls to the brim. So, over a 40-year lifespan, the Proposed Project – using the estimates found in the Application -- would use enough water ***to fill at least twelve Rose Bowls*** (1,200 acre feet + 1,840 acre feet (40 years x 46 acre feet per year) = 3,040 acre-feet), assuming that that amount of water could actually be drawn from local groundwater supplies.

Comment Set B8 – Coalition of individuals and community groups (cont.)

underestimates actual usage.[29] And the Application does not provide any estimate of the volume of water needed for the construction and operation of any of the other elements of the Related Development. Further, the Application does not provide any estimate of the amount of groundwater consumed or groundwater recharge that would be lost in the Este Sub-Basin (and in other affected sub-basins) through construction of the Proposed Project and Related Development. The EIR will need to thoroughly, accurately and *independently* make such assessments. In doing so, the EIR cannot rely solely, or even primarily, on water usage or re-charge reduction estimates provided by developers or by the large-scale solar industry.

B8-35 cont.

Where would the huge volume of water needed come from? According to the Application (p. 30), it would be pumped out of Lucerne Valley's threatened aquifer or trucked onsite from a local water supplier. But neither of those methods would provide a viable water source for the Proposed Project.[30] The Application does not say what proportion of this water would be drawn on-site vs. obtained from local water companies, nor does it specify how many

---

[29] Solar developers typically provide unrealistically low water usage estimates. At the onset of the Agincourt and Marathon solar projects (now known as Lone Valley Solar) in Lucerne Valley, the proponents agreed to purchase from the Mojave Water Agency 10 acre feet of water; instead, according to our information, they wound up using more than 50 acre feet (10 acre feet came directly from the Morongo Basin pipeline, and the other 40 acre feet were purchased from a local farmer). And these projects spewed tons of dust. The same thing has occurred with respect to the Soitec PV project in Newberry Springs.

The Desert Sunlight Solar PV facility in Riverside County was approved based on the promise of its proponents to limit themselves to 1,400 acre feet of groundwater during construction. But, after they broke ground, they said they would need 1,500 acre feet of water (which they later increased by another 50 acre feet). The developers took all of that water from an aquifer that has not gotten any re-charge in hundreds of years, according to a U.S. Geological Service survey.

Antelope Valley Solar Ranch, located in Lancaster, near Route 138, was built by First Solar, which seems to be the contractor of choice for many solar photovoltaic projects. The AVAQMD cited First Solar for violations of air quality standards on at least two separate occasions. The AVAQMD was quoted as saying that there was "a myriad of things [First Solar] could have done that we didn't think they were doing to prevent the violations."

[30] Under the 1995 Mojave Basin Area Adjudication (the "MBA Adjudication") (www.mojavewater.org/judgment_summary.html), no inter-basin water transfers are permitted to the Este Subarea, so water could not lawfully be trucked in from outside Lucerne Valley. That would leave the project proponent with two untenable choices: (1) it could seek water from the State Water Project through the Morongo Basin Pipeline, but it is highly unlikely that it would be allocated any appreciable amount of water from that source; or (2) pump groundwater from the over-drafted Este Subarea and pay a "makeup obligation" to the Mojave Water Agency to recharge it, but no recharge site currently exists.

Comment Set B8 – Coalition of individuals and community groups (cont.)

groundwater wells would need to be established (p. E-9).[31] But either way, Lucerne Valley would lose if the developer ignored the above-cited restrictions: either Lucerne Valley's sub-basin would be drawn down by on-site groundwater wells or pollution/particulate-spewing water trucks would course up and down Highways 18 and 247 (the nearest water company is 10 miles away from the project site) bringing water from over-drafted groundwater reservoirs under adjacent communities that are interconnected with the Este Sub-basin, i.e., a water company drawing from a well in Apple Valley – under which the already over-drafted Alto Subarea groundwater basin is located -- would ultimately be reducing groundwater re-charge throughout the region, including Lucerne Valley.

B8-35 cont.

Depleting Lucerne Valley's groundwater supply could also incentivize the court in the MBA Adjudication to force local water users to ramp down the amount of groundwater they are entitled to pump -- their "Free Production Allowance (FPA)" – which would have a direct environmental justice impact on a disadvantaged community like Lucerne Valley and impair its economic future.

Utility-scale developers typically dismiss concerns about groundwater usage by noting that their project sites have been accorded adjudicated "production rights." But such rights, under the MBA Adjudication, do not represent a scientific estimate of the amount of groundwater that can actually be drawn from a given sub-basin without irrevocably depleting it. Adjudicated water rights establish only the amount of water that an individual can *legally* draw from a local aquifer, such as the Este Sub-basin. It does not mean that the water will actually be there (or that water of sufficient quality will be there), nor does it guarantee that, should the property owners bound to the judgment draw the amounts allotted to them, there would be enough to go around.

Water is an irreplaceable resource that is Lucerne Valley's lifeblood, and it is subject to prolonged drought. It is also jeopardized by 20,000 MWs in total, according to the draft DRECP (with a portion of that on BLM lands as per the final BLM LUPA) of new utility-scale renewable energy that the DRECP plans for the California desert. Such data as we have on the subject –

---

[31] The Soda Mt. solar project (it was denied approval by the County Supervisors) – which would have consumed *less* acreage (Soda Mt. would have used 1,767 acres to generate 287 MW vs. 3,000 acres for 200 MWs for the Proposed Project) than the Proposed Project – would have required up to five groundwater production wells and three groundwater monitoring wells.

Incidentally, according to the Application, "[t]here are eleven primary local water suppliers for the Lucerne Valley . . . ," with the nearest water purveyor located approximately 10 miles south of the Proposed Project site.

Comment Set B8 – Coalition of individuals and community groups (cont.)

which comes chiefly from the DRECP itself – must be considered.[32]

B8-35 cont.

While the draft DRECP did not conduct a meaningful analysis of groundwater baseline data, it nevertheless made valuable observations about the tenuous state of the desert's groundwater basins. For instance, the draft DRECP acknowledged that its "Development Focus Areas" ("DFAs") would be located primarily on already over-drafted groundwater basins from which the enormous volumes of water needed -- for the construction, maintenance and operations of large-scale generation facilities -- would have to be drawn. In that regard, it conceded (at IV.6-24) that "[d]evelopment would occur in 35 groundwater basins," that 14 of them are stressed or in "overdraft or stressed," that "[m]ost (97%) of the developed area is within four ecoregion subareas [the High Desert areas of Los Angeles and San Bernardino Counties and the Imperial Valley]" -- which are the most populated areas of the California desert[33] -- and that "increased groundwater use in these sensitive basins can adversely affect water supplies and exacerbate impacts associated with overdraft conditions and declining groundwater levels."

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

---

[32] Statements made by the State Water Resources Control Board (the "SWRCB"), in its comment letter regarding the DRECP, suggested that there would be prolonged drought, and that has been borne out since. The SWRCB comment letter states that the preponderance of groundwater in the Basins and Ranges hydrologic province is thousands of years old (i.e., it takes thousands of years for groundwater to travel from the point of recharge to the point of discharge). According to the SWRCB comment letter, our aquifers represent a closed system where 66% of the groundwater is between 100 and 33,000 years old with the only "young" recharge coming from the mountains [p. 18]. On a related note, the SWRCB states that, "[i]n most areas of the desert, deeper, older groundwater is saline. Excessive pumping will likely cause migration of saline water into fresh water aquifers [p. 11]."

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

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-35 cont.

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

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

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

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

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

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

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-35 cont.

Other such "straws" come from the plethora of illegal marijuana grows that have been popping up all over Lucerne Valley for some time, as well as elsewhere in the County. They illicitly consume large volumes of water, and have been springing up faster than law enforcement can close them down. According to aerial photos of the region, there are approximately 250 illegal marijuana grows in Lucerne Valley alone. Using an average of .33 acres per grow and estimating that each of them uses three acre feet of water per year, the illegal marijuana grows consume a total of approximately 247 acre feet per year of Lucerne Valley water. There are another 160 acres of "hoop houses" in Lucerne Valley in which marijuana is illegally grown indoors. At three acre feet per year per each hoop house, they consume a total estimated 480 acre feet of water. So the combined illegal grows consume an estimated 727 acre feet per year, which would allow a legitimate farmer to grow 120 acres of alfalfa. None of the owners of the illegal grows are part of the MWA's adjudication, and their water usage is not accounted for as part of its water allocation program.

There is currently no method of determining the cumulative effects that the Proposed Project and Related Development would have on our inter-connected aquifer systems. Meanwhile, there is a proliferation of large-scale, water-thirsty projects, like the Cadiz Valley Water Conservation and Storage Project, the Eagle Mountain Pumped Storage Hydroelectric Project (1,300 MW) and potential efforts to remediate the Salton Sea that would stress already fragile water reserves.

The only way to truly determine the extent to which the Proposed Project and Related Development would rob Lucerne Valley of its precious groundwater supplies would be to undertake: (1) a comprehensive assessment as to how the siting of the proposed renewable energy generation and substation would – in combination with other factors, including the cumulative impacts of a plethora of utility-scale and transmission projects that will be developed on public land under the BLM LUPA -- affect relevant groundwater basins, i.e., to what degree would their sustainability be threatened; and (2) a baseline study as to the current status of each affected aquifer – how much potable and non-potable water is each such groundwater basin currently holding? Are the groundwater basins sustainable in view of the demands currently being made on them (including the demands that would be made on them by the Proposed Project and Related Development, and in view of their recharge rates (as these recharge rates are reduced by widespread industrial development)), or are these basins approaching collapse, i.e., what are their tipping points?

Even at that, such an analysis would provide a very limited, snapshot-in-time prognostication that may not accurately portray our groundwater basins' future sustainability. At the meeting of the BLM's Desert Advisory Committee held on September 27, 2014, in Pahrump, Nevada, Peter Godfrey, a BLM water specialist who was one of the authors of the groundwater portions of the draft DRECP, stated that, in order to assess our aquifers' future sustainability, a long-term time horizon of as much as 30 years is required, which is longer than the projected lifespan of the Proposed Project and substation. In other words, we won't really know whether

Comment Set B8 – Coalition of individuals and community groups (cont.)

these projects have compromised our groundwater basins until after they have passed the point of no return.[34]

B8-35 cont.

Moreover, because environmental justice concerns are involved, performing an abstract projection as to the amount of water usage for the Projected Project and Related Development would not suffice. An analysis would also have to be performed comparing how this draw-down would affect a disadvantaged community like Lucerne Valley versus how it would affect more advantaged areas of the state.

The groundwater lying below Lucerne Valley belongs to its residents, and it is their only water source for all practical purposes. Meanwhile, the ongoing drought continues to pose a dire threat. As a result, the community faces the unfortunate reality that there may be continuing "ramp-downs" under the MBA Adjudication of the amounts of water that residents can draw from the Este Sub-Basin. In view of this, the lack of definitive studies, and the fact that Lucerne Valley's groundwater basins are already under threat due to overuse in drought-ridden times, it should be assumed that extensive groundwater pumping for the Proposed Project and its progeny would render them unable to meet the needs of Lucerne Valley's residents and businesses.

Given these factors, and the CEQA mandates, the EIR must critically and adequately address the groundwater issue in the manner specified above, and incorporate a comprehensive and cumulative study of the impacts on groundwater reserves that renewable energy projects, like the Proposed Project and the Related Development, would have, with an emphasis on establishing the crucial "trigger points" at which groundwater pumping would render specific affected groundwater basins unable to meet the needs of the County's residents and businesses. Only then can the EIR engage in a rigorous and honest comparison of alternatives to the project as proposed.

10. The EIR Must Thoroughly Examine the Impacts on Surface Waters That the Proposed Project and Related Development Would Have By Reducing and Re-Directing Natural Surface Water Flows.

B8-36

The Proposed Project and Related Development – with the network of storm-water control basins called for by the Preliminary Plan -- will impact a large number of washes and

---

[34] The desire to safeguard groundwater supplies from being depleted over the long haul by large-scale development underlies SB 610 and SB 221. They require long-term supply availability projections for certain types of major development projects listed in Water Code Section 10912(a); they include residential development of more than 500 dwelling units, large shopping centers, office buildings, hotels and plants, as well as projects that "would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project." The EIR must address the question of whether the water usage of the Proposed Project and Related Development would exceed the quoted standard and, if so, provide long-term supply availability projections.

Comment Set B8 – Coalition of individuals and community groups (cont.)

ephemeral streams, especially in the relatively pristine, mountain-ringed alluvial valley targeted by the Proposed Project.[35] These areas provide important habitat values that will be impacted by the massive amount of re-grading proposed. Moreover, the loss of natural surface water flows and the re-direction of surface waters will likely have significant impacts. The impacts on soils from the proposed project will need to be adequately addressed in the DEIS/R.

B8-36 cont.

Ephemeral and intermittent streams make up over 81% of surface waters in the arid and semi-arid southwest (Arizona, New Mexico, Nevada, Utah, Colorado and California). These streams provide a variety of ecosystem services including landscape hydrologic connections, stream energy dissipation during high-water flows to reduce erosion and improve water quality, surface and subsurface water storage and exchange, ground-water recharge and discharge, sediment transport, and storage. They are vital in terms of deposition to aid in floodplain maintenance and development (Lucerne Valley Dry Lake is nearby), nutrient storage and cycling, wildlife habitat and migration corridors, support for vegetation communities to help stabilize stream banks and provide wildlife services, and water supply and water-quality filtering (http://www.epa.gov/esd/land-sci/pdf/EPHEMERAL_STREAMS_REPORT_Final_508-K).

Therefore, the EIR needs to evaluate the impact of the Proposed Project and Related Development on the ephemeral and intermittent streams and the ecosystem processes that they provide both on and off of the proposed project sites.

11. The EIR Must Include an In-Depth Study of the Effects that the Proposed Project and Cumulative Development Would Have on Lucerne Valley Communities.

B8-37

There is an established rural desert community consisting of at least 40 homes within approximately five miles of the Proposed Project, plus St. Joseph's Monastery. There is a cluster of at least 54 homes within a half-mile of the boundaries of one of the Cumulative Projects – the Ord Mountain Solar Project – with at least 33 of them being occupied by their owners (or, as is the case with Rivers Edge Ranch, under active operation), which includes homes to the west of Peterman Hill.

The Proposed Project, Generation Transmission Line and Calcite Substation sites would be located in a narrow valley running southeasterly -- between the Granite Mountains and the Ord Mountains ACECs – from the foot of Stoddard Ridge to Lucerne Valley Dry Lake. Most of the land in this region is pristine desert habitat. The portion of it that has been farmed is in an advanced stage of recovery, is part of a functioning natural habitat and cannot be readily distinguished from those portions which are pristine natural desert. There has been no large-scale agriculture there for approximately a decade.

---

[35] In response to the EJ Outreach letter, a coalition of High Desert residents sent a letter to the CSLC, dated April 30, 2020, a copy of which is appended hereto as Attachment 1. The

Comment Set B8 – Coalition of individuals and community groups (cont.)

That the homes in the local community are dispersed – this is a common and often defining characteristic of rural living, particularly in the desert – does not disqualify the community from receiving protection against rampant industrialization. One need only look at the County's above-cited land use goals and policies for confirmation of that proposition: they are directed toward protection and preservation of the rural lifestyles of the County's desert residents. Is there any doubt that, had the community consisted of million-dollar homes with well-manicured lawns, the Proposed Project and Related Development would have been disallowed some time ago? B8-37 cont.

The County has, in accord with those goals and policies, protected small desert communities from utility-scale development. On May 5, 2015, the Board of Supervisors granted an appeal revoking a CUP for a proposed commercial photovoltaic solar project in Landers – called Bowman Solar – in part because it would have been incompatible with the dispersed rural residences that dot the surrounding region, ***notwithstanding that there were only "seven single-family residences*** . . . located within 1,000 feet of the proposed project parcel" according to the Initial Study for that project (emphasis added.). Such concerns also played a part in the County Planning Commission's denial, on November 6, 2014, of a CUP for the proposed Desert View photovoltaic solar project in western Lucerne Valley.

The basic premises for the EIR's analysis must be that these homes form a community in the fullest sense of the word. In fact, the EIR must adopt an expansive definition of what a community is given that the effects of wind-blown fugitive dust and spores generated by the Proposed Project and Related Development would greatly impact residents living at some distance from them.

12. The EIR Must Analyze a Broad Array of Environmental Justice[36] Impacts that the Proposed Project and Related Development Would Have on the Surrounding Community. B8-38

The Notice incorrectly contends that the EIR need not "examine whether the Project would have the potential to disproportionately affect the area(s) of high minority population(s) and low-income communities," or "the Project's consistency with the CSLC environmental justice policy." Consideration of environmental justice ("EJ") concerns is required by CEQA (as will be discussed below) and by the tenets of the CLSC's own strongly-worded Environmental Justice Policy, which is based on the "principle that past environmental injustices will not define California's future," and that "all communities equitably [must] share in the environmental benefits and burdens resulting from its decisions."[37]

---

[36] Environmental justice is defined by the Environmental Protection Agency as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."

[37] Further, the CSLC's website states that its mission is to preserve "irreplaceable natural habitats for wildlife, vegetation, and biological communities."

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-38 cont.

While the Notice states that the EIR will address EJ concerns, notwithstanding the view that the CSLC is not required to do so, this grudging approach suggests that the EIR might give EJ a perfunctory treatment. That would be contrary to applicable law.

EJ concerns are accorded an immense amount of focus and weight in this state, and *all* social, economic and physical impacts that the Proposed Project and Related Development would impose on the surrounding community must be analyzed as part of the EIR. Under CEQA, impacts to the environment are not limited to the natural environment, but also include "substantial adverse effects on human beings, either directly or indirectly." CEQA Guidelines, Section 15065(d).

Along those same lines, the official website for the California Office of Attorney General (oag.ca.gov) states, in an attachment to its "CEQA and General Planning" section – entitled "Environmental Justice at the Local and Regional Level Legal Background" (the "EJ Guidelines") – that:

> "Human beings are an integral part of the 'environment.' An agency is required to find that a "project may have a 'significant effect on the environment' if, among other things, '[t]he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly[.]" (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines, § 15126.2 [noting that a project may cause a significant effect by bringing people to hazards]."

The EJ Guidelines also state that: (1) a "local lead agency [is required] to determine whether pollution from a proposed project will have significant effects on any nearby communities, when considered together with any pollution burdens those communities already are bearing, or may bear from probable future projects;" and (2) "economic and social effects may be relevant in determining significance under CEQA in two ways . . . First, as the CEQA Guidelines note, social or economic impacts may lead to physical changes to the environment that are significant . . . Second, the economic and social effects of a physical change to the environment may be considered in determining whether that physical change is significant [citations to legal authorities were omitted for purposes of brevity]." See also Section 15131(b), which states that "[e]conomic or social effects of a proposed project may be used to determine the significance of physical changes caused by the project."

An EIR is fatally defective if it accords greater weight to a nearby community of million-dollar homes than it does to less affluent communities like Lucerne Valley. Lucerne Valley is, in fact, a Disadvantaged Community (2012-16 American Survey/Census) Census Designated Place (CDP), with a median income which is roughly half of the state's median income. The EIR with respect to the Proposed Project must give serious consideration to the Proposed Project's likely effects on the people who would be living in its proximity.

A coalition of High Desert organizations and residents submitted a letter to the CSLC, dated April 30, 2020 – the EJ Letter -- which addresses EJ concerns arising with respect to the Proposed Project and Related Development. The EJ Letter, a copy of which is attached to this

Comment Set B8 – Coalition of individuals and community groups (cont.)

letter as Attachment 1, is incorporated into the instant letter, and it engages in a thorough treatment of the many EJ concerns that must be addressed by the EIR.

B8-38 cont.

To summarize, the EJ Letter points out that:

A. <u>The Community Would Not Reap Any Benefits from the Proposed Project and Related Development</u>.

Local residents would be called upon to make a huge sacrifice in the name of large-scale energy generation and transmission: they would have to give up their desert rural lifestyles, direct access to nature and unimpeded natural views, as well as the value of their homes. But they would get nothing in the bargain. All of the power generated would be exported to the grid for use outside the County, and all profits would go to the developer, which is a multi-national company.[38]

B. <u>The Community Would Directly Suffer All of the Substantial Downsides Generated by the Proposed Project and Related Development.</u>

Residents would be subjected to noise, dust and constant intrusion from a major construction project that would require hundreds of workers and platoons of heavy equipment over an extended period of time. And dust plumes would inevitably be unleashed during the operational life of the projects as the prevailing winds sweep over denuded desert soil, while new high tension lines crackle and hum loudly overhead. As the immense appeal of the community is destroyed in the process, the value of the homes in it would plummet, all of which will likely result in some or all of the homes being abandoned. If so, the area would sink into blight and become a derelict community. Instead of the current, vibrant human community that exists side-by-side with thriving natural communities, there would be thousands of solar panels left silently pivoting in the degraded landscape; and

---

[38] California has long had such a glut of renewable energy that, for eight days in January and nine in February of 2017, the state had to pay Arizona to take all the surplus, even as natural gas power plants – eight such plants are being refurbished – continued to generate, according to a June 22, 2017 *Los Angeles Times* article, entitled "California has invested heavily in solar power. Now there's so much that other states are sometimes paid to take it." It also reports that curtailments of solar and wind power production for the first quarter of 2017 were more than double the same period in the previous year, and the surge in solar power could push the number even higher in the future. Because of this surplus, existing power plants run, on average, at slightly less than one-third of capacity. And some plants are being closed decades earlier than planned. But the overbuilding of new plants and transmission continues apace because – according to industry insiders cited in the article – such construction receives a "lopsided incentive": "utilities can build in the construction costs into the amount that the utility can charge electricity users – no matter how much or how little is used." In other words, such charges include a guaranteed rate of return, i.e., profit, for the utilities.

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-38 cont.

C. <u>The Proposed Project, Generation Transmission Line and Calcite Substation Would Usher a Proliferation of Additional Utility-Scale Projects into the Vicinity – the Cumulative Projects -- Imposing Additional Ill Effects on Community Members</u>.

This is already beginning to happen, despite the fact that the Proposed Project, Generation Transmission Line and Calcite Substation have not been approved. As noted above, there are at least three additional utility-scale Cumulative Projects being proposed for the immediate vicinity of the community. This proliferation of utility-scale projects would put the community at the epicenter of thousands of dust (and Valley Fever spore) -spewing industrialized acres, thereby making its residents the focus of an undue and highly disproportionate amount of health-compromising fugitive particulates and other pollutants.[39]

Each of these EJ considerations must be addressed in the EIR.

D. <u>Approval of the Proposed Project and Related Development Would Violate the Tenets of the EJ Policy By Causing Lucerne Valley to Suffer a Disproportionate Environmental and Social Impact, While Providing It With No Benefits</u>.

The EJ Policy starts with the following declaration: the CSLC "commits to the principle that past environmental injustices will not define California's future and supports the ideal that all communities equitably share in the environmental benefits and burdens resulting from its decisions. The environmental justice goals below are bold and transformative because that is what California needs."

The CSLC has, with this "bold and transformative" approach, made it its mission to reverse that historical trajectory, and to see to it that "all communities equitably share in the environmental benefits and burdens." Pursuant to that policy, all communities across our state must equitably share the burdens associated with ramping up California's renewable energy capacity, and the state's SB 100 goals (which include reaching 100% zero-carbon energy resources by the end of 2045) and AB 32 goals (which include reducing greenhouse gas emissions 80% below 1990 levels by 2050) cannot be achieved on the backs of the state's rural populations. As observed by the EJ Background Report (p. 2-10), "geographic inequities" result "where the burdens of undesirable land uses or costs are concentrated in certain neighborhoods

[39] The EJ Guidelines cite Gov. Code, § 65040.12, subd. (e), which states that "[f]airness in this context means that the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects."

Comment Set B8 – Coalition of individuals and community groups (cont.)

and the benefits are received elsewhere."[40]

B8-38 cont.

And the CSLC cannot fund our state's teacher's retirement fund on the backs of the state's rural communities either. (The CSLC's July 25, 2017 comment letter regarding the RECE acknowledged that the CSLC wanted to use the Proposed Project in part to "benefit the California State Teacher's Retirement Fund.") This would impose yet another "geographic inequity" on Lucerne Valley.

Geographic inequities are considered to involve far more than the physical impacts of pollution. According to the EJ Background Report (p. 1-1), "the field of environmental justice has expanded beyond its original focus of reducing the disproportionate burden of pollution among certain populations. Environmental justice now includes broader social equity . . ." Environmental Justice "is considered an equity issue. It is an integral component of equity, but social equity also encompasses a larger framework such as access to jobs and economic opportunity . . . [s]ocial equity is applied across the age range and various disciplines and has many other nuances . . . Equity can be used as the larger framework for ensuring opportunities for all in the community," according to the Office of Planning and Research-issued "2017 General Plan Guidelines."[41]

---

[40] Likewise, Gov. Code, § 65040.12, subd. (e), states that "[f]airness in this context means that the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects."

[41] According to the CEQA Guidelines, Section 15604(e), economic or social impacts that are related to physical impacts must be addressed:

> "[e]conomic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner any other physical change resulting from the project."

Under CEQA, impacts to the environment include "substantial adverse effects on human beings, either directly or indirectly." CEQA Guidelines, Section 15065(d). Along those same lines, the official website for the California Office of Attorney General (oag.ca.gov) states, in an attachment to its "CEQA and General Planning" section – entitled "Environmental Justice at the Local and Regional Level Legal Background" – that: "Human beings are an integral part of the 'environment.'" (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines, § 15126.2 [noting that a project may cause a significant effect "by bringing people to hazards].

Comment Set B8 – Coalition of individuals and community groups (cont.)

E. That Lucerne Valley Has an Older, Less Affluent Population (And Is Already Experiencing the Effects of Pollution) Brings It Within the Ambit of the CSLC's EJ Policy and CEQA's Analogous Policies.

B8-38 cont.

As noted above, the EJ Policy (p. 2) encompasses "populations that are disproportionately burdened by or less able to prevent, respond, and recover from adverse environmental impacts." Lucerne Valley already experiences pollution generated by industries that produce benefits accruing almost entirely outside the County.

According to the County's EJ Background Report's Table 3-4b (p. 3-13), Lucerne Valley "has significant air quality issues. The region does not meet federal standards for ozone and respirable particulate matter (PM10) or state standards for ozone and respirable fine particulate matter." "Several census tracts in [there are four of them there] have pollution burden scores measured in the upper quartile [p. 3-12]."

Lucerne Valley, as per the EJ Background Report, qualifies under SB 1000 as an "Economic Justice Focus Area," based on the following specific finding, among others (p. 3-11 and 12):

> "All census tracts in Lucerne Valley rank in the 3rd or 4th quartiles, with a high portion of lower income households. Concerns in Lucerne Valley include higher rates of asthma due to ozone (2 tracts), airborne allergens carried by seasonal winds, and other local pollution sources . . . Three tracts in Lucerne Valley have poverty and unemployment rates scored in the upper quartile [p. 3-12]."

We have only partially excerpted the EJ Letter in this letter. Again, we would urge that the drafters of the EIR to carefully consult the EJ Letter when formulating its treatment of EJ considerations.

13. The EIR's Analysis Must Take Proper Account of the Difficulty of Restoring Natural Desert Terrain and Habitat.

B8-39

The Proposed Project and Related Development cannot be justified by the proposition that, after their operational lives are over, each of the various project sites can be restored to their former natural state, because the desert is an ecosystem well-known to be poorly responsive to restoration efforts after significant habitat disturbance.

Nevertheless, the Notice represents that:

> "[i]f, at the end of the CSLC lease [for the Proposed Project] and/or contract term to sell energy to the utility buyer, no contract extension is available or no other buyer of the energy emerges, the solar plant would be decommissioned and dismantled. After

Comment Set B8 – Coalition of individuals and community groups (cont.)

B8-39 cont.

> removal of all construction-related on-site improvements, remediation and restoration of the area would be performed on the site to its pre-construction condition."[42]

All the developer is really proposing here is that, if the Proposed Project fails to generate enough profits, all above-ground, man-made structures would be removed and the site would be left, in effect, "broom clean." That is abandonment – taking your marbles and going home – not restoration.

In order to effect true restoration, the developer(s) would – as a first step -- need to reverse all of the grading and trenching used to construct the various projects. In the case of the Proposed Project, this would mean restoring the original terrain contours, pitch and contours of an immense and geologically complex alluvial valley – after removing subsurface features like the storm-water control basins called for by the Preliminary Plan -- and putting back the original web of channels making up the region's delicate hydrological systems. This would require extensive, delicate and high-precision grading, the importation of huge volumes of compatible desert soil (and obtaining it would inflict severe habitat damage on still other desert sites), great volumes of water (and obtaining it would inflict further damage elsewhere). Managing this unprecedented endeavor would far exceed the skill sets of even the most sophisticated contractors and scientists.

Even if that first step were to be accomplished, teams of environmental scientists would need to collaborate on reinstating and managing the site's biological processes from the ground floor up (actually from the sub-soil up) – right down to the microbiological level -- while creating the precise conditions needed to successfully reintroduce the site's original vegetation, from its microphyll plant life and sub-soil fungi to its above-the-surface climax species, which is creosote bush scrub according to the SC Wildlands 11/10/20 Letter. The prospects for recreating the original, living cryptobiotic soil crusts would be nil for all practical purposes.

The SC Wildlands 11/10/20 Letter states that:

> "[o]f significance, there are several clusters of ancient creosote rings along washes on the proposed site. As Tim Thomas, former President of the Mojave Chapter of California Native Plant Society said, 'Lots of rings indicate old, 3-4,000-year-old, intact habitat.' As such, it would be impossible to restore habitat 'on the site to its pre-construction condition.'"

Making restoration efforts all the more infeasible would be climate change. According to the draft DRECP, current climate change predictions identify the deserts of North America as being particularly hard hit. The report states: "Climate projections agree that temperatures will

---

[42] It is noteworthy that, in the above-quoted language, the Proposed Project's developer evinces an intention to abandon its leasehold on the project site – prior to the end of the lease term -- if the developer loses its power purchase agreement, or cannot obtain an extension of it. Should that occur, the developer would certainly decline to sink further capital into a defunct project by pursuing thorough, complicated and expensive habitat remediation efforts.

Comment Set B8 – Coalition of individuals and community groups (cont.)

increase in the southern California deserts by more than 2º C…" Draft DRECP, App. P, page 13. That these increases in already very high temperatures will put tremendous stress on numerous species goes without saying. When the loss of water from extended drought is added to the mix, there ceases to be any basis to suggest that the additional stress on the desert from developments like the Proposed Project and Related Development can be "mitigated" away through restoration some years hence. B8-39 cont.

Also, it would be particularly hard to protect against OHV use after construction; and it is almost impossible to protect against increased fires and human disturbance as a result of increased access. Yet these phenomena – increased OHV use after construction, more fires and more human disturbance because of increased access – are inevitable consequences of the Proposed Project and Related Development.

Finally, it is extremely doubtful that any of the developers of the Proposed Project and Related Development will still be around decades into the future. To the extent that any of them are still on the scene, they would have no incentive to restore the sites in question or the capital or know-how needed to accomplish that.

The concept of restoration has no validity in a serious environmental study without meticulous examination of the points referenced above.

14. The EIR Must Contain a CEQA-Mandated Consideration of Project Alternatives.

B8-40

Section 15126.6(a) of the CEQA Guidelines requires that an EIR describe a range of reasonable alternatives to the project, or a range of reasonable alternatives to the location of the project, that could feasibly attain the basic objectives of the project. An EIR does not need to consider every conceivable alternative project, but it does have to consider a range of potentially feasible alternatives that will facilitate informed decision-making and public participation.

According to CEQA Guidelines Section 15126.6(a), the discussion of alternatives must include several different issues. The discussion of alternatives must focus on alternatives to the project, or to the project location, which will avoid or substantially reduce any significant effects of the project, even if the alternatives would be costlier or hinder to some degree the attainment of the project objectives.

The "No Project" alternative must also be evaluated under CEQA rules, particularly given that, as noted above in this letter, any serious EIR will have a lengthy list of "Mandatory Findings of Significance." A "No Project" alternative would have the further benefit of promoting the policies behind Executive Order N-82-20, which requires the state to preserve at least thirty percent of its public lands and waters, with a specific emphasis on establishing and implementing carbon sequestration in natural vegetation and soils.

In fact, a land swap between the CSLC and the BLM would make a "No Project" approach by far the most appropriate and appealing alternative, one that would produce a "win-

Comment Set B8 – Coalition of individuals and community groups (cont.)

win" for all parties concerned. Such a swap would work as follows: the CSLC would exchange the land comprising the Proposed Project site for BLM land in one of the five areas of disturbed land designated by Policy 5.4.2 of the County's RECE, and in the County's Resolution, as being available for utility-scale renewable energy development. This swap would enable the CSLC to generate renewable energy leasing revenue from an already environmentally disturbed location that is far away from established communities, without trammeling on Executive Order N-82-20. One of those five County-designated areas, which is near Trona, deserves especially thorough consideration and analysis in the EIR as an alternate site for the Proposed Project. B8-40 cont.

If the EIR were to reject the "No Project" alternative on the ground that it would be infeasible because it would not meet the basic project objective -- which is to build the Proposed Project (on the currently designated site) in order to help meet renewable energy/GHG-reduction mandates and generate revenue for the teachers' retirement fund -- then the EIR would not provide an adequate, CEQA-mandated discussion of project alternatives. This would also be the case in the event that the EIR advocates "build alternatives" that are only cosmetically different from the development proposal currently in hand.

The "No Project" analysis must also include a discussion of the existing conditions and what would reasonably be expected to occur in the foreseeable future if the Proposed Project and Related Development were not approved, such as the preservation of the human and natural communities in the vicinity of the project site in compliance with Executive Order N-82-20.

In short, in order to comply with such requirements, the EIR would have to consider and report that there are so many "substantial and avoidable" impacts associated with the proposed solar farms, transmission line and substation – in terms of visual aesthetics, biological resources, groundwater, health, air quality, EJ and cumulative growth-inducing effects, among others – that building the Proposed Project would be ill-advised.

15. The EIR Must Incorporate a Thorough Search for Native American Artifacts, Campsites and Burial Grounds in the General Area of the Proposed Project and Related Development. B8-41

The EIR must make its own inquiry into whether or to what extent that "tribal cultural resources" – artifacts that could be highly significant in terms of preserving tribal heritage and history – might be present on some or all of the sites which are targeted for renewable energy and infrastructure development.

The Proposed Project's Preliminary Plan indicates that tribal cultural resources are indeed present, by showing a "Cultural Exclusion Area." But the EIR must confirm this and conduct its own independent analysis as to the full extent of the area that must be put off-limits to industrial development, especially given the developer's strong profit motive to maximize developable acreage.

This is highly important because the contemplated construction activities would inevitably destroy highly fragile and irreplaceable traces of tribal cultures which may be situated within or near the footprint of the project sites. The presence of artifacts and campsites in or

Comment Set B8 – Coalition of individuals and community groups (cont.)

near them would add real urgency to the need to preserve the area intact for further research, which is typically a painstaking process.

B8-41 cont.

As an integral part of the EIR, a team of qualified paleontologists must be commissioned to thoroughly examine the general project areas in order to determine the extent to which it bears the mark of ancient tribal cultures and to assess the extent to which any large-scale industrial development there would be appropriate. In addition, the developer must work closely with tribal authorities to explore, identify and preserve sites and artifacts.

The results and implications of such a study and such inquiries must be meaningfully weighed in the EIR.

16. Conclusion.

We welcome the opportunity to comment on the scope of the EIR for the Proposed Project, Generation Transmission Line and Calcite Substation, and look forward to continuing participation.

We reserve the right to make other and further comments regarding scoping in subsequent correspondence and at any other public scoping meetings concerning the referenced development and/or the EIR.

Very truly yours,

Community Associations, Organizations and Individuals:

LUCERNE VALLEY ECONOMIC DEVELOPMENT ASSOCIATION

Chuck Bell, President

LUCERNE VALLEY MARKET/HARDWARE

Linda Gommel, Chief Executive Officer

HOMESTEAD VALLEY COMMUNITY COUNCIL

Jim Harvey, President

CHURCH OF OUR LORD AND SAVIOR (LUCERNE VALLEY)

Bill Lembright, President

Comment Set B8 – Coalition of individuals and community groups (cont.)

YUCCA MESA IMPROVEMENT ASSOCIATION

Chris Nichols, President

JOHNSON VALLEY IMPROVEMENT ASSOCIATION

Betty Munson, President

SAN BERNARDINO VALLEY AUDUBON SOCIETY

Drew Feldman, Conservation Director

MORONGO BASIN CONSERVATION ASSOCIATION

Steve Bardwell, President

GRANITE MOUNTAINS DESERT RESEARCH CENTER (University of California Natural Reserve System, UC Riverside EEOB (Evol./Ecol./Org. Biol.)

James M. André, Director

CALIFORNIA DESERT COALITION

Frazier Haney, Director

FRIENDS OF BIG MORONGO

Jane Olson, President

BASIN AND RANGE WATCH

Kevin Emmerich, Co-Founder

EXPERT APPLIANCE SERVICE

Bill Peterson and Alyn Peterson, Proprietors (and residents of Lucerne Valley)

THE ROCK CORRAL RANCH

Nicole Hallam and Gregg Hallam, Proprietors (and residents of Johnson Valley)

LUCERNE VALLEY REALTY

Martha Lynn, Owner

JUBILEE MUTUAL WATER COMPANY, INC. (Lucerne Valley)

Raymond M. Gagne, Jr., General Manager

Comment Set B8 – Coalition of individuals and community groups (cont.)

CENTER WATER COMPANY, INC.

Raymond M. Gagne, Jr., Consultant

Brian Hammer (homeowner in Lucerne Valley)

Sue Hammer (homeowner in Lucerne Valley)

Neil Nadler (homeowner in Lucerne Valley)

Randy Polumbo (resident of Lucerne Valley)

Kathryn Anema (resident of Lucerne Valley)

Raymond M. Gagne, Jr. (resident of Lucerne Valley)

Sheri Bush (resident of Lucerne Valley)

Lorraine M. Cross (property owner/resident of Lucerne Valley)

Richard Selby (resident of Lucerne Valley)

Roger Peterson (resident of Lucerne Valley)

Renee Lynn (resident of Lucerne Valley)

Dennis Morrison (resident of Lucerne Valley)

Linda Morrison (resident of Lucerne Valley)

Todd Jones (resident of Lucerne Valley)

Jenny Wilder (resident of Apple Valley)

Barbara Idouchi (resident of Apple Valley)

Aaron Idouchi (resident of Apple Valley)

Comment Set B8 – Coalition of individuals and community groups (cont.)

Neville Slade (resident of Apple Valley)

Tamara Slade (resident of Apple Valley)

John Smith (resident of Apple Valley)

Bryan Baker (resident of Apple Valley)

Betty Munson (resident of Johnson Valley)

Susan Blair (resident of Johnson Valley)

Barry Blair (resident of Johnson Valley)

Theresa Taylor (resident of Johnson Valley)

Pat Flanagan (resident of Desert Heights)

Robert L. Berkman (resident of Newberry Springs)

Kathy Ridler (resident of Newberry Springs)

Rod Ridler (resident of Newberry Springs)

Jack Unger (resident of Newberry Springs)

Paula Deel (resident of Newberry Springs)

Paul Deel (resident of Newberry Springs)

Robert Shaw (resident of Newberry Springs)

Veronica Shaw (resident of Newberry Springs)

Cindy Charlton (resident of Newberry Springs)

Frazier Haney (resident of Joshua Tree)

Jennifer Bolande (resident of Joshua Tree)

Sharon Dove (resident of Morongo Valley)

Meg Foley (resident of Morongo Valley)

Sheila Bowers (resident of Pioneertown)

Comment Set B8 – Coalition of individuals and community groups (cont.)

Gene Parsons (resident of Pioneertown)

Star Decker (resident of Pioneertown)

Sara Fairchild (resident of Pioneertown)

Ann Garry (resident of Pioneertown)

Dave Garry (resident of Pioneertown)

Elizabeth Stewart (resident of Yucca Valley)

Matthew McCarthy (resident of Yucca Valley)

Rick Sayers (resident of Yucca Mesa)

Ed Ruscha (resident of Venice, CA)

CCs:

Robert Lovingood (First District Supervisor;
SupervisorLovingood@sbcounty.gov)

Janice Rutherford (Second District Supervisor;
SupervisorRutherford@sbcounty.gov)

Dawn Rowe (Third District Supervisor;
SupervisorRowe@sbcounty.gov)

Curt Hagman (Chairman and Fourth District Supervisor;
SupervisorHagman@sbcounty.gov)

Josie Gonzales (Vice Chairperson and Fifth District Supervisor;
SupervisorGonzales@sbcounty.gov)

Karen Watkins (karen.watkins@lus.sbcounty.gov)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

INDEX OF ATTACHMENTS
TO
COALITION STAGECOACH SOLAR NOP COMMENT LETTER

Attachment 1:	Coalition Environmental Justice Letter in Response to CSLC, dated April 30, 2020	B8-42
Attachment 2:	SC Wildlands' Letter Commenting on the DEIR for the Proposed Ord Mountain Solar Project, dated November 16, 2018	B8-43
Attachment 3:	SC Wildlands' Letter Commenting on the Draft EIR/EIS for the DRECP, dated February 19, 2015	B8-44
Attachment 4:	SC Wildlands' Report for the Alliance for Desert Preservation dated, February 23, 2015	B8-45
Attachment 5:	SC Wildlands' Letter Commenting on the Proposed Stagecoach Solar Project NOP, dated November 10, 2020	B8-46

Comment Set B8 – Coalition of Community Groups and Individuals

B8-42
(for entire attachment)

Attachment 1

Coalition Environmental Justice Letter in Response to CSLC

dated April 30, 2020

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

File Ref. W 26868

April 30, 2020

By Email: Randy.Collins@slc.ca.gov
Mr. Randy Collins
Public Land Management Specialist
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, Calif. 95824-8202

Re: Environmental Justice Outreach; Stagecoach Solar Project, Lucerne Valley, San Bernardino County; proposed 200 Megawatt Solar Energy Facility (the "Proposed Project")

Dear Mr. Collins:

We are a coalition made up of the following community groups, businesses, agencies and individuals: Lucerne Valley Economic Development Association (LVEDA), Church of Our Lord and Savior (Lucerne Valley), Lucerne Valley Market/Hardware, Lucerne Valley Realty, Expert Appliance Service, Jubilee Mutual Water Company, Inc., Homestead Valley Community Council, Johnson Valley Improvement Association, Newberry Springs Chamber of Commerce, Newberry Springs Economic Development Association, Newberry Springs Community Alliance, Morongo Basin Conservation Association, Mojave Communities Conservation Collaborative, California Desert Coalition, Friends of Pioneertown, Sustainable Learning Center, Friends of Big Morongo Canyon Preserve, Brian Hammer, Roger Peterson, Sue Hammer, Dennis Morrison, Renee Lynn, Millie Rader, Jerry Swarthout, David Rader, Neil Nadler, Todd Jones, Lorraine Cross, Louis Kannenberg, Rusty LaGrange, George V. Yablonsky, Franklin S. Fowler Jr., M.D., Carl Porter, Jeanne C. Fowler, Roland Reyes, Kathryn Anema, Charlie Brewster, Teresa Reyes, Frank Quinones, Randy Polumbo, Herlinda V. Quinones, Lawrence Land, Gary Aplet, Kenneth D. Lair, Barry Blair, Barbara Smith, Susan Blair, Jackie R. Lindgren, Gregg Hallam, Bryan Baker, Nicole Hallam, Robert L. Berkman, Ellen Johnson, Laraine Turk, Jim Johnson, Ted Stimpfel, Marina West, Randy West, Diana Bork, Ann Garry, Sarah Kennington, Dave Garry, Elizabeth Stewart, Steve Bardwell, Matthew McCarthy, David S. Miller, Cindy Charlton, Dixie Coutant, Jerry Broyles, Monica L. Mahoney, Gene Parsons, Catherine Cannon, Star Decker and Robert Stiefel. Together, we represent a broad spectrum of residents, businesses, organizations, recreationists and conservationists in the High Desert of San Bernardino County.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Our coalition has been active in commenting on renewable energy, land use and environmental policies affecting High Desert communities, which has included engaging with San Bernardino County (the "County") concerning the Renewable Energy and Conservation Element of the Countywide Plan and various proposed utility-scale renewable energy projects, including several that are proposed for northern Lucerne Valley in the vicinity of the Proposed Project site. We are writing now in response to the "Environmental Justice Outreach" letter, dated February 19, 2020 (the "EJ Outreach Letter"), sent by the California State Lands Commission (the "CSLC"), which asks for our "input on the impacts and benefits of this action [the Proposed Project] on the local community."[1] As will be discussed below, the Proposed Project would, if approved, impose disproportionate environmental hazards and other serious repercussions on Lucerne Valley -- which is a disadvantaged community in several respects -- that would be contrary to the goals and policies stated in the CSLC's "Environmental Justice Policy" (the "EJ Policy").

We support the CSLC's goal of:

(1) fostering and increasing our state's renewable energy capacity by, as stated in the EJ Policy, "facilitating and encouraging community- or regional-scale renewable energy facilities" (EJ Policy, p. 2 (para. 1(b) of the "Environmental Justice Goals"), and encouraging such facilities in order to enhance "social equity" (EJ Policy, p. 10 (Goal 6.0) (see also p. 12 ("Goal 8: Encourage Community-Oriented Lessees));

(2) "promoting equity and advancing environmental justice through more inclusive decision-making that considers the disproportionate burdens on disadvantaged communities and Native Nations (p. 1 of the EJ Policy);" and

(3) implementing the EJ Policy to create, as stated in the EJ Outreach letter, a "future in which environmental justice communities and tribal communities are no longer disproportionately impacted by pollution and environmental hazards . . ."

In line with the CSLC's aims, our coalition has engaged with the County in an effort to prevent utility-scale renewable energy projects – large generation facilities that export power out of the County to the electrical grid -- from impinging on disadvantaged High Desert communities and the surrounding open space that defines them and maintains their quality of life.

1. Introduction

Lucerne Valley is a well-established community of dispersed rural homes located in a primarily undisturbed natural desert setting in which important inter-mountain wildlife corridors are present, with a harmonious (yet delicate) balance maintained between its human and natural

[1] We request that all future notices and communications pertaining to the Proposed Project be directed to our representative, Chuck Bell, at the following email address: chuckb@sisp.net.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

communities. It is an economically disadvantaged community that is home to a predominantly older population with significant health deficits.

The Proposed Project would consist of a 5,359-acre utility-scale renewable energy (solar panel) facility and a 7.6-mile 220 kV transmission line (the "Gen-Tie Line").[2] In order to connect the Proposed Project to the grid, Southern California Edison ("Edison") would have to construct a new regional electrical substation in its vicinity (the sites for the Proposed Project and substation are depicted on the maps attached to this letter as Figures 3 and 5[3]). Development of this magnitude would fundamentally and irrevocably industrialize Lucerne Valley and, in the process, generate harmful environmental impacts that would deprive its residents of their health, homes and groundwater, while devastating the local tourism-driven economy and property values. Two of the primary by-products of the Proposed Project would be visual blight and health-destroying dust, spores and respirable fine particulate matter blowing off of a wind-prone project site scraped bare of its native, soil-retaining plants. The Proposed Project would render the desert rural lifestyle enjoyed by Lucerne Valley's residents a thing of the past, and ultimately displace them in whole or in large part.

As a result, the Proposed Project, Gen-Tie Line and substation would impose an undue and highly disproportionate burden on one small community in the name of achieving the state's ambitious SB 100 mandate (which requires that the state must rely on 100% zero emission energy sources by 2045) and AB 32 mandate (which requires a reduction in greenhouse gas emissions of 80% below 1990 levels by 2050).

And that is not the only sacrifice that Lucerne Valley is being called upon to make in order to ramp up the state's renewable energy production. It already faces an existential threat from three other utility-scale solar projects currently under application: (1) Sienna Solar North, East & West (which would consist of four separate solar generation facilities totaling 1,630 acres); (2) Ord Mountain Solar (483 acres); and (3) Calcite Solar I (which would consist of four separate solar generation facilities totaling 664 acres). Those three projects (whose locations are depicted in red on the maps attached to this letter as Figures 3 and 5, under the legend: "Proposed County Projects"), together with the Proposed Project, would totally repurpose over

---

2 This information comes from the "Project Details" document appended to the EJ Outreach Letter (the "Project Details").

3 All maps attached to this letter as Figures 1 through 6 were prepared by Brian Hammer, Adjunct Professor at Victor Valley College (Agriculture and Natural Resources Dept.), and GIS Analyst for a state agency.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

8,136 acres of desert land in Lucerne Valley as industrial sites.[4] Their effects would extend far beyond the project footprints, and the interstitial land – the land that falls between and around the projects -- would also be rendered uninhabitable, ecologically dead and visually unappealing due to its unfortunate proximity to the industrially-altered project sites.

Edison is attempting to propel all four Lucerne Valley utility-scale projects into existence by proposing to build the above-referenced substation there (called the "Calcite" substation) in order to interconnect them to the grid. The Calcite substation is so integral to the Ord Mountain project (which would be the closest one to the Proposed Project) that it is considered a connected project for CEQA review.[5] The green-lighting of any of the four proposed Lucerne Valley utility-scale projects would be cited by Edison as justification for the new Calcite substation. Approval of that substation would, in turn, encourage approval of the four projects, as well as a cluster of additional utility-scale generation facilities in its vicinity.

In short, the Proposed Project – which is the biggest by far of any of the Lucerne Valley utility-scale projects currently under application -- would, if approved, be key to transforming the region into an industrial wasteland (with Lucerne Valley at its epicenter) characterized by vast complexes of solar panels, graded/scraped land, a honeycomb of roads for construction, maintenance, cleaning and security and a web of visually-intrusive (and electrical field-producing) lines crackling and humming overhead. As laudable as the state's renewable energy goals are, placing even one utility-scale project – the Proposed Project -- in Lucerne Valley's midst would be most inequitable; concentrating others there would strike a grievous blow to the entire region.

That the Proposed Project would inflict a disproportionate environmental burden on Lucerne Valley is also borne out by the following facts:

1. Lucerne Valley has a predominantly older and health-impaired population – the median age of its residents is 50.4 years, while the California median age is 36.5 years – that is most susceptible to (and least able to recover from) from adverse impacts from the Proposed

---

[4] Proponents of the Ord Mountain and Calcite Solar I projects have put them on hold for the time being, according to the "County of San Bernardino Land Use Services Planning Division Renewable Energy Projects as of March 2020." Nevertheless, they are still very much in the approval "pipeline." Savvy large-scale renewable energy developers file applications to establish "grandfather" status for their projects, and then put them on hold to serve strategic aims. The developers of Ord Mountain and Calcite Solar I might be waiting to see whether political momentum would be generated by approval of the other proposed Lucerne Valley projects. If that happens, you can bet that the "holds" would then be lifted.

[5] The Draft Environmental Impact Report (the "DEIR") for the Ord Mountain project, which states (in its section 2.1) with respect to the "Calcite Substation Project" (which is described in Appendix K of the DEIR) that "[b]ecause it is a necessary infrastructure improvement to allow the proposed solar and energy storage project to connect to the grid, the

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Project, such as the harmful effects of inhaling blowing dust, spores and respirable fine particulate matter made airborne by the operation (and construction) of the Proposed Project, and least able to relocate;

2. Lucerne Valley residents would get nothing in the bargain if the Proposed Project were to go forward (as further discussed in Section 7 below). All of the power generated by the Proposed Project would be exported to the grid for use outside the County, while all profits would go to Avangrid Renewable LLC (an affiliate of Avangrid, Inc., which is a publicly-traded U.S. holding company with $30 Billion in assets and operations in 25 states) and to Edison; and

3. Lucerne Valley already experiences pollution generated by industrial activity on its southern outskirts that produces products, power and benefits accruing almost entirely outside the County.

As a result, approval of the Proposed Project would run counter to both the letter and spirit of the EJ Policy.

2. <u>A Description of the Lucerne Valley Community</u>.

The Proposed Project site is at the northwestern corner of the Lucerne Valley Community Service Area 29 ("LV CSA"), as shown on the maps attached to this letter as Figures 1 and 2.[6] Lucerne Valley comprises the entire area within the boundaries of LV CSA (which is depicted on Figures 1 and 2 as "Lucerne Valley (CSA 29)").

Lucerne Valley, with a population of 6,590 (according to the 2010 United States Census), is made up of approximately 3,556 dwelling units (according to Census Blocks derived from the 2010 United States Census (homes are plotted on Figures 1 and 2)) dispersed within a predominantly intact natural desert setting. The Lucerne Valley community is spread out and dispersed, with lots of open space between homes, because they were originally established on large homestead plots (initially 160-acres, later 40 acres) used mostly for farming and ranching. Many homes and surrounding plots there have been passed on between family generations. (See "Range One East," by Virginia C. Hemphill-Gobar (published in 1972 by J.S. Gobar Foundation)). (The "Aurora Solar LLC (a subsidiary of Avangrid Renewable LLC) Application for Lease of State Lands (August 2016)" (the "Application") does not acknowledge that the community even exists; it states that the "project area includes scattered rural residences and open, undeveloped desert lands.") This provides Lucerne Valley with a very unique and precious, yet extremely fragile, attribute that provides a high quality of life for its residents (and that makes it an appealing place to visit and a boon to the tourist industry): it hosts well-

[6] Mr. Hammer determined the locations of the homes on the Figure 1 and Figure 2 maps using the following method: each home location was plotted at the centroid of any parcel that showed an improved value according to the County's assessment records. In the High Desert region, this method effectively differentiates improved home sites from parcels of unimproved desert land.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

established, dispersed rural population clusters that thrive amid functioning desert sub-ecosystems, which, in turn, are part of the largest intact biome in the western states, i.e., the Mojave Desert.

Lucerne Valley hosts scientifically-recognized wildlife corridors that are also acknowledged by our federal and state governments, as well as "Areas of Critical Environmental Concern" ("ACECs") established under the DRECP. Among other things, Lucerne Valley provides core golden eagle habitat for the western Mojave Desert. Its natural desert setting is inhabited by the climax vegetation for the area, which in turn provides habitat and foraging zones for a host of threatened species. Figure 11 to the Application shows eleven "Special Status" animals and plants in the immediate vicinity of the Proposed Project (the map bears the legend "DRECP Occurrences"), including the desert tortoise, red-tailed hawk, Le Conte's Thrasher and Bendire's Thrasher. Part of residents' quality of life is that they can see wildlife moving amongst their homes.

The County's current Community Plan for the LV CSA identifies: (1) as "Unique Characteristics" (LV1.3.1) that "Lucerne Valley offers a rural lifestyle, characterized by the predominance of large lots, limited commercial development and the prevalence of agricultural and animal raising uses in the area. The desert landscape and natural resources further define the rural character of the community;" and (2) as a chief concern (LV1.3.2) of residents that growth pressures will "threaten the features of their rural community," including its "natural beauty [which is] characterized by an abundance of open space and scenic vistas . . ."

Local residents greatly value the open space around their homes – and the personal privacy and direct access to nature that it affords them – while nevertheless enjoying a strong sense of community with their neighbors. Efforts to introduce utility-scale generation into north Lucerne Valley have met strong opposition from throughout the community. Approximately 50 to 60 local people have typically attended monthly meetings of the Lucerne Valley Economic Development Association, all of whom expressed a desire to exclude large-scale solar and related transmission development from Lucerne Valley.

As will be discussed below in Section 4, Lucerne Valley is an economically disadvantaged area. Its population consists predominantly of older people with health conditions who are the most susceptible to the ill effects of pollution.

3. <u>A Description of the Proposed Project</u>.

According to the Project Details, the project area would be 3,600 acres, with "associated infrastructure to occupy approx. 1,750 acres." It is not clear from the Project Details whether that acreage figure is meant to encompass the 7.6 miles of the Gen-Tie Line required to link the Proposed Project to the proposed Calcite substation. Further acreage would be required to accommodate the equipment and structures making up the Calcite substation; its buildings would be approximately 10 to 80 feet tall, while transmission line structures would be 50 to 180 feet tall, according to the DEIR (p. 3.1–38) for the Ord Mountain solar project. The Proposed

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Project, the Gen-Tie Line and the proposed Calcite substation are depicted on the maps attached to this letter as Figures 3 and 5.

According to the Application, the Proposed Project would produce up to 200 MWs (using fixed-tilt or tracking solar panels) on undisturbed land west of Hwy. 247, south of Stoddard Ridge, west of Black Mt. and north of Sidewinder Mt. (these two mountains are part of the Granite Mountains).

The Proposed Project site – which consists of only minimally disturbed mature creosote bush scrub that is hundreds to thousands of years old – is all but surrounded by DRECP-declared ACECs, as shown on Figure 4. As also indicated on Figure 4, the Proposed Project site is in the midst of an important wildlife corridor which is incorporated in the DRECP as the "Desert Linkage Network." Lucerne Valley hosts arms of this network that provide passage from the San Bernardino Mountains north through the basins and ranges connecting with China Lake North Range and the southern Sierra.

Each of the solar panels making up the Proposed Project would require support structures and footings, as well as extensive perimeter fencing, lighting and access/service roads. This would require the grading and removal of the existing desert soil and the plants that the anchor it.

The Proposed Project would be of such magnitude that, according to the Application, it would have: (1) an on-site operations and management building for the life of the project with up to 10 permanent full-time employees (a typical utility-scale project does not require any full-time, on-site employees); and its (2) own 34.5/220 kV substation on a 5-acre site for the purpose of stepping-up energy generated onsite to 220 kV for connection to the Gen-Tie Line.

The Application proposed three alternate routes for the Gen-Tie Line. One would traverse BLM land in the Granite Mountains (which is designated by the DRECP as an "Area of Critical Environmental Concern" (an "ACEC") almost exclusively; a second proposed route would be mostly on BLM land (with two short stretches over private County lands, including a final easterly run from BLM land in the Granite Mountains to the Calcite substation); and a third proposed route would run mostly on private County land in the valley between the Granite Mountains and Ord Mountains. The Application states that transmission poles would be dug into the ground off-site by drilling and foundations would be established for the Gen-Tie Line.

The Project Details indicate that the project proponent has settled on the third proposed route for the Gen-Tie Line, which is the one that would inflict the most environmental harm on Lucerne Valley residents, especially those living in the relatively narrow inter-mountain area between the Granite Mountain and Ord Mountain ACECs; it would also mean that the Gen-Tie Line would run alongside (and, in places, over) Hwy. 247, which has been designated by the County as a scenic highway (and which is now under serious consideration by the state for inclusion in the State Scenic Highway system, which would provide protection against development that would reduce the visual appeal of the surroundings). That would ruin the desert and mountain vistas that draw motorists to Lucerne Valley and support its economy.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

The applicant is Aurora Solar LLC, which is a wholly owned subsidiary of Avangrid Renewables, LLC (a publicly-traded U.S. holding company with $30 Billion in assets and operations in 25 states). They are affiliated with Avangrid, Inc. Avangrid, Inc. was formerly known as Iberdrola USA, Inc. A letter accompanying the Application says that the name change was part of a re-branding process. The Application form specifically asked for an estimate of the gross and net profits that the Proposed Project would generate, and the bases for those estimates, but the developer stated only that its profits would be determined in the future depending on how an engineering study comes out. While it can be anticipated that Avangrid Renewables, LLC would profit handsomely from the Proposed Project, a specific projection of the estimated profits would highlight the pronounced disparity between the high costs that the Proposed Project would impose on the local community versus the immense benefits that would be enjoyed elsewhere.

4. Lucerne Valley is a Low-Income Community That Is Already Affected by Environmental Pollution. It Is Therefore Entitled to the Full Protection of the EJ Policy.

The EJ Policy provides a very inclusive definition as to which communities fall within its purview, one which takes into consideration a wide array of circumstances. In that regard, the EJ Policy states (at p. 2) that it "uses the terms 'disadvantaged,' 'marginalized,' and 'vulnerable' interchangeably; it intends to encompass not only definitions contemplated by SB 1000 [Fn. 1 in the EJ Policy sets out a specific definition in Senate Bill 1000 (the Planning for Healthy Communities Act) for "disadvantaged communities"], but also to include low-income and minority populations that are disproportionately burdened by or less able to prevent, respond, and recover from adverse environmental impacts."

A. That Lucerne Valley is an Economically Disadvantaged Community Brings It Within the Ambit of the EJ Policy.

While, as noted above, the EJ Policy's protections are not limited to those communities that strictly qualify under SB 1000, it is noteworthy that Lucerne Valley has been deemed by the County to qualify as an environmental justice area under its definition.

SB 1000 mandates that, after January 1, 2018, cities and counties adopt an environmental justice element in their general plans that identifies "objectives and policies to reduce the unique or compounded health risks in disadvantaged communities." SB 1000 requires local governments to identify any "disadvantaged communities" in its jurisdiction which, according to Gov. Code, § 65302, subd. (h)(1)-(2), are defined as: (1) "an area identified by the California Environmental Protection Agency ("CalEPA") pursuant to Section 39711 of the Health and

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Safety Code";[7] or (2) "an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation."[8]

The SB 1000 factors were applied in the "County of San Bernardino Environmental Justice and Legacy Communities Background Report, dated November 26, 2018 (the "EJ Background Report"), which was "prepared to inform the preparation of the [San Bernardino County] Countywide Plan."[9] After noting that "[t]here is no unilateral definition for 'disadvantaged communities [p. 2-9]," the EJ Background Report concludes that Lucerne Valley qualifies as an Environmental Justice Focus Area, noting, among many other things, that "three [out of four census] tracts in Lucerne Valley have poverty and unemployment rates scored in the upper quartile [p. 3-12]"

Portions of Lucerne Valley also meet the "Disadvantaged Community" ("DAC") criteria of the Department of Water Resources (the "DWR"), which relies on the US Census American Community Survey (ACS) 5-Year Data: 2012 – 2016 baseline (which is the most current data available on the subject), according to https://water.ca.gov/Work-With-Us/Grants-And-Loans/Mapping-Tools. That website states that the statewide median household income for the current dataset is $63,783; therefore, the calculated DAC threshold is $51,026. There is no relevant data available on that website for the north Lucerne Valley area in which is the Proposed Project site is located, there is little doubt that that area would meet the DAC criteria). As noted above, the Figure 2 map also depicts each of the homes located in Lucerne Valley and its environs (as well as the Proposed Project site).

---

[7] CalEPA designates an area as a disadvantaged community if a census tract scores at or above 75 percent on the agency's CalEnviroScreen screening tool. That screening tool can be found on the following website, which was prepared by Office of Environmental Health Hazard Assessment ("OEHHA"), a division of Cal EPA: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30. See CalEPA and Office of Health Hazard Assessment, CalEnviroScreen 3.0 (https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30).

[8] SB 1000 defines a "low-income area" as "an area with household incomes at or below 80 percent of the statewide median income" or (2) an area with "household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's (HCD) list of state income limits adopted pursuant to Section 50093 of the Health and Safety Code." (Gov. Code, § 65302(h)(4)(C).)

[9] The EJ Background Report can only be accessed through a hyperlink on a side margin within the Hazards Element subpage on the Countywide Plan website. While the version on the website has "DRAFT" marked across its pages, it appears to be the official environmental justice discussion for the Countywide Plan.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Also noted on the Figure 2 map (with cross-hatching) are those portions of Lucerne Valley that meet the DAC/DWR criteria for constituting *severely* disadvantaged communities, which are those areas in which household incomes are less than 60% of the statewide median household income. While there is no data for the north Lucerne Valley area, it is likely that it meets the criteria for being considered severely disadvantaged.

Portions of Lucerne Valley are also considered "Economically Disadvantaged Areas" ("EDAs") according to the above-mentioned "CalEnviroScreen" website. Using geospatial data and mapping tools drawn from the CalEnviroScreen website, Mr. Hammer plotted – on the map attached to this letter as Figure 1 -- those portions of Lucerne Valley that meet the EDA criteria (while there is no relevant data available on that website for the north Lucerne Valley area in which is the Proposed Project site is located, there is little doubt that that area would meet the EDA). The DAC zones (on Figure 2) in Lucerne Valley coincide with the EDA zones shown on Figure 1, and the maps are quite similar.

B. That Lucerne Valley Has an Older Population (And Is Already Experiencing the Effects of Pollution) Brings It Within the Ambit of the EJ Policy.

As noted above, the EJ Policy (p. 2) encompasses "populations that are disproportionately burdened by or less able to prevent, respond, and recover from adverse environmental impacts." Lucerne Valley already experiences pollution generated by industries that produce benefits accruing almost entirely outside the County.

According to the EJ Background Report's Table 3-4b (p. 3-13), Lucerne Valley "has significant air quality issues. The region does not meet federal standards for ozone and respirable particulate matter (PM10) or state standards for ozone and respirable fine particulate matter." "Several census tracts in [there are four of them there] have pollution burden scores measured in the upper quartile [p. 3-12]."

Lucerne Valley, as per the EJ Background Report, qualifies under SB 1000 as an "Economic Justice Focus Area," based on the following specific finding, among others (p. 3-11 and 12):

> "All census tracts in Lucerne Valley rank in the 3rd or 4th quartiles, with a high portion of lower income households. Concerns in Lucerne Valley include higher rates of asthma due to ozone (2 tracts), airborne allergens carried by seasonal winds, and other local pollution sources . . . Three tracts in Lucerne Valley have poverty and unemployment rates scored in the upper quartile [p. 3-12]."

The EJ Background Report (p. 3-13) correctly notes that there are mining operations in Lucerne Valley. There are, in fact, three industrial calcium carbonate (limestone) mines (one of which has a cement production plant on site) on the southern outskirts of the community, along the north slope of the San Bernardino Mountains, as well as two nearby sand/gravel/aggregate plants. In addition, there are already two operating utility-scale renewable energy projects

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

located in the southern portion of Lucerne Valley (south of Hwy. 247, on Camp Rock Road) which have emitted wind-blown dust and particulates.[10]

Moreover, Lucerne Valley has a vulnerable predominantly older, health-compromised population – the median age of its residents is 50.4 years, while the California median age is 36.5 years (according to the www.City-Data.com website[11]) -- that would be most susceptible to (and least able to recover from) adverse impacts from the Proposed Project, such as the harmful effects of inhaling blowing dust, spores and respirable fine particulate matter made airborne by the operation (and construction) of the Proposed Project. According to the EJ Background Report (p. 3-12), "[c]oncerns in Lucerne Valley include higher rates of asthma due to ozone (2 tracts), airborne allergens carried by seasonal winds, and other local pollution sources. Cardiovascular disease scores in the upper quartile for two tracts and may be the result of a 37 percent obesity rate (12 points above the average)." Moreover, according to the EJ Background Report (p. 3-13), "23% of working age adults [are] in poor health, 8% heart disease rate, and 13% diabetes rate (50% above the state average)," with the majority "of health infrastructure located 15 miles west in Apple Valley." Lucerne Valley is a "medically underserved area" and does not have a hospital, skilled nursing facility or community clinic according to the EJ Background Report (p. 3-13) (there is, however, now a medical clinic in Lucerne Valley, which is supplemented by visits from a medical van from St. Mary's Hospital).

Moreover, older, low-income residents whose health and quality of life have been compromised by proximity to the Proposed Project (and its potential progeny) would also be the least able, due to a lack of financial resources, to relocate, especially if the value of their biggest investment – their homes – has been decimated by the Proposed Project. Vulnerable residents of the community – indeed, any of its residents – could find themselves trapped in homes that have become valueless in an unlivable industrialized landscape.

Lucerne Valley is hardly the only place that utility-scale projects can be sited in a state as big as California and in an enormous County (the largest one in the continental United States). Recognizing this, the County's Board of Supervisors adopted a Resolution, entitled "Establishing the County's Position," dated February 17, 2016 (it is discussed in Section 6(C) below), which designated five sites -- which are seriously degraded, away from Lucerne Valley and other population centers, and relatively close to existing transmission – as the only places that utility-scale should go, subject to the project's otherwise satisfying the County's criteria (the sites are

---

10 The EJ Background Report (p. 3-13) states that there are cleanup sites in Lucerne Valley due to military land uses and military waste burial sites, but we are not aware of any such sites there. The EJ Background Report (p. 3-13) also says that there are four solid waste landfills in Lucerne Valley, when in fact there was only one, and it has been closed for some time.

11 The www.City-Data.com website does not specify how or when the underlying data was compiled, and we lack the resources needed to independently confirm its accuracy, but it does comport with coalition members' understanding that an atypically large portion of Lucerne

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

north of Kramer Junction, Trona, Hinkley, El Mirage and Amboy). As will also be discussed below in Section 6(A), Policy 5.2 of the County's Renewable Energy and Conservation Element *de facto* banishes utility-scale projects to those five areas. Meanwhile, some counties in this state, like Kern County, welcome solar utility-scale facilities and have designated zones for them.

Given the plethora of siting options available, environmental justice would not be served by concentrating utility-scale projects in vulnerable communities like Lucerne Valley.

5. Approval of the Proposed Project Would Violate the Tenets of the EJ Policy By Causing Lucerne Valley to Suffer a Disproportionate Environmental and Social Impact, While Providing It With No Benefits.

The EJ Policy starts with the following declaration: the CSLC "commits to the principle that past environmental injustices will not define California's future and supports the ideal that all communities equitably share in the environmental benefits and burdens resulting from its decisions. The environmental justice goals below are bold and transformative because that is what California needs."

Indeed, environmental *injustice* has long been the very hallmark of industrial expansion. Lucerne Valley is precisely the sort of community that has traditionally been shunted aside in the name of "progress," being small, low-income and rural. We are greatly encouraged to see that the CSLC has, with the "bold and transformative" approach announced in the EJ policy, made it its mission to reverse that historical trajectory, and to see to it that "all communities equitably share in the environmental benefits and burdens." Pursuant to that policy, all communities across our state must equitably share the burdens associated with ramping up California's renewable energy capacity, and the state's SB 100 goals (which include reaching 100% zero-carbon energy resources by the end of 2045) and AB 32 goals (which include reducing greenhouse gas emissions 80% below 1990 levels by 2050) cannot be achieved on the backs of the state's rural populations. As observed by the EJ Background Report (p. 2-10), "geographic inequities" result "where the burdens of undesirable land uses or costs are concentrated in certain neighborhoods and the benefits are received elsewhere."[12]

Those geographic inequities involve far more than the physical impacts of pollution. According to the EJ Background Report (p. 1-1), "the field of environmental justice has expanded beyond its original focus of reducing the disproportionate burden of pollution among certain populations. Environmental justice now includes broader social equity . . ." Environmental Justice "is considered an equity issue. It is an integral component of equity, but social equity also encompasses a larger framework such as access to jobs and economic

---

[12] Likewise, Gov. Code, § 65040.12, subd. (e), states that "[f]airness in this context means that the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects."

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

opportunity . . . [s]ocial equity is applied across the age range and various disciplines and has many other nuances . . . Equity can be used as the larger framework for ensuring opportunities for all in the community," according to the Office of Planning and Research-issued "2017 General Plan Guidelines."[13]

That Lucerne Valley requires the full measure of protection promised by the EJ Policy, and would otherwise suffer from pollution, social inequity and loss of economic opportunity, is underscored by its unique nature: its human and natural communities have long co-existed in a harmonious manner that has allowed both to thrive among open space in a predominantly undeveloped natural desert landscape. By its very nature, this carefully-maintained balance is highly fragile and easily disturbed, and the high quality of life enjoyed by the community's residents – through direct access to nature and beautiful vistas in an area that is home to important inter-mountain wildlife corridors – would be lost forever if even one utility-scale facility were to be imposed on it. Add to that the severe health effects and damage to the local tourist-oriented economy that would result, and it becomes apparent just how little it would take to effectively steamroll Lucerne Valley out of existence.

As will be further discussed below, approval of the Proposed Project would be contrary to the EJ Policy because it would inflict disproportionate environmental harm on Lucerne Valley and provide no benefits to the community.

A. The Proposed Project, the Gen-Tie Line and the Calcite Substation Would Release Dust, Spores and Respirable Fine Particulates in a Wind-Prone Area, Harm Health and Drive Out Residents.

---

[13] According to the CEQA Guidelines, Section 15604(e), economic or social impacts that are related to physical impacts must be addressed:

> "[e]conomic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner any other physical change resulting from the project."

Under CEQA, impacts to the environment include "substantial adverse effects on human beings, either directly or indirectly." CEQA Guidelines, Section 15065(d). Along those same lines, the official website for the California Office of Attorney General (oag.ca.gov) states, in an attachment to its "CEQA and General Planning" section – entitled "Environmental Justice at the Local and Regional Level Legal Background" – that: "Human beings are an integral part of the 'environment.'" (Pub. Res. Code, § 21083, subd. (b)(3); see also CEQA Guidelines, § 15126.2 [noting that a project may cause a significant effect "by bringing people to hazards]."

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Extensive grading, scraping and stripping of the project site would be required for installation of vast complexes of solar panels and trackers (including foundations for the trackers), for the construction of the honeycomb of roads needed for construction, maintenance and cleaning of them, for installation of a perimeter security fence, for extensive trenching and for construction of a 7.6 mile Gen-Tie Line. According to the Application, the Proposed Project would require:

1. "grubbing of the existing vegetation; grading necessary for preparation of an approximately 10-acre temporary fenced lay-down area; the construction of access and service roads; construction of necessary drainage structures; grading to provide ground slopes suitable for array development; trenching for the electrical DC and AC collection system, including the telecommunication lines; installation of the structures, racking, modules, and inverter units; and construction of a 34.5 kV underground collection system leading to the 34.5 kV switchyard area;" and

2. "ground-disturbing activities [that would] expose soils and allow invasive and non-native plant species to become established. In addition, increased human and vehicle activity in the project area during construction would have the potential to introduce seeds of invasive and non-native species into the area (human and vehicle activity during operations and maintenance would similarly have the potential to introduce invasive and non-native species to the area)."

Construction of the Calcite substation would require even more grading and clearing. Both projects would require a massive amount of soil disturbance and destruction of native soil-anchoring vegetation on desert lands that are notorious for being easily scarred and slow to heal.

As a result, the Proposed Project site would, after construction is completed, wind up denuded and subject to serious erosion from pervasive desert winds (the Proposed Project and Calcite substation would be sited in an area of high wind erosion potential, according to the "Soil sensitivity factors for the DRECP" map and the "Confidence levels for sensitive soil factor maps for the DRECP"). A region-wide blight would be occasioned during the frequent high-wind events in Lucerne Valley, and large and unhealthy volumes of dust, spores and respirable particulate matter would inevitably emanate from the Proposed Project, as well as from the Sienna, Ord Mountain and Calcite solar projects, each of which would require extensive grading

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

that destroys the desert pavement and anchoring vegetation.[14]

Making matters worse, there is no valid baseline for measuring dust emissions in north Lucerne Valley. The Mojave Desert Air Quality Management District (the "District"), which covers 20,000 square miles of desert terrain in the County and in Riverside County, cannot provide such a baseline, because the District does not have any air quality monitoring stations there (the monitoring stations are located in Trona, Lancaster, Victorville, Phelan, Lucerne Valley (in the San Bernardino Mountains, near the Mitsubishi Cement Plant), and Twentynine Palms). In accord with a directive from the District, County planners would nevertheless have to use the Victorville station's dust emission readings and meteorological data, in order to estimate the Proposed Project's dust emissions, even though the conditions at the Victorville station differ

---

[14] Other utility-scale solar projects in the region have proven to be particularly bad neighbors, and have failed to live up to their developers' promises.

The Soitec PV project in Newberry Springs has received a lot of negative attention. The developer reportedly promised that it would not scrape vast tracts of land, that the project would have minimal impact on vegetation and wildlife, and that mitigation measures (such as soils stabilization) would be implemented. None of this came to pass, and it has also become apparent that an unduly low estimate was presented, during the application phase, of the amount of water the project would consume.

The Agincourt and Lone Valley Solar projects in Lucerne Valley (on Camp Rock Rd.) – now known as "Lone Valley Solar" -- have been spewing dust, despite applying much more water than the developers projected.

Joshua Tree has not fared any better with three nearby utility-scale solar projects: Cascade Solar, SEPV8 Solar (Lear Avenue) and Indian Trail Solar. Once vegetation was removed to construct them, soils became unstable and dust and sand began blowing. Dust storms are now a regular feature during high wind events. Prescribed mitigation measures -- like watering exposed soil and ceasing construction if the winds exceed a certain level -- have proven completely ineffectual, if implemented at all.

Antelope Valley Solar Ranch, located in Lancaster, near Route 138, was built by First Solar, which seems to be the contractor of choice for many solar photovoltaic projects. The AVAQMD cited First Solar for violations of air quality standards on at least two separate occasions. The AVAQMD was quoted as saying that there was "a myriad of things [First Solar] could have done that we didn't think they were doing to prevent the violations."

These examples demonstrate that approving a utility-scale project based on even the most stringent-appearing criteria – such as a developer's pledge to use "best available practices" to achieve "mitigation" after the project is built – simply does not work.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

night and day from those present in north Lucerne Valley in terms of soils and wind speeds and directions.[15]

Valley Fever spores are present throughout the High Desert, and can be expected to be present in the soils comprising the Proposed Project site. Those spores would likely become wind-blown and respirable due to construction and operational activities. Valley Fever spores can travel on the wind as far as 75 miles. Soil disturbance in the Western Antelope Valley resulting from large-scale renewable energy development, and from construction of SCE's grid line and power station infrastructure, is suspected of having caused an outbreak of Valley Fever in that region. Any water that would be used to suppress dust emissions would, unfortunately, causes Valley Fever spores to reproduce, because they thrive on alternating periods of extreme wetness and extreme dryness.

Finally, the construction activities associated with the Proposed Project, Gen-Tie Line, and Calcite substation destroy the above ground green photosynthesizing leaves of the soil-anchoring plants. During photosynthesis, the native plants would naturally capture carbon and pump it underground through its roots and into its associated microbes to fix and store the carbon. Desert soil disturbance destroys the ability of soils to prevent dust storms and store carbon. (For a description of this process see the March 19, 2019 "Desert Report" by Robin Kobaly (she is a botanist and plant ecologist, and has recently published "The Desert Underground" (Summertree Institute 2019)). The Proposed Project site is intact, mature creosote scrub with centuries to millennial old mycorrhizal development underground. It is a system capturing and storing carbon that, if destroyed will leave a destructive footprint for miles around.

B. The Proposed Project Would Ruin Lucerne Valley's Local Economy, Which Is Oriented Towards Tourism to a Large Extent.

The proliferation of centralized energy generation facilities in Lucerne Valley would have a devastating impact on its economic welfare, as well as on the economy of the County as a whole, which is heavily dependent on tourism. It has been estimated at **$1 Billion *per year*** according to a University of Idaho study discussed in Basin Energy Assessment Team's "Renewable Energy Analysis" (October 2013).

---

15 The Victorville station, which is located on asphalt and is 300 feet from a road that has an average annual daily traffic count of 1,000 vehicles, monitors a 0.3 to 3.5 square mile area with a relatively uniform land use. Hence it is no surprise that the station's monitoring records show zero (0.0) days above the 24-hour federal and state PM10 standards.

The technical information in this letter regarding the District's monitoring program is drawn from a meticulously researched March 22, 2017 article in the *Desert Report* (which is a publication of the Sierra Club), entitled "The Perfect (Dust) Storm – Fugitive Dust and the Morongo Basin Community of Desert Heights." Its author, naturalist Pat Flanagan, is a board member of the Morongo Basin Conservation Association.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

The industrialization of Lucerne Valley – the visual blight caused by one or more major utility-scale projects, the resulting wind-driven plumes of health-destroying particulate matter, the loss of major wildlife corridors and a landscape characterized by abandoned homes – would wreck the local tourist economy. The Proposed Project and Gen-Tie line would be particularly devastating to Lucerne Valley's appeal given that the project site consists of virgin desert land framed on three sides by rugged mountainous terrain.

A major effort is underway to promote tourism in Lucerne Valley, the main thrust of which is an ongoing campaign to have Hwy. 247 designated as part of the State Scenic Highway System.[16] Hwy. 247 is the major traffic artery through Lucerne Valley, connecting the 15 Freeway at Barstow) with Highway 18 (which extends southeasterly to the San Bernardino Mountain resorts); Hwy. 247 is also the major roadway to and from points east, such as Johnson Valley, Joshua Tree, Landers and Morongo Basin. Designation of (and promotion of) Hwy. 247 as a State Scenic Highway would certainly draw more motorists and be a great boon to the local economy. The protection against industrialization that such a designation would extend to adjacent desert lands would also draw investment in and expansion of Lucerne Valley's tourist economy. Potential industrialization has long cast a depressing shadow over its economic development.

But eligibility for official inclusion in the State Scenic Highway System depends on the state's determination "based on the amount of natural landscape visible by motorists, the scenic quality of the landscape, and the extent to which development intrudes upon the motorist's enjoyment of the view." An influx of vast new solar fields and transmission infrastructure would create visual blight that would detract from, if not derail, that effort (which is now in its final phase[17]), as would the Gen-Tie Line. As noted above in Section 3, it would follow (and be visible from) Hwy. 247 for much of its length. The Calcite substation, and related transmission, would also be close to and visible from Hwy. 247, which would further detract from the area's appeal.

Heavy equipment and water trucks used during the construction and operation of the Proposed Project, Gen-Tie Line and Calcite substation would also likely cause major damage to state and County roads in Lucerne Valley (County roads are not built to support that kind of

---

16 The County has already designated Hwy. 247, as per General Plan (Policy OS 5.3), as a scenic highway – which means that it is a "roadway that has scenic and aesthetic qualities that over time have been found to add beauty to the County" and that this designation "applies all applicable policies to development on these routes . . ."

17 A committee of local residents (drawn from the communities served by Hwy. 247), acting under the auspices of the County, is now in the process of refining, as per the state's comments, the extensive and meticulous documentation it has submitted in support of the scenic highway application. Members of this committee anticipate that the state will approve the application in mid-2020.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

weight). As it stands now, governmental budgets are barely sufficient to keep those roads in repair to support local residential use. The Proposed Project and its progeny would also, by generating traffic through the commercial portion of Lucerne Valley, create a traffic safety issue given that there is only one four-way stop (with a short turning radius) in that locale. Any loss or substantial interruption of a major vehicular artery serving Lucerne Valley would directly impinge on the local economy, and result in a grave environmental injustice to the community.

Asking Lucerne Valley to sacrifice its economic well-being, in the name of increasing the state's renewable energy generation capacity, would be most inequitable; it would also be inimical to the EJ Policy's express goals.

C. The Proposed Project Will Be Used to Validate the Proposed Calcite Substation, Which Could, in Turn, Be Cited as Justifying the Revival of the Coolwater-Lugo Transmission Project.

Proponents of the Ord Mountain solar project (which would be the closest one to the Proposed Project) have cited the prospect of a Calcite substation being built as justification for putting a major utility-scale project in Lucerne Valley. They tout its close proximity to the Pisgah-Lugo transmission line, while noting that, if Calcite were to be approved, it would be only one gen-tie away from it. The same justification will no doubt be proffered for the Proposed Project.

Edison, in turn, cites the utility-scale projects aimed at Lucerne Valley as justification for establishing a Calcite substation. Edison then touts Calcite as the linchpin for many additional generating projects in the area.

Edison's website made no bones at all about why it thinks a new Calcite substation should be established in Lucerne Valley: "[t]he project will connect [i.e., encourage the proliferation of] new renewable generation projects in the San Bernardino County High Desert to the transmission grid."

If, as expected, the Calcite substation could accommodate utility-scale projects in addition to the Proposed Project, it will induce further utility-scale development in the region. The prospect of a new Calcite substation has in fact triggered an influx of proposals for utility-scale facilities in its vicinity. As noted above in Section 1 of this letter, there are three more utility-scale projects queuing up to interconnect with a Calcite substation, all of which would industrialize more than 8,136 acres in Lucerne Valley.

The referenced proposals for utility-scale projects are, in turn, cited by Edison as justifying construction of the new substation. As stated by Edison representative, Jennifer Cusack (at a December 6, 2016 public meeting in Lucerne Valley), "we [Edison] have to interconnect new projects."

With a bevy of new utility-scale projects in the pipeline all clustered around a Calcite substation – a substation that would provide a critical infrastructure link for new transmission

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

lines -- Edison may well attempt a revival of the highly controversial, intensely opposed Coolwater-Lugo Transmission Project, which proffered – as one of its chief justifications – the dubious proposition that new transmission would be needed to interconnect posited renewable energy projects to the north and east of the Granite Mountains (which are found on the western side of Lucerne Valley).

D. Approval of One Utility-Scale Renewable Project in Lucerne Valley Would Create a "Beach-Head" for the Proliferation of Other Such Projects in Its Immediate Vicinity, All of Which Incrementally Industrialize Hitherto Intact Desert Parcels.

The Application form poses a question as to whether the Proposed Project would be part of a larger project or a series of projects. In response, the project proponent stated in the Application that "[t]he development of the subject State lease lands is not a component of a larger project or a series of projects. Further analysis is not warranted in the environmental documentation prepared by the CSLC." The Application denies (on p. 33) that the Proposed Project would be related to or dependent on any other project, but acknowledged that an environmental review was in the works for the Calcite substation.

As noted above, and as will be further discussed below, the developer's representations are highly inaccurate.

Desert areas, wild or rural in character, have little attraction for industrial-scale renewable energy facilities, like the Proposed Project, so long as no means exist to deliver the electricity to the grid. Hence, proponents of new renewable energy projects seek to site them next to substations (either those which are in existence or which are predicated on approval of one or more utility-scale projects), or next to other existing renewable energy facilities in order to "piggy-back" on transmission lines connecting their neighbors' renewable projects to the grid. Hence approval of one utility-scale renewable project in the desert has the "secondary effect" of creating a "beach-head" for the proliferation of other such projects in its immediate vicinity, all of which incrementally industrializes hitherto intact desert parcels, thereby creating classic "induced changes in the pattern of land use."

Such projects, because they result in profound and permanent destruction of the natural environs, are often posited as rendering the surrounding desert lands "disturbed," i.e., they are deliberately mischaracterized as biologically-defunct, "damaged goods" no longer possessing environmental, aesthetic and recreational worth. This is exactly what the DEIR for the Ord Mountain project attempted to do in its discussion of visual aesthetics. Therefore, they are often erroneously deemed ripe for more large-scale commercial development, regardless of their existing rural desert designation and irrespective of the land use policies dedicated to protecting that character (which are discussed in Section 6 below).

In addition, the Ord Mountain DEIR tried to cite a cluster of homes around its project site as causing it to be "disturbed" in an effort to downgrade the area's environmental, aesthetic and recreational value in the eyes of planners and decision makers. At the same time, the DEIR

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

denied the existence of a community that merited any protection. As the developer for the Proposed Project and its consultant can readily attest, Lucerne Valley residents expressed strong disagreement, at the public scoping meeting on the proposed Ord Mountain project, with the conclusion that, when it comes to Lucerne Valley, "nobody lives there." A coalition of High Desert residents – the same one that is submitting the current environmental justice letter – reiterated this point in a letter which delivered a pointed critique of the Ord Mountain DEIR. Efforts to introduce utility-scale generation into north Lucerne Valley have met strong opposition from the community.

There are still further secondary effects. Once utility-scale renewable projects begin to move in, rural residents move out; this is true because such projects have historically made bad neighbors. The exodus of rural residents would, in turn, accelerate the process of industrialization as renewable project proponents seek to develop former, so-called "disturbed" home-sites.[18]

Attention must also be given to the growth-inducing effects in the arena of inter-connection and transmission, and the ensuing "closed loop" effect, in which a remotely-located generating project like this one is used as a justification for the construction of extensive, environmentally-threatening transmission facilities – such as the Gen-Tie Line -- which in turn become a justification for more generation plants, and so on. Thus, what on the surface is a generation project having "only" a finite footprint becomes a continuous trigger for more and more transmission and generating projects. This is precisely why CEQA requires an analysis of such secondary effects and growth-inducing impacts, because otherwise these very real consequences grow and multiply "in the cracks" between one project and the next, never undergoing direct scrutiny.

In short, the enabling of new utility-scale renewable projects, like the Proposed Project, which, in turn, enable new transmission infrastructure projects like a Calcite substation (that, in turn, beget even further renewable projects), would have the obvious secondary effect of inducing a major change in the pattern of land use in Lucerne Valley. The environmental impact of each new generating plant on the desert and its populace is large and enduring.

E. The Volume of Water Required for the Construction, Operation and Maintenance (including Ongoing Dust Suppression) of the Proposed Project, Gen-Tie Line and Substation Would Deplete Lucerne Valley's Finite and Threatened Groundwater Resources.

The Proposed Project would be located on an over-drafted groundwater basin – the Este Sub-basin -- according to the "Overdraft Groundwater Basins, DRECP" map, and directly in the middle of the groundwater sub-basin referred to on Figure 4 as the "North Valley Subwatershed" of the Lucerne Lake Watershed Area (Mr. Hammer geo-processed this sub-basin on Figure 4 from a digital elevation model). The Proposed Project (and its potential progeny) would

---

[18] Efforts have already begun to lease a right of way for the Proposed Project's Gen-Tie Line, which is meant to send a strong signal to the community.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

compromise the underlying groundwater reservoir by drawing immense volumes of water for its construction and operation. The Proposed Project would also reduce groundwater recharge through removal of vegetation, alteration of the land through grading and covering the land with impervious surfaces, all of which would alter the relationships between rainfall, runoff, infiltration and transpiration. In other words, with native vegetation scraped off the immense Project Site, there would be nothing to retain the rainwater flowing down from the surrounding mountains towards the center of the North Valley Subwatershed, so, instead of percolating into the aquifer, it would flow out of the north valley area.

The Application disclosed that the Proposed Project would require large volumes of water: water consumption during the construction phase alone is estimated at approximately 1,200 acre-feet (AF) for dust suppression and earthwork over an approximately 18-month period.

The Application also specifies that the project's permanent employees would perform in-place panel washings every 6 to 8 weeks using a tanker truck, and smaller "satellite" panel washing trucks (each panel washing truck would carry water treatment equipment and truck-mounted panel washing booms or module cleaning robotics). On-site water storage tanks may be installed to facilitate washing and to support fire suppression. The "operations & management" building for the project would include a groundwater well to provide potable water. There would also be septic tanks and a leech-field.

The Application estimates that on-site operations would use up to approximately 46 acre feet ***per year*** rounded up to include the potential for domestic use.[19] The Application provides no estimate as to the volume of water needed to prevent fugitive dust, particulate matter and spores from blowing off the 5,359-acre site during the life of the Proposed Project, and the developer has not specified whether it would make an efforts in that direction, even though to not do so would violate Policy D/CO 1.4 of the County's General Plan's Conservation Element (which sets out the requirement to "[r]educe disturbances to fragile desert soils as much as practicable in order to reduce fugitive dust . . ."). Of course, no amount of water would, after the arid, wind-prone site is denuded and disturbed through construction, operation and maintenance, be sufficient to prevent fugitive matter from being wind-borne across the region.[20]

---

[19] As stated below in this letter, PV panels washed six times per year would consume .15 acre feet per year per megawatt of generation, which would mean that washing the panels for the Proposed Project's 200 MWs would consume at least 30 AFY.

[20] To put things in perspective, 1,000 acre-feet of water is enough to fill four Rose Bowls to the brim. So, over a 40-year lifespan, the Proposed Project – using the estimates found in the Application -- would use enough water ***to fill at least twelve Rose Bowls*** (1,200 acre feet + 1,840 acre feet (40 years x 46 acre feet per year) = 3,040 acre-feet), assuming that that amount of water could actually be drawn from local groundwater supplies.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

In short, even though the Application estimates an alarmingly high amount of water usage for the Proposed Project, it would require significantly more water than estimated.[21]

Where would this huge volume of water come from? According to the Application (p. 30), it would be pumped out of Lucerne Valley's threatened aquifer or trucked onsite from a local water supplier. But neither of those methods would provide a viable water source for the Proposed Project.[22] The Application does not say what proportion of this water would be drawn on-site vs. obtained from local water companies, nor does it specify how many groundwater

---

[21] Solar developers typically provide unrealistically low water usage estimates. At the onset of the Agincourt and Marathon solar projects (now known as Lone Valley Solar) in Lucerne Valley, the proponents agreed to purchase from the Mojave Water Agency 10 acre feet of water; instead, according to our information, they wound up using more than 50 acre feet (10 acre feet came directly from the Morongo Basin pipeline, and the other 40 acre feet were purchased from a local farmer). And these projects spewed tons of dust. The same thing has occurred with respect to the Soitec PV project in Newberry Springs.

The Desert Sunlight Solar PV facility in Riverside County was approved based on the promise of its proponents to limit themselves to 1,400 acre feet of groundwater during construction. But, after they broke ground, they said they would need 1,500 acre feet of water (which they later increased by another 50 acre feet). The developers took all of that water from an aquifer that has not gotten any re-charge in hundreds of years, according to a U.S. Geological Service survey.

Antelope Valley Solar Ranch, located in Lancaster, near Route 138, was built by First Solar, which seems to be the contractor of choice for many solar photovoltaic projects. The AVAQMD cited First Solar for violations of air quality standards on at least two separate occasions. The AVAQMD was quoted as saying that there was "a myriad of things [First Solar] could have done that we didn't think they were doing to prevent the violations."

[22] Under the 1995 Mojave Basin Area Adjudication (the "MBA Adjudication") (www.mojavewater.org/judgment_summary.html), no inter-basin water transfers are permitted to the Este Subarea, so water could not lawfully be trucked in from outside Lucerne Valley. That would leave the project proponent with two untenable choices: (1) it could seek water from the State Water Project through the Morongo Basin Pipeline, but it is highly unlikely that it would be allocated any appreciable amount of water from that source; or (2) pump groundwater from the over-drafted Este Subarea and pay a "makeup obligation" to the Mojave Water Agency to recharge it, but no recharge site currently exists.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

wells would need to be established (p. E-9).[23] But either way, Lucerne Valley would lose if the developer ignored the above-cited restrictions: either Lucerne Valley's sub-basin would be drawn down by on-site groundwater wells or pollution/particulate-spewing water trucks would course up and down Highways 18 and 247 (the nearest water company is 10 miles away from the project site) bringing water from over-drafted groundwater reservoirs under adjacent communities that are interconnected with the Este Sub-basin, i.e., a water company drawing from a well in Apple Valley – under which the already over-drafted Alto Subarea groundwater basin is located -- would ultimately be reducing groundwater re-charge throughout the region, including Lucerne Valley.

Depleting Lucerne Valley's groundwater supply could also incentivize the court in the MBA Adjudication to force local water users to ramp down the amount of groundwater they are entitled to pump -- their "Free Production Allowance (FPA)" – which would have a direct environmental justice impact on a disadvantaged community like Lucerne Valley and impair its economic future.

Utility-scale developers typically dismiss concerns about groundwater usage by noting that their project sites have been accorded adjudicated "production rights." But such rights, under the MBA Adjudication, do not represent a scientific estimate of the amount of groundwater that can actually be drawn from a given sub-basin without irrevocably depleting it. Adjudicated water rights establish only the amount of water that an individual can *legally* draw from a local aquifer, such as the Este Sub-basin. It does not mean that the water will actually be there (or that water of sufficient quality will be there), nor does it guarantee that, should the property owners bound to the judgment draw the amounts allotted to them, there would be enough to go around.

Water is an irreplaceable resource that is Lucerne Valley's lifeblood, and that is subject to prolonged drought. It is also jeopardized by 20,000 MWs in total, according to the draft DRECP (with a portion of that on BLM lands as per the final BLM LUPA) of new utility-scale renewable energy that the DRECP plans for the California desert. Such data as we have on the

---

[23] The Soda Mt. solar project (it was denied approval by the County Supervisors)– which would have consumed *less* acreage (Soda Mt. would have used 1,767 acres to generate 287 MW vs. 3,600 acres for 200 MWs for the Proposed Project) than the Proposed Project – would have required up to five groundwater production wells and three groundwater monitoring wells.

Incidentally, according to the Application, "[t]here are eleven primary local water suppliers for the Lucerne Valley . . . ," with the nearest water purveyor located approximately 10 miles south of the Proposed Project site.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

subject – which comes chiefly from the DRECP itself – must be considered.[24]

While the draft DRECP did not conduct a meaningful analysis of groundwater baseline data, it nevertheless made valuable observations about the tenuous state of the desert's groundwater basins. For instance, the draft DRECP acknowledged that its "Development Focus Areas" ("DFAs") would be located primarily on already over-drafted groundwater basins from which the enormous volumes of water needed -- for the construction, maintenance and operations of large-scale generation facilities -- would have to be drawn. In that regard, it conceded (at IV.6-24) that "[d]evelopment would occur in 35 groundwater basins," that 14 of them are stressed or in "overdraft or stressed," that "[m]ost (97%) of the developed area is within four ecoregion subareas [the High Desert areas of Los Angeles and San Bernardino Counties and the Imperial Valley]" -- which are the most populated areas of the California desert[25] -- and that "increased groundwater use in these sensitive basins can adversely affect water supplies and exacerbate impacts associated with overdraft conditions and declining groundwater levels."

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

---

[24] Statements made by the State Water Resources Control Board (the "SWRCB"), in its comment letter regarding the DRECP, suggested that there would be prolonged drought, and that has been borne out since. The SWRCB comment letter states that the preponderance of groundwater in the Basins and Ranges hydrologic province is thousands of years old (i.e., it takes thousands of years for groundwater to travel from the point of recharge to the point of discharge). According to the SWRCB comment letter, our aquifers represent a closed system where 66% of the groundwater is between 100 and 33,000 years old with the only "young" recharge coming from the mountains [p. 18]. On a related note, the SWRCB states that, "[i]n most areas of the desert, deeper, older groundwater is saline. Excessive pumping will likely cause migration of saline water into fresh water aquifers [p. 11]."

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

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

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

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

There is currently no method of determining the cumulative effects that the Proposed Project, the Gen-Tie Line and the Calcite substation would have on our inter-connected aquifer systems. Meanwhile, there is a proliferation of large-scale, water-thirsty projects, like the Cadiz Valley Water Conservation and Storage Project, the Eagle Mountain Pumped Storage Hydroelectric Project (1,300 MW) and potential efforts to remediate the Salton Sea that would stress already fragile water reserves.

The only way to truly determine the extent to which the Proposed Project, Gen-Tie Line and Calcite substation would rob Lucerne Valley of its precious groundwater supplies would be to undertake: (1) a comprehensive assessment as to how the siting of their proposed renewable energy generation and substation would – in combination with other factors, including the cumulative impacts of a plethora of utility-scale and transmission projects that will be developed on public land under the BLM LUPA -- affect relevant groundwater basins, i.e., to what degree would their sustainability be threatened; and (2) a baseline study as to the current status of each affected aquifer – how much potable and non-potable water is each such groundwater basin currently holding? Are the groundwater basins sustainable in view of the demands currently being made on them (including the demands that would be made on them by the Proposed Project, Gen-Tie Line and substation), and in view of their recharge rates, or are these basins approaching collapse, i.e., what are their tipping points?

Even at that, such an analysis would provide a very limited, snapshot-in-time prognostication that may not accurately portray our groundwater basins' future sustainability. At the meeting of the BLM's Desert Advisory Committee on September 27, 2014, in Pahrump, Nevada, Peter Godfrey, a BLM water specialist who was one of the authors of the groundwater portions of the draft DRECP, stated that, in order to assess our aquifers' future sustainability, a long-term time horizon of as much as 30 years is required, which is longer than the projected lifespan of the Proposed Project and substation. In other words, we won't really know whether these projects have compromised our groundwater basins until after they have passed the point of no return.[26]

---

[26] The desire to safeguard groundwater supplies from being depleted over the long haul by large-scale development underlies SB 610 and SB 221. They require long-term supply availability projections for certain types of major development projects listed in Water Code Section 10912(a); they include residential development of more than 500 dwelling units, large shopping centers, office buildings, hotels and plants, as well as projects that "would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project." If the Proposed Project, the Gen-Tie Line and Calcite substation are allowed to proceed, we will address in subsequent correspondence the question of whether their water usage would exceed the quoted standard, and thereby require the project proponents to provide long-term supply availability projections.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Moreover, because environmental justice concerns are involved, performing an abstract projection as to the amount of water usage for the Projected Project, Gen-Tie Line and Calcite substation would not suffice. An analysis would also have to be performed comparing how this draw-down would affect a disadvantaged community like Lucerne Valley versus how it would affect more advantaged areas of the state.

The groundwater lying below Lucerne Valley belongs to its residents, and it is their only water source for all practical purposes. Meanwhile, the ongoing drought continues to pose a dire threat. As a result, the community faces the unfortunate reality that there may be continuing "ramp-downs" under the MBA Adjudication of the amounts of water that residents can draw from the Este Sub-Basin. In view of this, the lack of definitive studies, and the fact that Lucerne Valley's groundwater basins are already under threat due to overuse in drought-ridden times, it should be assumed that extensive groundwater pumping for the Proposed Project and its progeny would render them unable to meet the needs of Lucerne Valley's residents and businesses.

F. Siting the Proposed Project, Gen-Tie Line and Calcite Substation in Lucerne Valley Would Represent an Exercise in Social Engineering That Directly Contravenes the EJ Policy.

Powerful forces seek to loose a tide of utility-scale facilities and related transmission into Lucerne Valley, even though it is not at all clear how much *utility-scale* generation will actually be needed to reach the state's SB 100 and AB 32 goals, i.e., how much renewable energy can be derived from other fast-proliferating, non-utility scale sources, such as rooftop solar, that don't require the destruction of thousands of rural acres. Nevertheless, those who would profit most from transforming Lucerne Valley into an industrial zone, while bearing none of the related burdens, urge this process on by invoking those very same goals. If Lucerne Valley were to be sacrificed in the name of achieving those goals and, as is likely, it later turns out that much less utility-scale is actually needed,[27] the fate of a vulnerable community would have already been irrevocably sealed, as would the fate of a desert notorious for being easily scarred and slow to heal. The community would be gone forever and a living, breathing biome totally lost. Responsibility, if it is even assessed, would be deflected and disavowed by proponents and decision-makers, while profits and power flow out of the community. The unspoken (and highly incorrect) assumption would be that the community and surrounding desert were regrettable, yet unavoidable, collateral damage. Permitting this kind of uncontrolled experimentation to proceed – effectively treating Lucerne Valley's residents as "guinea pigs" -- would be cynical social

---

[27] According to the California Energy Commission's Official Blog (calenergycommission.blogspot.com), "behind the meter" generation (which is a reference to renewable generation produced on-site by, for example, rooftop solar systems) increased in California in just the past five years by 310%, and rooftop solar will readily achieve the state's goal of having 1 Million solar roof systems installed.

At the same time, projections as to the amount of energy needed to power the state's economy may need to be revamped in light of the current Covid-19 emergency and related economic fall-out.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

engineering of the worst type, would represent the very antithesis of environmental justice, and would totally contravene the EJ Policy's goal of sheltering disadvantaged communities from having inequitable environmental, social and economic impacts of development thrust upon them.

6. The County Has Already Determined That Utility-Scale Renewable Energy Facilities Would Impose Disproportionate and Intolerable Burdens on Rural Communities and Therefore Banned Them.

The County's Renewable Energy and Conservation Element ("RECE") of its General Plan, its 2013 Solar Ordinance (Chapters 84.29 and 810.01), the above-referenced Lucerne Valley Community Plan, and various policy pronouncements made by the County, are founded on the principle that utility-scale renewable energy projects are inherently incompatible with rural desert communities.

A. The RECE.

The RECE, as amended by Policy 4.10, precludes utility-scale renewable energy projects anywhere within the boundaries of community plan areas, such as Lucerne Valley. Whether or not the Proposed Project can be "grandfathered" past this outright ban (in view of when the Application was filed), Policy 4.10 is highly significant, and instructive, in terms of the environmental justice implications arising from the Proposed Project.

The RECE, and especially Policy 4.10, represents a hard-won consensus between the County's populace and its governing bodies, one forged over many arduous years of public meetings – in the Countywide SPARC, REVEAL and Community Plan processes -- that utility-scale projects impose disproportionate and unacceptable environmental harm on rural desert and mountain communities. As noted in the DEIR for the Ord Mountain solar project (p. 3.9-5), one of the RECE's "guiding principles includes keeping utility-oriented projects separate from and sufficiently buffered from existing communities, to avoid adverse impacts on community development and quality of life."

The policies and goals embodied in the RECE are discussed below.

The RECE clearly evinces an intention by the County to foster community-oriented solar and to all but ban further utility-scale solar projects. In so doing, the RECE cites the many virtues of community-oriented solar: it promotes energy independence, reduction of the need for new transmission, the sustaining of sensitive natural resources and habitats and local economic growth. In that regard, the RECE promotes as a primary "core value" the need to maintain a "high quality of life for residents of the County," as well as the need to bar renewable energy projects that "substantially conflict with surrounding land uses, especially existing communities or residential areas where residents object to the visual character of RE projects."

Reflecting the County's strong bent against utility-scale generation, the RECE sets out strict siting criteria for such facilities, where they are not outright banned by Policy 4.10, that are

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

so strict that they *de facto* banish utility-scale projects in all but five specific areas referenced in RE Policy 5.2[28] and 5.4 of the RECE (which are remote areas far away from designated community plan areas). Policy 5.4 makes it clear that utility-scale development elsewhere will be required to meet a higher standard of evaluation for appropriate site selection, and that a "two-step application process" will be required in order to evaluate site selection early in the process.

The following over-arching principle can be discerned from the County's land use regime: in view of the harm that industrial operations (like the Proposed Project, the Gen-Tie Line and Calcite substation) visit on the visual integrity, economy, social ecology and health of rural residents, they do not make good neighbors. In that respect, the RECE embodies a vision that closely resembles the one laid out in the EJ Policy.

B. The Lucerne Valley Community Plan.

Like the RECE, the Lucerne Valley Community Plan (the "Community Plan") takes a dim view of development that would industrialize rural communities. The Community Plan, which is an integral part of the overall General Plan, states that it is "to provide goals and policies that address the unique land use issues of the Community Plan area that are not included in the Countywide General Plan."

The Community Plan identifies: (1) as "Unique Characteristics" (LV1.3.1) that "Lucerne Valley offers a rural lifestyle, characterized by the predominance of large lots, limited commercial development and the prevalence of agricultural and animal raising uses in the area. The desert landscape and natural resources further define the rural character of the community;" and (2) as a chief concern (LV1.3.2) of residents that growth pressures will "threaten the features of their rural community," including its "natural beauty [which is] characterized by an abundance of open space and scenic vistas . . ."

Further, as one of its primary "Community Priorities," the Community Plan specifies (LV1.3.3) the need to "[r]etain the rural character of the community by maintaining low density residential development and ***commercial development that serves the needs of local residents***" (emphasis added); as well as the need to maintain (LV/LU 1.1) "***strict adherence*** to the Land Use Policy Map unless proposed changes are ***clearly demonstrated*** to be consistent with the community character" (emphasis added).

Most significantly, the Community Plan, in its Goal LV/LU-1, states its primary land use goal as follows: "Retain the existing rural desert character of the community."

---

[28] Policy 5.2 also contains a catch-all category for "other sites proven by a detailed suitability analysis to reflect the significantly disturbed nature or conditions" of the specific land types enumerated in Policy 5.2, i.e., waste disposal sites, mining sites, airports, etc. But, as indicated above, the lands comprising the Proposed Project site do not begin to resemble heavily degraded lands of the type listed, so the DEIR would have to explain why the Proposed Project would qualify under the catch-all category (or acknowledge that it would not).

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

The Community Plan, like the RECE, further confirms the County's view that utility-scale projects and substations would represent an abrupt and pronounced departure from Lucerne Valley's rural desert character and would incrementally advance the industrialization of the desert, all of which would encourage further consumption of irreplaceable, community-defining natural open space and scarce resources like water.

C. The Supervisors' February 17, 2016 Resolution and DRECP Position Paper.

The County has taken land use policies and goals that further affirm its position that utility-scale generation inflicts disproportionate harm on its rural communities, as stated in:

(1) the February 17, 2016 Resolution of the County's Board of Supervisors) (the "Resolution"), which designated five sites (the same ones that are referenced in the RECE -- which are seriously degraded, away from Lucerne Valley and other population centers, and relatively close to existing transmission – as the only places that utility-scale should go, subject to the project's otherwise satisfying the County's criteria; and

(2) the "County of San Bernardino Position Paper on the Draft Desert Renewable Energy Conservation Plan," dated February 3, 2015 (the "Position Paper"), in which the County stated that the communities of Lucerne Valley, Newberry Springs, Stoddard Valley, Johnson Valley and Apple Valley are not appropriate for Development Focus Areas ("DFAs"), which are places in which the DRECP would allow utility-scale renewable energy projects to be established.

(1) The Resolution.

In the Resolution – which is entitled "Establishing the County's Position" -- the County's Board of Supervisors designated five sites -- which are seriously degraded, away from population centers, and relatively close to existing transmission – as the places that utility-scale should go, subject to the projects otherwise satisfying the County's criteria. The Resolution was adopted by a unanimous vote.

The Proposed Project, Gen-Tie Line and Calcite substation would not be located in or near any of the five designated sites.

In selecting those areas most amenable to utility-scale projects, the Board of Supervisors gave attention to such important factors as close access to transmission, no adjacent human communities and the prevalence of severely degraded biomes. The Supervisors quickly eliminated Lucerne Valley and the other North Slope communities because of high conflicts with these factors. The Supervisors were further guided by these two sets of maps:

(1) a map included in Kristeen Penrod's (SC Wildlands) "California Desert Connectivity Project" (Penrod et al. 2012) – which is lauded in the draft DRECP as providing "a comprehensive and detailed habitat connectivity analysis for the California deserts" (App. Q

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

(Sections 3.4.1 and 3.4.2)) – depicting the "Desert Linkage Network," upon which is overlaid the Desert Tortoise TCA Habitat Linkages (as prepared for the DRECP by the USFWS -- one of the four state and federal agencies sponsoring the DRECP). These combined linkages reflect the interconnections between individuals of a species and among species, with a focus on how they subsist, migrate and procreate over time as part of a desert knit together by connectivity corridors as a living, breathing biome[29]; and

(2) DRECP Databasin maps showing: (a) the DRECP's DFAs, Variance Lands and Unallocated Lands overlaid on the Desert Tortoise TCA Habitat Linkages; (b) the ACECs (Areas of Critical Ecological Concern) and NLCS (National Landscape Conservation System) areas under the DRECP where utility-scale would be prohibited; (c) Overdraft Groundwater Basins in the County; (d) Conservation Values; (e) Special Recreation Management Areas/Extensive Recreation Management Areas; and (f) existing transmission.

Those maps – and the fact that Lucerne Valley, Apple Valley, Johnson Valley and Morongo Basin, among others, host well-established towns and dispersed desert rural communities[30] that would be negatively impacted by industrial-scale renewables (among many other considerations, utility-scale facilities like the Proposed Project draw from already overdrafted groundwater basins) – compelled the conclusion, through a simple process of elimination, that the County's north and eastern slope valley areas must be kept off-limits to such large-scale development; they also confirm that there are highly degraded, transmission-adjacent, former and current industrial, mine and brownfield sites further north -- near Trona, Hinkley, North of Kramer Junction, El Mirage and Amboy -- where such development could be permitted, i.e., the five sites designated in the Resolution.[31]

---

[29] Ms. Penrod prepared a report for the DRECP – which embodied her comments on the draft DRECP – that expanded this linkage network. Among other things, her report demonstrates that almost all of Lucerne Valley should be protected from large-scale development as part of a far-reaching wildlife linkage network integral to connecting the intact landscape block of the San Bernardino Mountains with the desert region to the north.

[30] An appreciable portion of Lucerne Valley remains zoned for "agriculture," but it is now used primarily for rural residential purposes. "Rural Living" zones make up about 50% of the area, while "Resource Conservation" districts make up about 21% of the area (these figures come from the Lucerne Valley Community Plan).

[31] The five sites also have the virtue of being located: (1) over ample groundwater supplies (moreover, the groundwater underlying the Trona, Hinkley and Amboy sites is non-potable, and can only be put to industrial uses); (2) outside of any military flight corridors; (3) on land that has a flat enough gradient to host utility-scale solar development; and (4) away from communities affected by utility-scale development.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

The County's above-referenced valley areas, like Lucerne Valley, enjoy a harmonious convergence of human and natural communities (and resulting tourism) that, while unique and precious, is extremely fragile and easily destroyed. So the County stepped in to protect this irreplaceable community resource through the Resolution, as well as by way of its Position Paper and RECE.

(2) The Position Paper.

The Resolution was not the first time that the County has articulated its foremost values and priorities in terms of siting large-scale renewable projects. In the "County of San Bernardino Position Paper on the Draft Desert Renewable Energy Conservation Plan," dated February 3, 2015, the County stated that the communities of Lucerne Valley, Newberry Springs, Stoddard Valley, Johnson Valley and Apple Valley were not appropriate for DFAs, which are places in which the DRECP would allow utility-scale renewable energy projects to be established.

In issuing its Position Paper, the County was clearly seeking to protect the human and natural communities of its east and north slope valley regions by putting them off limits to industrial-scale development, which directly conflicts with the desire of the project proponent to develop an enormous 5,359-acre utility-scale facility in Lucerne Valley.

Similar planning priorities and goals are expressed by the County in its current general plan and in its 2013 Solar Ordinance. See, for instance, Policy LU 1.2 (ensure compatibility of new development with "adjacent land uses and community character"), Policy LU 1.4 ("[e]ncourage preservation of the unique aspects of the rural communities and their rural character") and Policy CO 8.1 (maximize beneficial effects and minimize adverse effects associated with the siting of major energy facilities and avoid inappropriately burdening certain communities). But the point is already well made: the County has consistently made enactments and policy pronouncements based on the premise that utility-scale renewable energy facilities impose disproportionate and intolerable burdens on its rural communities, including Lucerne Valley.

7. <u>The Proposed Project Would Impose Immense and Intolerable Burdens on Residents of Lucerne Valley, While Providing Them with No Benefits</u>.

The Proposed Project, Gen-Tie Line and Calcite substation would, if built, fundamentally and irrevocably industrialize Lucerne Valley and, in the process, generate harmful environmental impacts that would deprive residents of their health, homes and groundwater, while devastating the economy and property values, and ultimately displace them in whole or in large part. The proposed development would also usher in a host of additional utility-scale and transmission projects that would completely transform the region to the profound detriment of its residents.

The Proposed Project and related development would be a permanent blight on the community. While the Application represents that the Proposed Project would have a useful life of 30 to 40 years, it does not reference any plan for removing or recycling the structures comprising the Proposed Project (or the Gen-Tie Line) at the end of their useful lives, or for

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

attempting to restore the site to its natural condition. In any event, no developer could be realistically expected to have the enormous resources, or the intention of committing them several decades in the future (if the developer is still in existence then), to effect such restoration, and it has yet to be demonstrated that, as a matter of biological science, the 5,359-acre region comprising the Proposed Project (and the Calcite substation site) could ever be restored to its undeveloped natural desert state, especially given the massive amount of industrial infrastructure that would have to be installed in creating the projects. Even the best-funded and best-intentioned developer would face the impossible task of re-building this fragile and unimaginably complex eco-region from its biological base upward, with the hope that critical wildlife corridors occluded for decades by the Proposed Project, Gen-Tie Line and Calcite substation could be restored after the existing flora and fauna had suffered local species collapse.

In line with the above-cited EJ Policy, the following concerns are triggered by the Proposed Project and substation:

A. The Community Would Not Reap Any Benefits from the Proposed Project, Gen-Tie Line and Calcite Substation.

Lucerne Valley would be called upon to make a huge sacrifice in the name of large-scale energy generation and transmission: they would have to give up their desert rural lifestyles, direct access to nature and unimpeded natural views, as well as the value of their homes. But they would get nothing in the bargain. All of the power generated would be exported to the grid for use outside the County, and all profits would go to Avangrid Renewables, LLC (a publicly-traded U.S. holding company with $30 Billion in assets and operations in 25 states) and to Edison.[32]

B. The Community Would Directly Suffer All of the Substantial Downsides Generated by the Proposed Project, Gen-Tie Line and Calcite Substation.

---

[32] California has had a glut of renewable energy for some time now. For instance, in the first eight days in January and nine in February of 2017, the state had to pay Arizona to take all the surplus, even as natural gas power plants – eight such plants are being refurbished – continued to generate, according to a June 22, 2017 *Los Angeles Times* article, entitled "California has invested heavily in solar power. Now there's so much that other states are sometimes paid to take it." It also reports that curtailments of solar and wind power production for the first quarter of 2017 were more than double the same period last year, and the surge in solar power could push the number even higher in the future. Because of this surplus, existing power plants run, on average, at slightly less than one-third of capacity. And some plants are being closed decades earlier than planned. But the overbuilding of new plants and transmission continues apace because – according to industry insiders cited in the article – such construction receives a "lopsided incentive": "utilities can build in the construction costs into the amount that the utility can charge electricity users – no matter how much or how little is used." In other words, such charges include a guaranteed rate of return, i.e., profit, for the utilities.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Residents would be subjected to noise, dust and constant intrusion from two major construction projects that would require hundreds of workers and platoons of heavy equipment over an extended period of time. And dust plumes would inevitably be unleashed during the operational life of the projects as the prevailing winds sweep over denuded desert soil, while new high tension lines crackle and hum loudly overhead. As the immense appeal of the community is destroyed in the process, the value of the homes in it would plummet, all of which will likely result in some or all of the homes being abandoned. If so, the area would sink into blight and become a derelict community to the extent that residents have the financial wherewithal to pull up stakes. Instead of the current, vibrant human community that exists side-by-side with thriving natural communities, there would be hundreds of thousands of solar panels left silently pivoting in the degraded landscape; and

C. The Proposed Development Would Usher a Proliferation of Additional Utility-Scale Projects into the Vicinity, Imposing Additional Ill Effects on Community Members (as per the Cumulative Effects Discussion Above).

This is already beginning to happen, despite the fact that neither the Proposed Project nor the substation has been approved. As noted above, there are three additional utility-scale projects being proposed for the immediate vicinity of the community that are now in the approval pipeline. This proliferation of utility-scale projects would put the community at the epicenter of thousands of dust (and spore)-spewing industrialized acres, thereby making its residents the focus of an undue and highly disproportionate amount of health-compromising fugitive particulates and other pollutants.

Lucerne Valley residents would obviously not enjoy any countervailing benefits from such development, other than, for sake of argument, a tangential, indirect and very incremental increase in the state's renewable energy capacity. But this would be the same marginal benefit accruing to any resident of this state, indeed any citizen of this planet. Yet it would be the population living in the vicinity of the Proposed Project that would suffer all of the resulting environmental degradation and dislocation.

Lucerne Valley will not enjoy a boost in employment if the Proposed Project, Gen-Tie Line and Calcite substation were to be built. According to the Application, there would be only ten post-construction jobs created at the Proposed Project. Those ten jobs, as well as the jobs associated with construction of the Proposed Project, would be filled primarily with union workers drawn from the state/regional work force, with technicians and other specialists drawn from the energy industry and with persons drawn from Edison's workforce.

This profound and undeniable imbalance between anticipated burdens and benefits underscores the immense environmental injustice that would result from approval of the Proposed Project and related development.

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

8. Conclusion.

We thank you for inviting us to comment on the environmental justice implications of the Proposed Project, the Calcite substation and the potential utility-scale projects that might arise in their wake, and we look forward to continuing participation in this process.

Very truly yours,

Community Associations, Businesses and Organizations:

LUCERNE VALLEY ECONOMIC DEVELOPMENT ASSOCIATION

Chuck Bell, President

CHURCH OF OUR LORD AND SAVIOR (LUCERNE VALLEY)

Bill Lembright, President

LUCERNE VALLEY MARKET/ HARDWARE

Linda Gommel, Chief Executive Officer

LUCERNE VALLEY REALTY

Martha Lynn, Owner

EXPERT APPLIANCE SERVICE

Bill Peterson and Alyn Peterson, Proprietors (and residents of Lucerne Valley)

JUBILEE MUTUAL WATER COMPANY, INC. (Lucerne Valley)

Raymond M. Gagne, Jr., General Manager

HOMESTEAD VALLEY COMMUNITY COUNCIL

Jim Harvey, President

JOHNSON VALLEY IMPROVEMENT ASSOCIATION

Betty Munson, Secretary

NEWBERRY SPRINGS CHAMBER OF COMMERCE

Paula Deel, Board Member

NEWBERRY SPRINGS ECONOMIC DEVELOPMENT ASSOCIATION

Paul Deel, President

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

NEWBERRY SPRINGS COMMUNITY ALLIANCE

Ted Stimpfel, President

MORONGO BASIN CONSERVATION ASSOCIATION

Steve Bardwell, Treasurer

MOJAVE COMMUNITIES CONSERVATION COLLABORATIVE

Lorrie L. Steely, Founder

CALIFORNIA DESERT COALTION

Claudia Sall, Secretary

FRIENDS OF PIONEERTOWN

David Miller, Member of the Board of Directors

SUSTAINABLE LEARNING CENTER (Apple Valley)

Neville Slade and Tammy Slade

FRIENDS OF BIG MORONGO CANYON PRESERVE

Meg Foley – Executive Director

Individual Community Members:

Brian Hammer, Analyst and Adjunct Professor (owner of home in Lucerne Valley)

Sue Hammer (owner of home in Lucerne Valley)

Renee Lynn (resident of Lucerne Valley)

Jerry Swarthout (resident of Lucerne Valley)

Neil Nadler (owner of home in Lucerne Valley)

Roger Peterson (resident of Lucerne Valley)

Dennis Morrison (resident of Lucerne Valley)

Millie Rader (resident of Lucerne Valley)

David Rader (resident of Lucerne Valley)

Todd Jones (resident of Lucerne Valley)

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Lorraine Cross (resident of Lucerne Valley)

Rusty LaGrange (resident of Lucerne Valley)

Franklin S. Fowler Jr., M.D. (resident of Lucerne Valley)

Jeanne C. Fowler (resident of Lucerne Valley

Kathryn Anema (resident of Lucerne Valley)

Teresa Reyes (resident of Lucerne Valley)

Randy Polumbo (owner of a home in Lucerne Valley)

Lawrence Land (owner of a home in Lucerne Valley)

Kenneth D. Lair (resident of Apple Valley)

Barbara Smith (resident of Apple Valley)

Jackie C. Lindgren (resident of Apple Valley)

Bryan Baker (resident of Apple Valley)

Robert L. Berkman (resident of Daggett)

Laraine Turk (resident of Joshua Tree)

Ted Stimpfel (resident of Newberry Springs)

Randy West (resident of Landers)

Ann Garry (resident of Pioneertown)

Dave Garry (resident of Pioneertown)

Steve Bardwell (resident of Pioneertown)

David S. Miller (resident of Pioneertown)

Dixie Coutant (resident of Tehachapi)

Louis Kannenberg (resident of Lucerne Valley)

George V. Yablonsky (resident of Lucerne Valley)

Carl Porter (resident of Lucerne Valley)

Roland Reyes (resident of Lucerne Valley)

Charlie Brewster (resident of Lucerne Valley)

Frank Quinones (resident of Lucerne Valley)

Herlinda V. Quinones (resident of Lucerne Valley)

Gary Aplet (resident of Lucerne Valley)

Barry Blair (resident of Johnson Valley)

Susan Blair (resident of Johnson Valley)

Gregg Hallam (resident of Johnson Valley)

Nicole Hallam (resident of Johnson Valley)

Ellen Johnson (resident of Newberry Springs)

Jim Johnson (resident of Newberry Springs)

Marina West (resident of Landers)

Diana Bork (resident of Helendale)

Sarah Kennington (resident of Pioneertown)

Elisabeth Stewart (resident of Yucca Valley)

Matthew McCarthy (resident of Yucca Valley)

Cindy Charlton (resident of Newberry Springs)

Jerry Broyles (resident of Pioneertown)

Comment Set B8 – Coalition of Community Groups and Individuals(cont.)

Monica L. Mahoney (resident of Joshua Tree)

Catherine Cannon (resident of Yucca Valley)

Robert Stiefel (resident of Yucca Valley)

Gene Parsons (resident of Pioneertown)

Star Decker (resident of Pioneertown)

CCs:

Robert Lovingood (Chairperson and First District Supervisor; SupervisorLovingood@sbcounty.gov)

Janice Rutherford (Second District Supervisor; SupervisorRutherford@sbcounty.gov)

Dawn Rowe (Vice-Chairperson and Third District Supervisor; SupervisorRowe@sbcounty.gov)

Curt Hagman (Fourth District Supervisor; SupervisorHagman@sbcounty.gov)

Josie Gonzales (Fifth District Supervisor; SupervisorGonzales@sbcounty.gov)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

ATTACHMENTS

- MAPS -

Figures 1 through 6

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

FIGURE 1.

Economically Disadvantaged Community Areas in Lucerne Valley

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

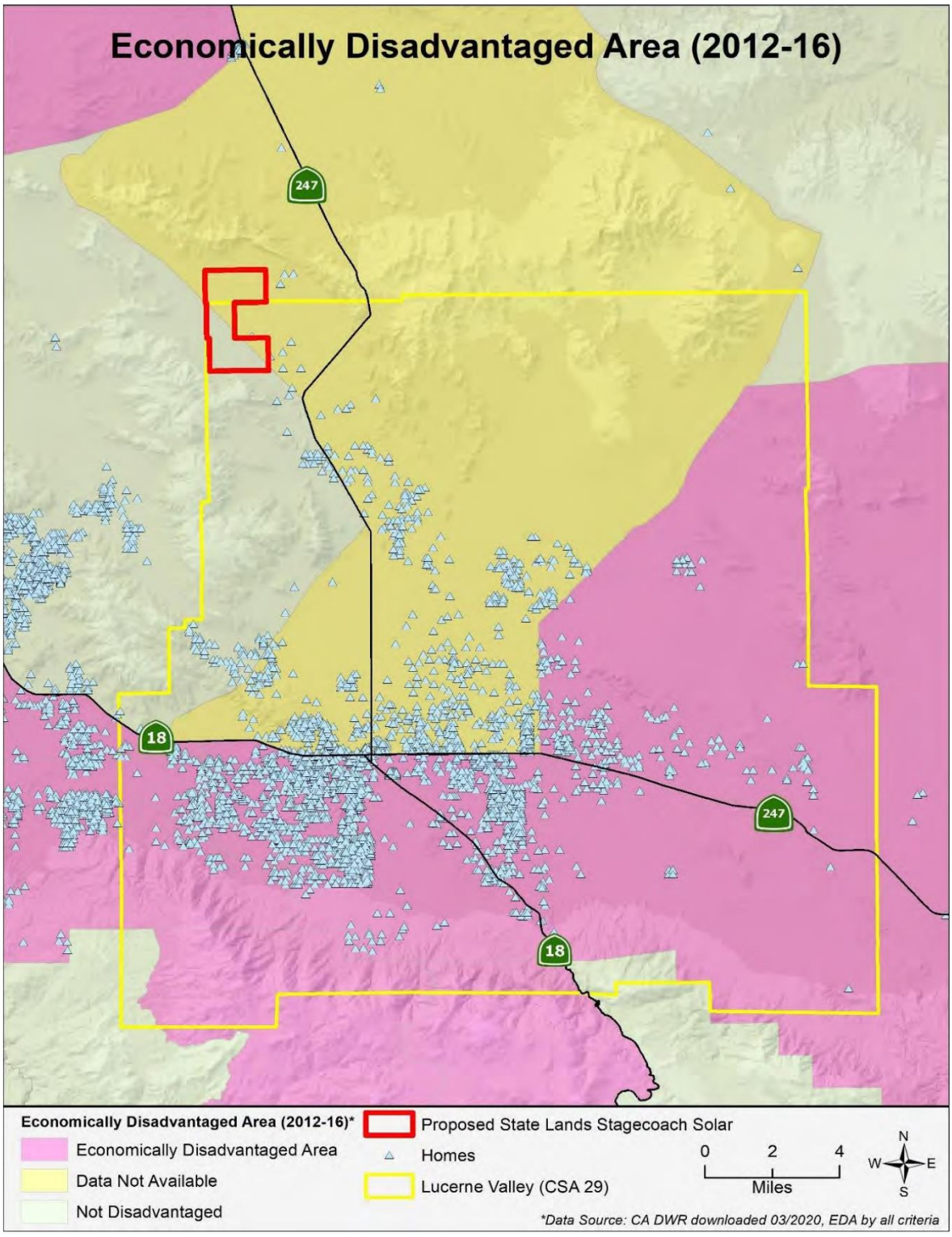


Figure 1 Economically Disadvantaged Areas in Lucerne Valley

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

FIGURE 2.

Disadvantaged and Severely Economically Disadvantaged Community Areas in Lucerne Valley

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

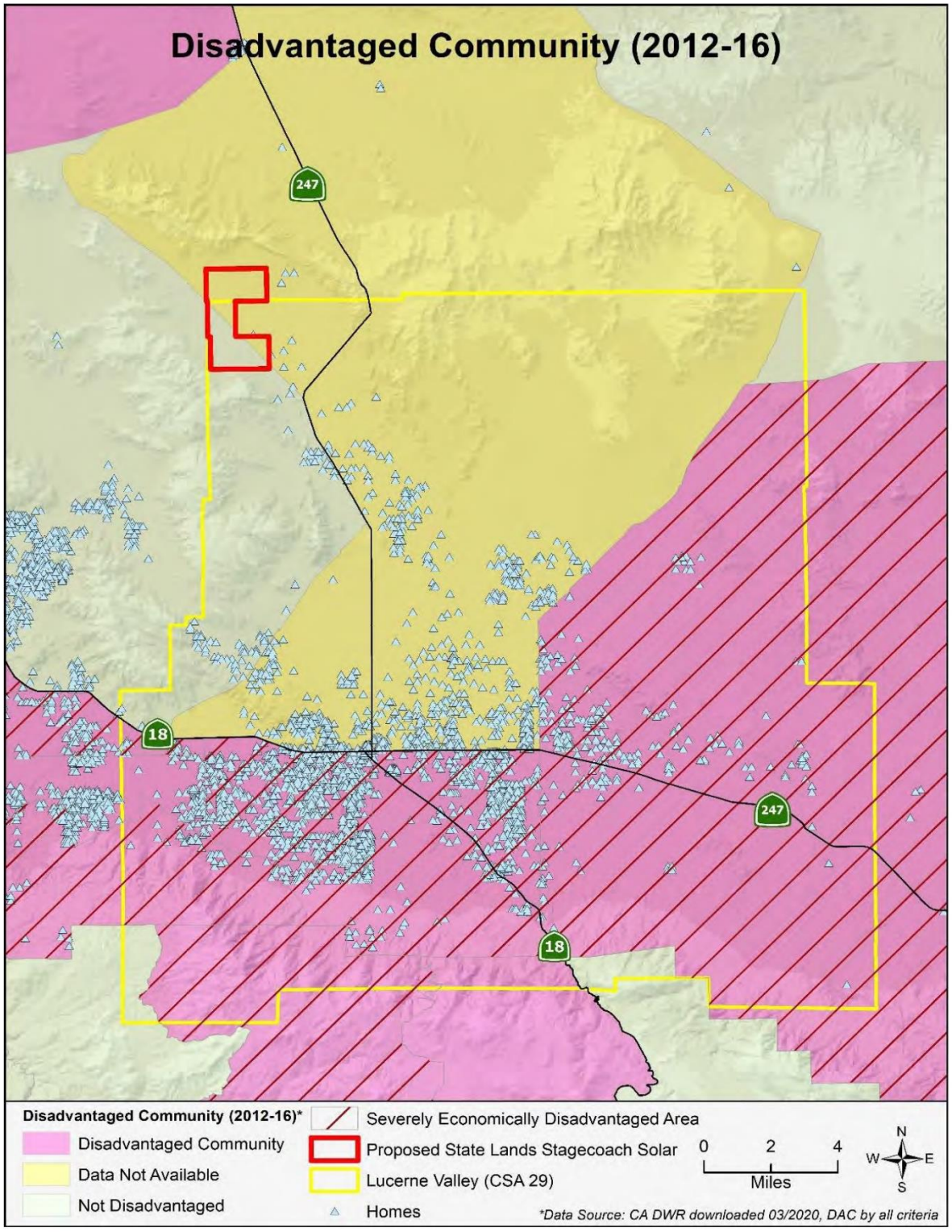


Figure 2 Disadvantaged and Severely Economically Disadvantaged

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

FIGURE 3.
Vicinity Map (overlay of map attached to project application)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

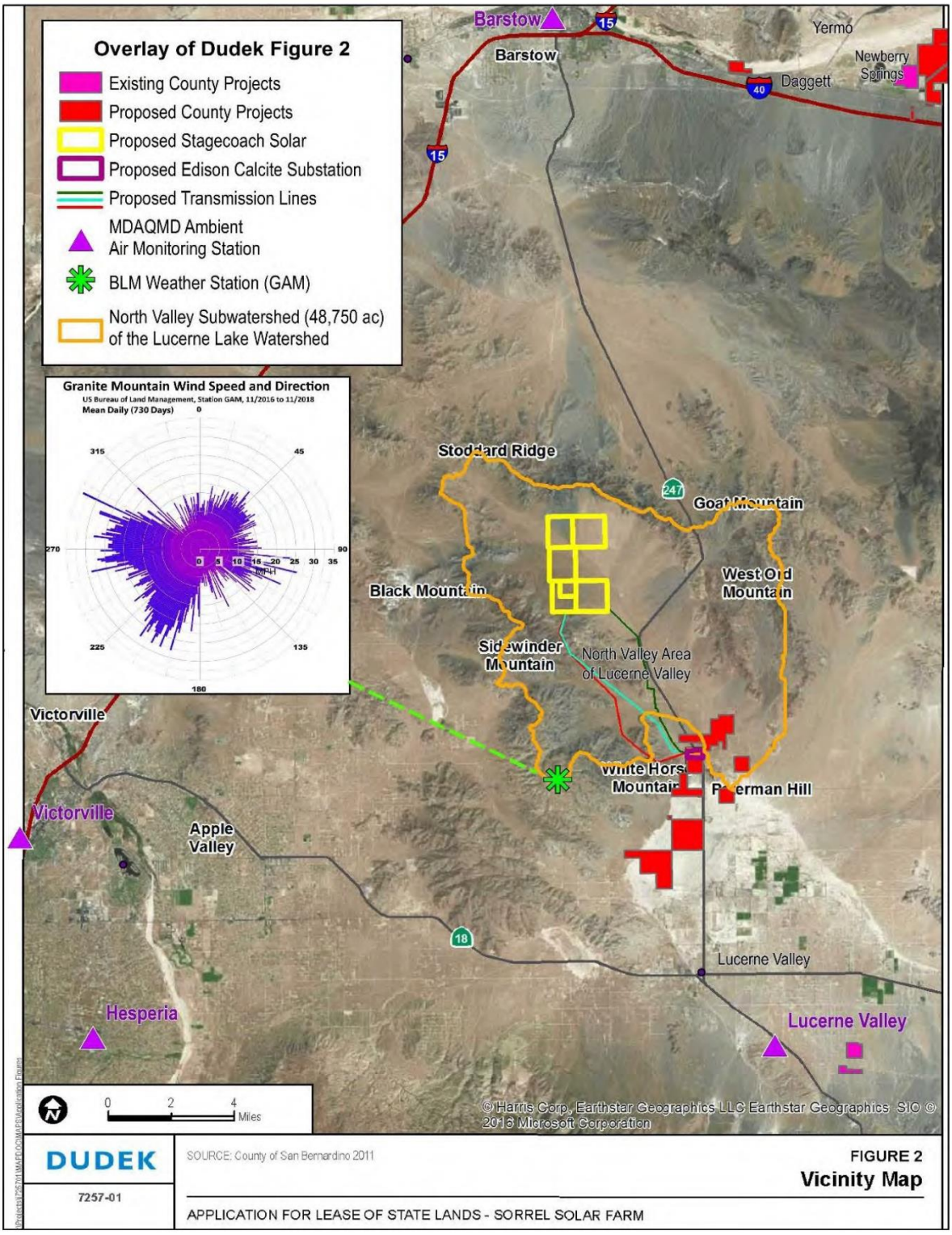


Figure 3 Vicinity Map (overlay of map attached to Project Application)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

FIGURE 4.

ACEC and Wildlife Linkage Design

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

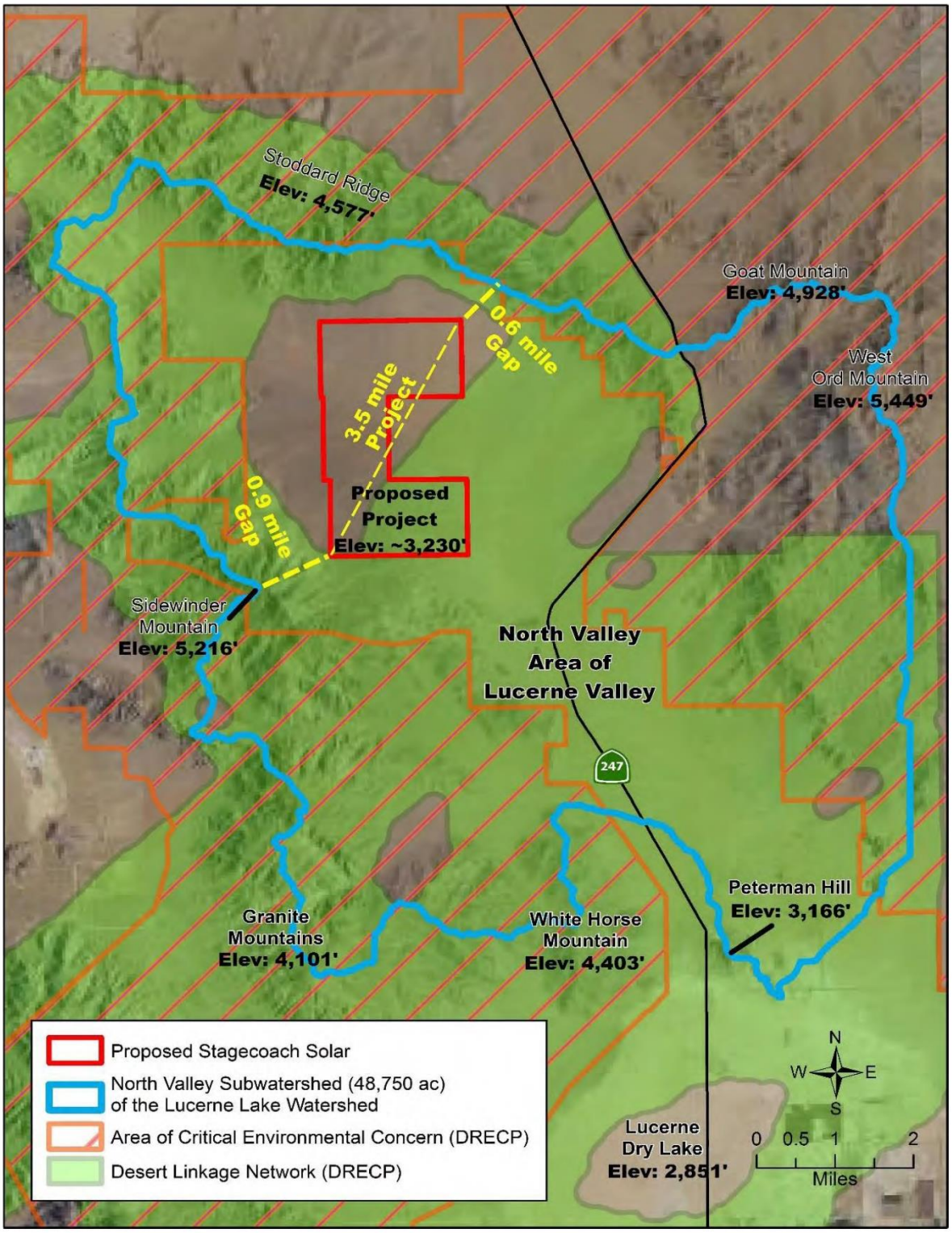


Figure 4 ACEC and Wildlife Linkage Design

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

FIGURE 5.

North Valley Subwatershed Bluelines

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

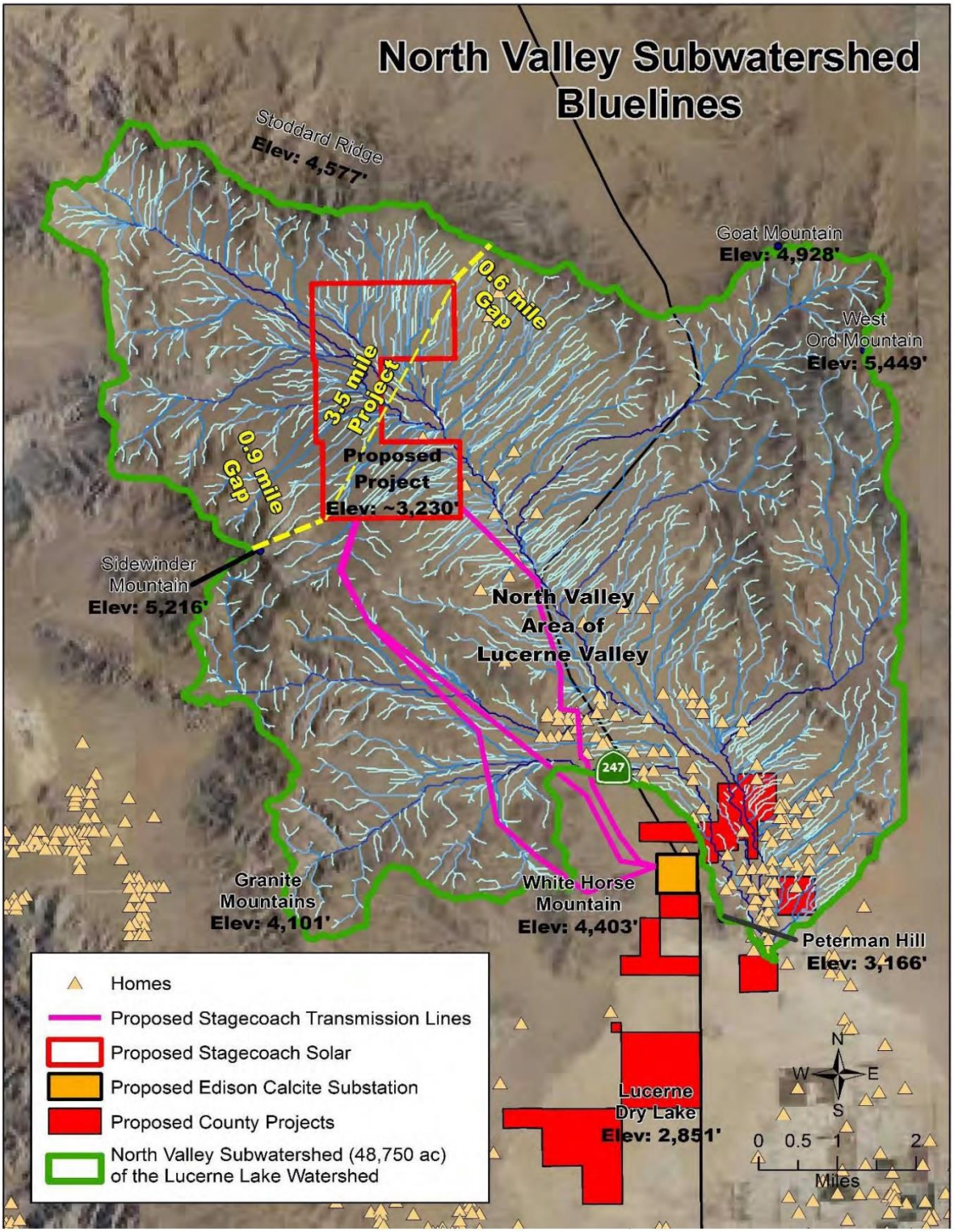


Figure 5 North Valley Subwatershed Bluelines

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Figure 6.

Regional Dust Potential

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

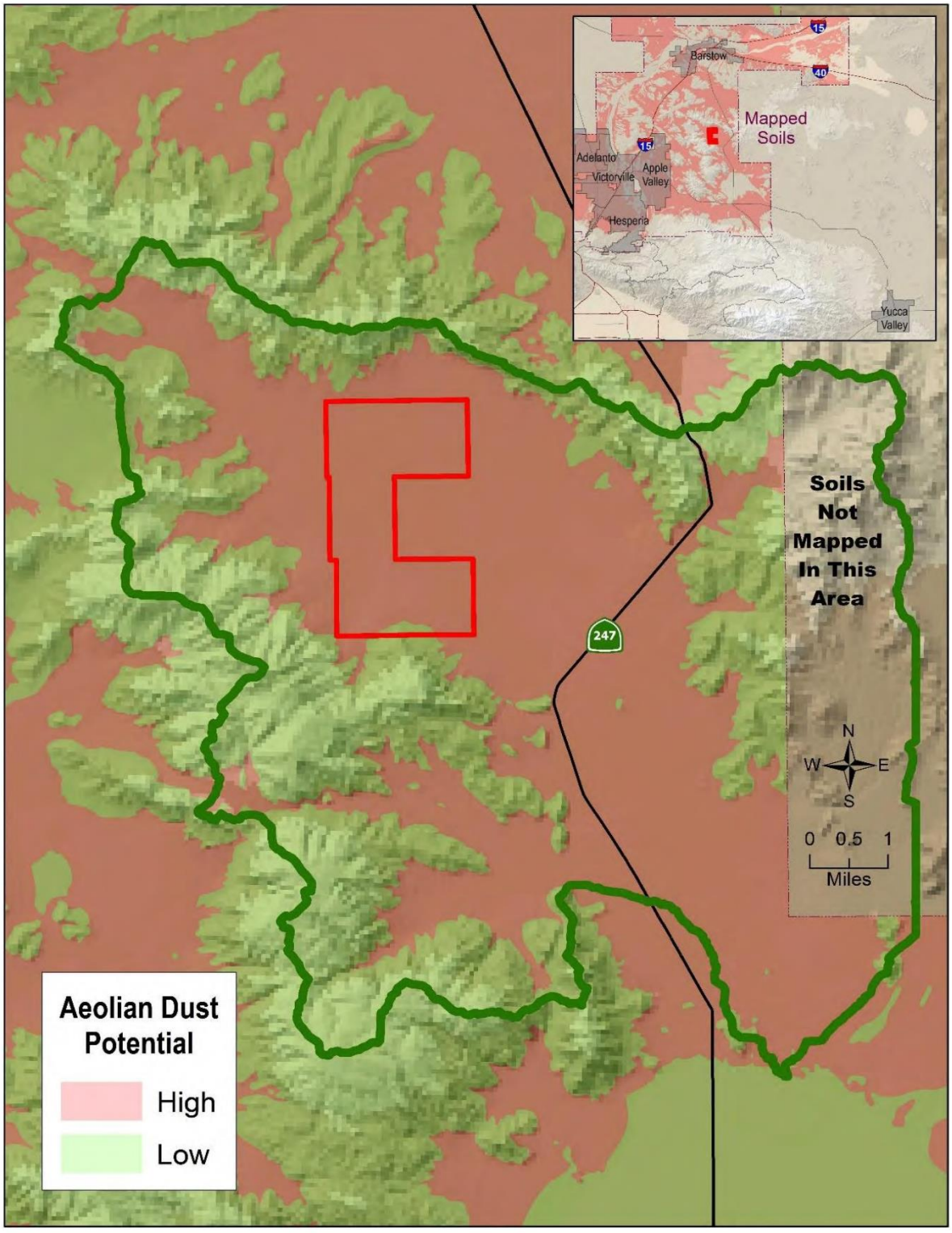


Figure 6 Regional Dust Potential

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-43
(for entire attachment)

Attachment 2

SC Wildlands' Letter Commenting on the DEIR for the Proposed Ord Mountain Solar Project

dated November 16, 2018

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

November 16, 2018

Mr. Chris Warrick, Senior Planner
San Bernardino County Land Use Services Dept.
385 North Arrowhead Ave., First Floor
San Bernardino, Calif. 92415
Submitted via email: Chris.Warrick@lus.sbcounty.gov

Subject: Comments Ord Mountain Solar and Energy Storage Project DEIR

Dear Mr. Warrick,

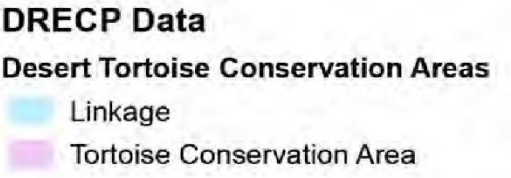
Thank you for the opportunity to comment on the Proposed Ord Mountain Solar and Energy Storage Project Draft Environmental Impact Report (DEIR). SC Wildlands was alerted to the Proposed Ord Mountain Solar Project by Neil Nadler because of the Proposed Project's impacts to wildlife movement corridors and habitat linkages. SC Wildlands' mission is to protect and restore systems of connected wildlands that support native species and the ecosystems upon which they rely. As such, our comments on the DEIR largely focus on the inadequacy of the analysis of potential impacts to wildlife movement corridors and habitat linkages.

A Linkage Network for the California Deserts (Penrod et al. 2012), commissioned by the Bureau of Land Management and The Wildlands Conservancy, was intended to provide more information to natural resource agencies, environmental consulting firms, and the general public concerning where and how to maintain connectivity and sustain ecological functions in a changing climate. Penrod et al.'s (2012) study area encompassed the entire Desert Renewable Energy Conservation Plan (DRECP) area with a buffer into the neighboring Sierra Nevada and South Coast Ecoregions, and was a key input to the reserve design of the DRECP. The Desert Linkage Network was designed to help meet Goal L1 of the DRECP, "Create a Plan-wide reserve design consisting of a mosaic of natural communities with habitat linkages that is adaptive to changing conditions and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets that provide for movement and gene flow and accommodate range shifts and expansions in response to climate change". Evidently, the Consultant who completed the DEIR was unaware of Penrod et al.'s (2012) A Linkage Network for the California Deserts, as it was not used in any analyses evaluating impacts to wildlife movement corridors and habitat linkages.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

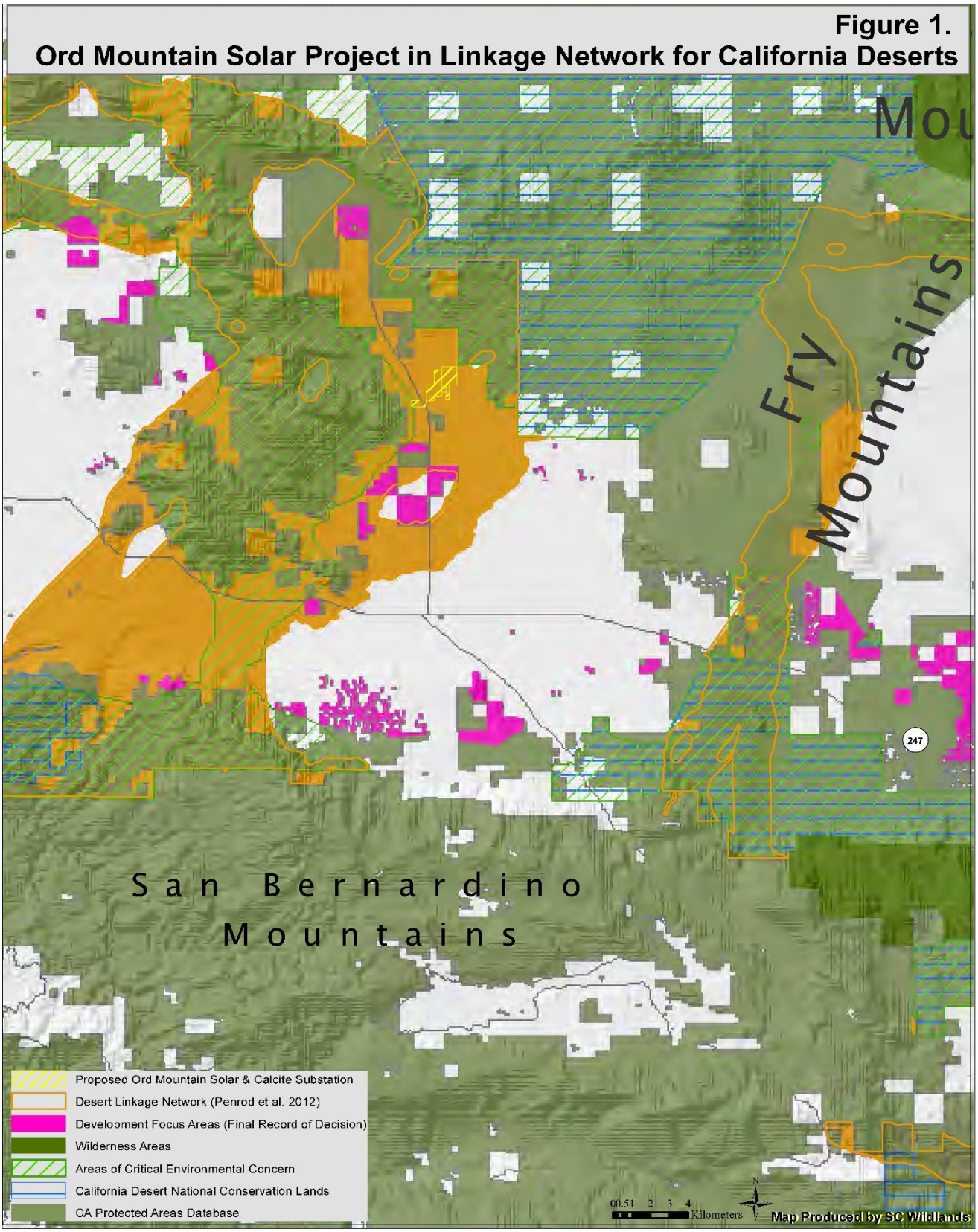
The Desert Linkage Network (Penrod et al. 2012) was developed in part based on the habitat and movement requirements of 44 different focal species that are sensitive to habitat loss and fragmentation. These focal species were selected to represent a diversity of ecological interactions and are intended to serve as an umbrella for all native species and ecological processes of interest in the region. These 44 focal species capture a diversity of movement needs and ecological requirements and include area-sensitive species, barrier-sensitive species, less mobile species or corridor-dwellers, habitat specialists, and ecological indicator species. Eight of these focal species are also Covered Species under the DRECP, including Bighorn sheep, Mohave ground squirrel, pallid bat, burrowing owl, LeConte's thrasher, Bendire's thrasher, desert tortoise and Mojave fringe-toed lizard, and 3 of these species (bighorn sheep, desert tortoise and Mohave ground squirrel) were also used as "Reserve Drivers" in the DRECP. Six of the 8 special status animal species with the potential to occur (Table 3.3-3 of the DEIR) were also focal species in Penrod et al. 2012, with the exception of the golden eagle and prairie falcon.

The 'analysis' of the Proposed Project's impacts to Wildlife Corridors and Habitat Linkages is entirely inadequate and incomplete. The Consultant who completed the DEIR did not do a complete review of the DRECP Gateway (DRECP 2017), as indicated on page 3.3-2, at least not as it relates to habitat connectivity. The majority of the discussion on Wildlife Corridors and Habitat Linkages in the Biological Resources section of the DEIR (pages 3.3-14 to 3.3-15) focused on semi-accurate definitions of wildlife corridors and habitat linkages. The entire 'analysis' of the Proposed Project's impacts to Wildlife Corridors and Habitat Linkages was three measly sentences, "*The project site is within a DRECP linkage area for desert tortoise, but outside the Desert Tortoise Conservation Area. The DRECP identified potential areas used by golden eagles for nesting and foraging, and the project site lies entirely within the Golden Eagle Conservation Area. The project site is outside any areas defined as wildlife corridors by the DRECP. See Exhibit 3.3-3, DRECP Wildlife Corridors and Habitat Linkages*" (page 3.3-15). First, the "DRECP linkage area for desert tortoise" is a key component of the Desert Tortoise Conservation Areas, as indicated in the legend for Exhibit 3.3-3, which is included as an image here for reference. Second, the Project Site ***IS*** within areas "defined as wildlife corridors by the DRECP", including the Desert Linkage Network (Penrod et al. 2012; Figure 1), Bighorn Sheep Intermountain Habitat (California Department of Fish and Wildlife 2013; Figure 2), and Desert Tortoise TCA Habitat Linkages (Averill-Murray et al. 2013; Exhibit 3.3-3 of the DEIR). A more recent connectivity analysis for desert tortoise (Gray et al. 2018), A range-wide model of omnidirectional connectivity for the Mojave desert tortoise (*Gopherus agassizii)*, also shows the Proposed Project Site is important to desert tortoise movements.

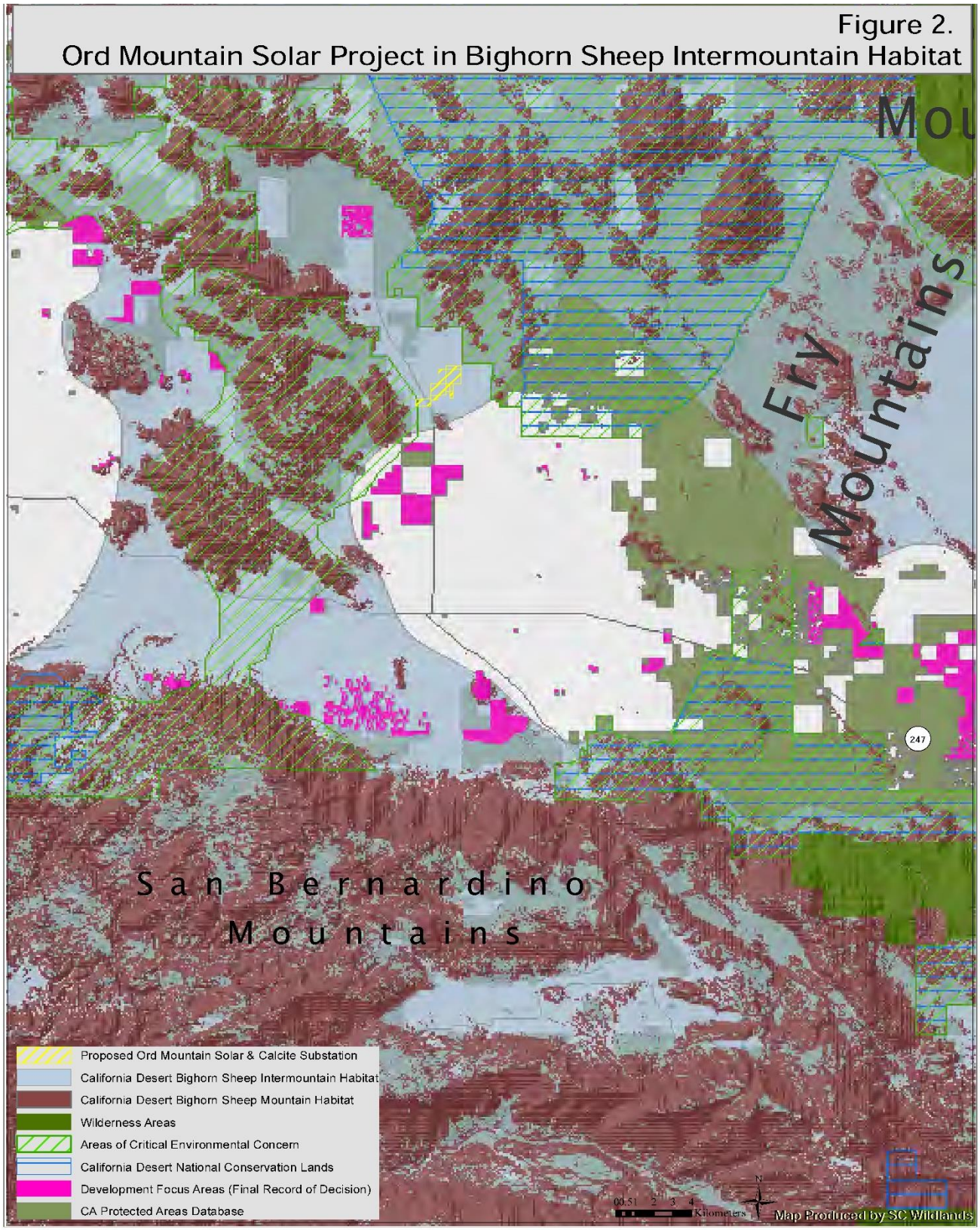


Furthermore, the boundaries for the Proposed Ord Mountain Solar Project and Calcite Substation nearly touch the Final Granite Mountain Wildlife Linkage Area of Critical Environmental Concern (ACEC), at the northeast and southwest corner of the proposed project (Figures 1 &2). The DRECP's Relevance and Importance Criteria for this ACEC states, "the area is critical for bighorn sheep, golden eagles, desert tortoise and prairie falcons and several other species. Additionally, numerous rare and sensitive plants have major populations here, making the area regionally important". Goals: "Protect biological values including habitat quality, populations of sensitive species, and landscape connectivity while providing for compatible public uses". One of the Objectives of this ACEC is to "protect and enhance sensitive wildlife habitat" with the following species listed: desert tortoise, LeConte's thrasher, San Diego pocket mouse, prairie falcon, golden eagle, and Mohave ground squirrel. In

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

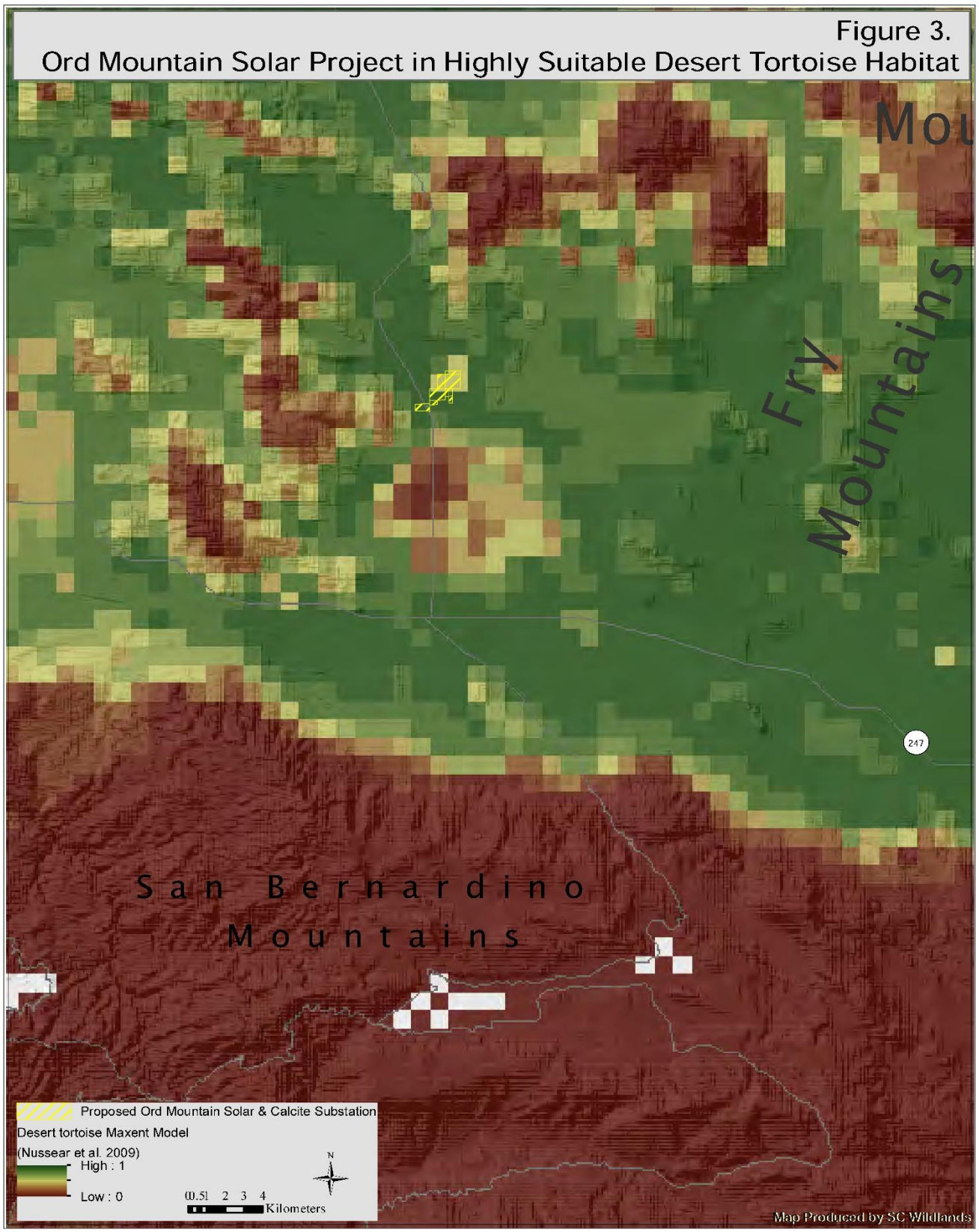
thrasher, crissal thrasher, cactus wren, greater roadrunner, chuckwalla, desert night lizard, desert spiny lizard, Great Basin collared lizard, rosy boa, speckled rattlesnake, Mojave rattlesnake, Bernardino dotted blue, desert green hairstreak, desert metalmark, and yucca moth.

One of the primary goals for the Desert Tortoise TCA Linkages (Goal DETO2 of the DRECP) is to "Maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas. Emphasize inclusion of high value contiguous habitats pursuant to Nussear et al. (2001) and avoidance of disturbance in habitat with high desert tortoise habitat potential. Nussear et al. (2009) identifies virtually all of the Proposed Ord Mountain Solar and Energy Storage Project Site as medium to highly suitable habitat for tortoise (Figure 3). Furthermore, the analyses conducted by USFWS (Averill-Murray et al. 2013) indicate that the Proposed Project Site is relatively permeable to tortoise movement. This area of the Desert Tortoise TCA Habitat Linkage should not be developed for solar energy, especially since one of the overarching Biological Goals of the DRECP is to, "Preserve, restore, and enhance natural communities and ecosystems including those that support Covered Species within the Plan Area". Sazaki et al. (1995) estimated dispersal distance for pre-breeding male tortoises to be between 6.21-9.32 miles. Forcing desert tortoises to go around the fenced perimeter of the entire 558 acres would create a significant barrier to movement of desert tortoises, especially dispersing juveniles, which could not be mitigated to a threshold that is less than significant.

The DEIR states, "Impacts to special-status vegetation communities, plants, wildlife species, and jurisdictional waters, including wetlands, must be ***quantified and analyzed*** to determine whether such impacts are significant under CEQA (Page 3.3-31). Yet, no quantitative analyses of impacts to sensitive plant and wildlife species were conducted; only shoddy qualitative assessments were included in the DEIR. In order to fully and accurately disclose impacts, quantitative analyses for each special status species are required. For example, how much of the 558-acre Project Site is potential habitat for desert tortoise? How many acres of desert tortoise habitat would be lost due to the proposed project? How many of these acres are within the Desert Tortoise TCA habitat linkages? How would the project constrict the linkage (i.e., measure the width of the tortoise linkage with and without the project)? In addition, the DEIR used outdated recorded occurrences of sensitive and listed species from the California Natural Diversity Database (CNDDB) from 2016 (page 3.3-2). It is 2018, and all of the recorded occurrences of the other surrounding proposed and approved solar projects likely added countless recorded occurrences to the CNDDB, or should have!

The DEIR is full of contradictions. Table 3.3-3 Special Status Animal Species Potential to Occur of the DEIR, has the following for desert tortoise, "*Low potential to occur on both project sites. There are no recent observations. Sites are far from typically occupied habitat and Critical Habitat. Focused surveys were negative; one potential burrow was located at Calcite Substation*". Page 3.3-33 of the DEIR states, *"No desert tortoises were detected on the project site during the protocol-level surveys conducted in 2016 and 2017. However, tortoise occur in low densities in the general project vicinity. The DRECP distribution data shows that desert tortoise may occur on the project site, and there is nearby suitable habitat; see* ***Exhibit 3.3-5, Biological Resources Impacts,*** *and* ***Exhibit 3.3-6, Desert Tortoise Distribution and Occurrence****. Therefore, there is the potential for desert tortoise to traverse onto the project site*". Environmental Intelligence, LLC was retained by Southern California Edison (SCE) to conduct a focused survey for desert tortoise in support of the proposed Calcite Substation Project in June of 2017, which is included as an appendix to Appendix D of the DEIR. In direct contradiction to the above statements in the body of the DEIR, Environmental Intelligence (2017), states, "*A total of two (2) live desert tortoises were observed within the*

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

carapace length (MCL) greater than 210mm and two (2) juvenile tortoise with a MCL less than or equal to 160mm. Other desert tortoise sign observed included nineteen (19) tortoise burrows, two (2) tortoise pallets, four (4) tortoise scat, and six (6) tortoise carcasses". In another appendix to Appendix D of the DEIR that addresses desert tortoise, sub-consultant BRC Equals 3 (August 2016), identified the entire Proposed Project Site as medium to high probability of tortoise occurrence, with the majority of the site ranked as having a high probability of tortoise occurrence (Figure 3). These inconsistencies must be addressed.

Several of the sub-consultants technical reports also contradict one another. For example, SWCA Environmental Consultants (2010) had this to say about the Relationship of the Project Parcel to Wildlife Movement Corridors (7.5.2): *On a regional level, the project site is located within the northern portion of the Lucerne Valley and it is 1.2 miles north of Lucerne Lake, 1.5 miles east of the Granite Mountains, and 1.4 miles south of the Ord Mountains. The dry, barren interior of Lucerne Lake and the steep slopes of the Granite and Ord Mountains create natural barriers for wildlife species associated with creosote bush scrub and saltbush scrub found within Lucerne Valley. This limits movement for these species to disperse and move into other areas of the Mojave Desert that support similar habitats. Creosote bush scrub is contiguous to the north and east of the project site, which allows movement of wildlife between the northern and eastern portions of Lucerne Valley. On a local level, the project site's use by wildlife as a movement corridor is limited due to alterations incurred from historic land uses. Agricultural practices have either removed the natural vegetation communities, as found in much of the northern portion of the site, or substantially altered them, as found in the southern portion, limiting the quality and availability of habitat for wildlife. The areas that are almost denuded of vegetation lack the refugia and cover typically sought by wildlife. The land use (transportation, residential, and agricultural) of areas adjacent to the project site also limit the value to wildlife of the habitat in the vicinity.* While, the 2017 report by Environmental Intelligence, states, "***due to the large expanse of undisturbed desert habitat and connectivity within Lucerne Valley**, the natural history of burrowing owls, and BRC's findings of burrowing Owl pellets within the Project boundaries in 2016, burrowing owls have the potential to occur within the Project and vicinity*". Furthermore, several of the Plant compendiums have over 100 plant species recorded on site, and only about a half dozen of these plants are non-native species. The floral diversity of the site is in direct contradiction to the suggestion by SWCA (2010) that the site is substantially altered with limited habitat for wildlife.

The DEIR states, "Dudek biologists and subconsultants completed multiple biological surveys at the site to gain a clear understanding of natural resources present". A table as included in section 3.3 that includes the day, time, field personnel for all of the surveys. There were 2 days of Jurisdictional Resource Evaluation, Vegetation Mapping, and Rare Plant Survey; 2 days Rare Plant Surveys; 7 days Desert Tortoise Protocol-Level Surveys; 11 days Burrowing Owl Protocol Surveys; and 2 days Golden Eagle Protocol Surveys. This amount of field time with so few field personnel does not seem sufficient to survey roughly 558 acres. Further, evidently some of the surveys, including focused surveys, were conducted concurrently with other surveys, which kind of defeat the purpose of a focused survey. A review of the various survey results included as appendices to Appendix D of the DEIR indicate that many of the Protocol-Level Surveys for listed species (i.e., desert tortoise, burrowing owl, and Mohave ground squirrel) were only conducted on the Calcite Substation Site to the west of State Route 247. It is our understanding that the U.S. Fish and Wildlife Service requires two consecutive years of focused surveys of the ENTIRE Project Site for species listed under the Endangered Species Act. This severe failure of the DEIR must be rectified.

The DEIR includes the following summary for impacts to wildlife movement and concludes that the impacts would be less than significant with mitigation:

INTERFERE SUBSTANTIALLY WITH THE MOVEMENT OF ANY NATIVE RESIDENT OR MIGRATORY FISH OR

Impact 3.3-4 The project would potentially interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

migratory wildlife corridors, or impede the use of native wildlife nursery sites. Impacts would be less than significant with mitigation.

There are no wildlife corridors traversing the project site, but the project site is within a habitat linkage for desert tortoise. Due to the lack of desert tortoise observations and suitable habitat on the project site, and given that the extent of the project site does not block the connection between the larger adjacent open spaces or habitat areas, the project would not prevent desert tortoise from using the habitat linkage; see ***Exhibit 3.3-7, Habitat Linkages****.*

Additionally, the project site is within a Golden Eagle Conservation Area, and golden eagles' nests do occur in the project vicinity; see ***Exhibit 3.3-8, Golden Eagle Protocol-Level Survey Results****. In addition, the project site may feature bird nests. Also see discussion in Impact 3.3-4 regarding these topics. Mitigation measure have been recommended to address potential impacts to desert tortoise, golden eagle, and other nesting birds, and would serve to reduce impacts to wildlife movement and nursery sites to less than significant.*

Mitigation Measures:
The following mitigation measures are recommended:

Ord Mountain Solar Energy and Storage project:
BIO-2 *Desert Tortoise,* ***BIO-3*** *Burrowing Owl,* ***BIO-4*** *Golden Eagle Nests,* ***BIO-5*** *Nesting Birds, and* ***BIO-7*** *Worker Response Reporting System*

Calcite Substation project:

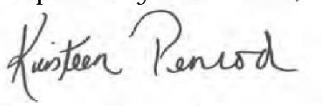
BIO-1 *Indirect Impacts to Special-Status Resources,* ***BIO-2*** *Desert Tortoise,* ***BIO-4*** *Golden Eagle Nests,* ***BIO-5*** *Nesting Birds, and* ***BIO-6*** *Mohave Ground Squirrel*
Level of Significance: *Less than significant with mitigation.*

All of the proposed mitigation for listed and sensitive wildlife species is based on avoidance and minimization. Appallingly, some of the mitigation measures only require notification of take to the agencies. How exactly does that reduce impacts to these species to "less than significant"? Mitigation Proposed for the desert tortoise in the DEIR (**BIO-2 Desert Tortoise)** is woefully inadequate**. A**voidance and minimization measures proposed for impacts to desert tortoise and its habitat include: environmental awareness training, pre-activity surveys, biological monitor, perimeter fence with desert tortoise exclusion mesh around perimeter of project, under vehicle checks, trash disposal, pets prohibited, vehicle speed 20 mph. The DEIR must disclose how much habitat would be lost for each special status species, either through direct habitat removal or complete exclusion from the desert tortoise proof perimeter fence. None of the proposed mitigation measures for the listed and sensitive species, or nesting birds directly address wildlife movement and thus these measures are NOT sufficient to reduce the impact to wildlife corridors and habitat linkages to less than significant.

Cumulative Impacts were not properly analyzed, at least as they relate to wildlife corridors and habitat linkages. A list of proposed and approved solar projects and their associated acreages and dots on a map are not sufficient to evaluate cumulative impacts to wildlife movement. The boundaries for each approved and proposed project should be included on a map and measurements should be taken and disclosed for how these projects further constrain wildlife movement corridors and habitat linkages. Compensatory mitigation, acquisition of land capable of supporting live-in and move-through habitat for multiple native species, is essential to reduce impacts.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Respectfully submitted,



Kristeen Penrod
Director
SC Wildlands
Direct 206-285-1916 Cell 626-497-6492

Literature Cited:

Averill-Murray, R.C., C.R. Darst, N. Strout, and M. Wong. 2013. Conserving population linkages for the Mojave desert tortoise (Gopherus agassizii). Herpetological Conservation and Biology 8(1):1-15.

California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California

Gray, M.E., B.G. Dickson, and B. Wallace. 2018. A range-wide model of omnidirectional connectivity for the Mojave desert tortoise (Gopherus agassizii). Conservation Science Partners, Truckee, CA.

Nussear, K.E., T.C. Esque, R.D. Inman, L. Gass, K.A. Thomas, C.S.A. Wallace, J.B. Blainey, D.M. Miller, and R.H.Webb. 2009. Modeling habitat of the desert tortoise (Gopherus agassizii) in the Mojave and parts of the Sonoran Deserts of California, Nevada, Utah, and Arizona. U.S. Geological Survey Open-File Report 2009-1102.

Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona http://oak.ucc.nau.edu/pb1/.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-44
(for entire attachment)

Attachment 3

SC Wildlands' Letter Commenting on the Draft EIR/EIS for the DRECP

dated February 19, 2015

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

Via email only February 19, 2015

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

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

The first page of the Executive Summary uses the word "transparent" to describe the DRECP's approach but the document is chock full of black box assumptions and analyses that fail to fully and accurately disclose impacts. Section I.3.4.4.3 says, "the reserve design envelope was

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

developed from a systematic and objective approach (Margules and Pressey 2000; Carroll et al. 2003; Moilanen et al. 2009) using several independent methods that were iteratively evaluated and refined". The Evaluation and Refinement is described as "exhaustive interactive GIS comparisons in collaborative mapping sessions," which isn't too terribly systematic or objective. This section also says that, "Important areas for desert tortoise, Mohave ground squirrel, and bighorn sheep were based on REAT agency interpretations of the species distribution models and recent occurrence data for these species, which correspond to the BGOs for these species"; also not systematic or objective, especially since most occurrence data is gathered when developments are proposed and thus cover only a portion of these species ranges. This section also says that "quantitative GIS analyses were conducted periodically throughout the evaluation and refinement process to quantitatively track and assess the capture of the species, natural communities, and landscape elements/processes". In order to fully and accurately disclose impacts, the actual results of those GIS analyses should be in Volume IV rather than after the results have been put through the mysterious acreage calculator.

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

Table 3. Tricolored blackbird habitat overlap with integrated Preferred Alternative

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

The California Desert Connectivity Project (Penrod et al. 2012) is briefly described in III.7.7-246. This is the ONLY place in the entire document that refers to "23 crucial linkage planning areas within the Plan Area". Actually, there were 22 linkage planning areas but nowhere are the 22 crucial linkages actually identified by name. And, nowhere are the 22 crucial linkages actually analyzed by linkage. Instead, baseline conditions of the Desert Linkage Network and impacts to the linkage network are analyzed by fictitious Ecoregion Subareas, which is relatively meaningless in the context of landscape connectivity since several of the 22 linkages span more than one Ecoregion Subarea. The DRECP repeatedly refers readers to Penrod et al. 2012 but that document is organized by linkage NOT invented Ecoregion Subareas, so it is impossible to evaluate and compare baseline conditions or impacts to the Desert Linkage Network.

The discussion in Vol. III Pages 7-248 through 7-271 provides virtually NO information beyond what is already summarized in Tables III.7-69, 7-82, and 7-96 other than vague geographical references, like "providing connectivity between mountain ranges within the ecoregion subarea" which was copy/pasted in several of the descriptions. Further, none of the Figures III.7-26 through 7-36 label any of the Landscape Blocks intended to be served by the 22 crucial linkages. Of particular note, is that none of the targeted Landscape Blocks outside of the Plan Area (e.g., Sierra Nevada, San Gabriel Mountains, San Bernardino Mountains) are labeled or depicted in Figure III.7-26 or in the subareas maps, or any other maps in the entire document. Yet, several areas of the DRECP refer to the importance of maintaining connectivity beyond the Plan boundary! Weren't PhDs, Cartographers and Copy Editors employed to develop this Plan?

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

The Preferred Alternative estimates a Plan-Wide Total Impact Area for the Desert Linkage Network of 28,000 acres (Table IV. 7-52) based on the overlap of the DFAs with the Desert Linkage Network times the proportion of the impacts from Covered Activity development anticipated with the DFA (IV.7-263). However, based on a GIS analysis of the overlap of the Integrated Preferred Alternative with the Desert Linkage Network, the actual acreage of the DFAs that overlap the Desert Linkage Network is 205,650 acres – which must be disclosed! There is also an additional 198,177 acres in the Linkage Network identified as Undesignated in the Preferred Alternative. Undesignated areas are described in the glossary as *BLM-administered lands that do not have an existing or proposed land allocation or designation. These areas would be open to renewable energy applications but would not benefit from the streamlining or CMA certainty of the DFAs.* Page II.3-381 under II.3.2.3.4.2 states: "In non-designated lands (i.e. lands not covered by the specific CMAs below), make lands available for disposal through exchange or land sale". Does this mean that nearly 200,000 acres of the Desert Linkage Network would be "available for disposal"? Shouldn't this be factored into the "Impact Analysis"? And fully disclosed in the Total Impact Acreage? Additionally, Future Assessment Areas cover 37,377 acres and Special Analysis Areas cover another 29,342 acres of the Desert Linkage Network.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

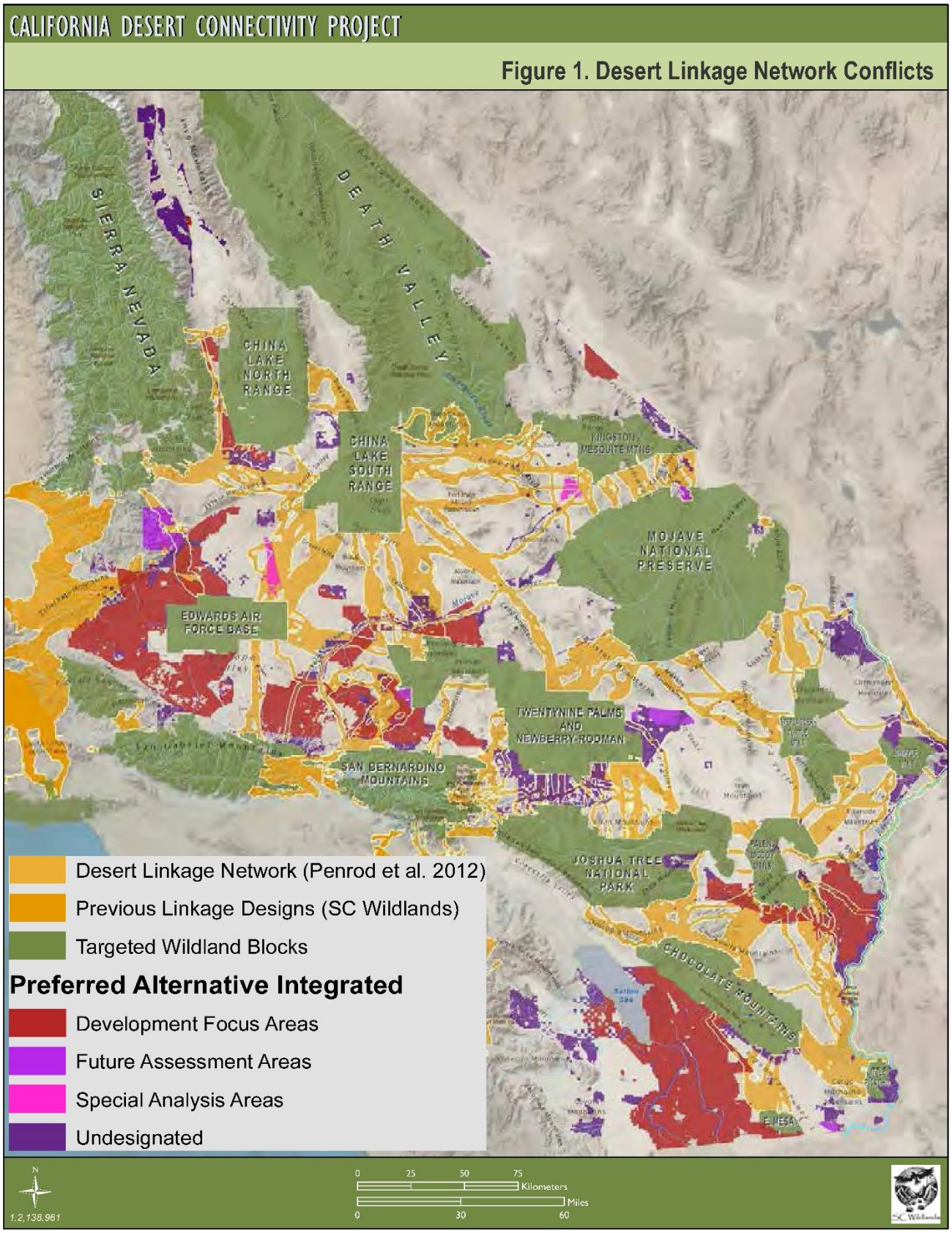
Between the DFAs, Undesignated, FAAs and SAAs areas, over 470,547 acres of the Desert Linkage Network could be open to renewable energy applications. There are NO maps that show how the DFAs, FAAs, SAAs, Variance Lands, or Undesignated Lands in the Preferred Alternative coincide with the Desert Linkage Network, not to mention transmission corridors! Volume IV is the **Environmental Consequences / Affects Analysis** yet this section repeatedly refers to maps in Volume III, "Affected Environment Figures III.7-26 through III.7-36 in Chapter III.7 of Volume III shows the desert linkage network for the Plan Area and in each ecoregion subarea". Maps must be included in Vol. IV for the entire Desert Linkage Network and each of the six subareas that would be impacted. As Figure 1 shows, several linkages are completely severed or severely constrained by DFAs, FAAs and Undesignated land.

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

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

The entire discussion describing the six different subareas of the Desert Linkage Network that "could be adversely impacted in DFAs and transmission corridors" is inadequate (IV.7-264 and 7-265). Each subarea is allocated one poorly written paragraph that vaguely describes impacts,

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

e.g., "there are DFAs in a portion of the desert linkage network". Impacts should be analyzed and described in reference to the 22 crucial linkages delineated by Penrod et al. (2012) and further evaluated by the focal species and land facet linkage networks, rather than fictitious ecoregional subareas. The DRECP should disclose where DFAs completely sever or significantly constrain a linkage. As the lead author in Penrod et al. (2012), I should not have difficulty deciphering the descriptions of impacts to the linkage network. Further, this entire discussion is meaningless without MAPS that include detailed annotation of all the areas referenced in the text. Geographical and locational references in the text should be included on the maps (see bold type in following paragraph). Typically, zoomed in maps have more annotation. The maps must clearly and accurately show where DFAs, FAAs, SAAs, Variance Lands and Undesignated lands and Transmission Corridors coincide with the Desert Linkage Network.

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

linkages and landscape linkages should automatically be included in the Reserve Design, either as ACEC, NLCS, Conservation Planning Areas, or SAAs. No Undesignated (i.e., BLM Unallocated) land within these linkages should be "disposed of" but should also be automatically included as ACEC, NLCS, SAAs, or Conservation Planning Areas in the Reserve Design.

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

Objective L1.2: Design landscape linkage corridors to be 3 miles wide where feasible, and at least 1.2 miles wide where a greater width is not feasible. COMMENT: It is feasible and desirable to design a linkage more than 1.2 miles wide for the proposed Granite Mountain Wildlife Linkage ACEC with revisions to the Apple Valley and Lucerne Valley DFAs.

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

Feature Landscape stressors and threats: Goal L3: Reduce, relative to existing conditions, adverse impacts from human activities to natural communities and Covered Species in the Plan Area.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Step-Down Biological Objective L3-A: Through the DRECP planning process, establish Development Focus Areas (DFAs) for Covered Activities in locations that would not disrupt or degrade the function of habitat linkages. COMMENT: Figure 1 clearly shows that DFAs would completely sever and disrupt and degrade the function of several linkages. Please see recommended revisions to the Reserve Design for the Pinto Lucerne Eastern Slopes below. I WISH I had time to conduct this level of detailed review for the entire Desert Linkage Network!

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

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

A Conservation Alternative for the Pinto Lucerne Valley and Eastern Slopes

Conservation Values are particularly high in the Pinto Lucerne Valley and Eastern Slopes Subarea along the Mojave River, through the linkage, and all along the slopes of the San Bernardino Mountains (Figure 2). The Conservation Values Model available on the Data Basin Gateway aggregated several biological themes including natural community diversity, rare species concentrations, concentrations of Covered Species modeled distributions, concentrations of Non-Covered Species modeled distributions, and relative quality of identified wildlife

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

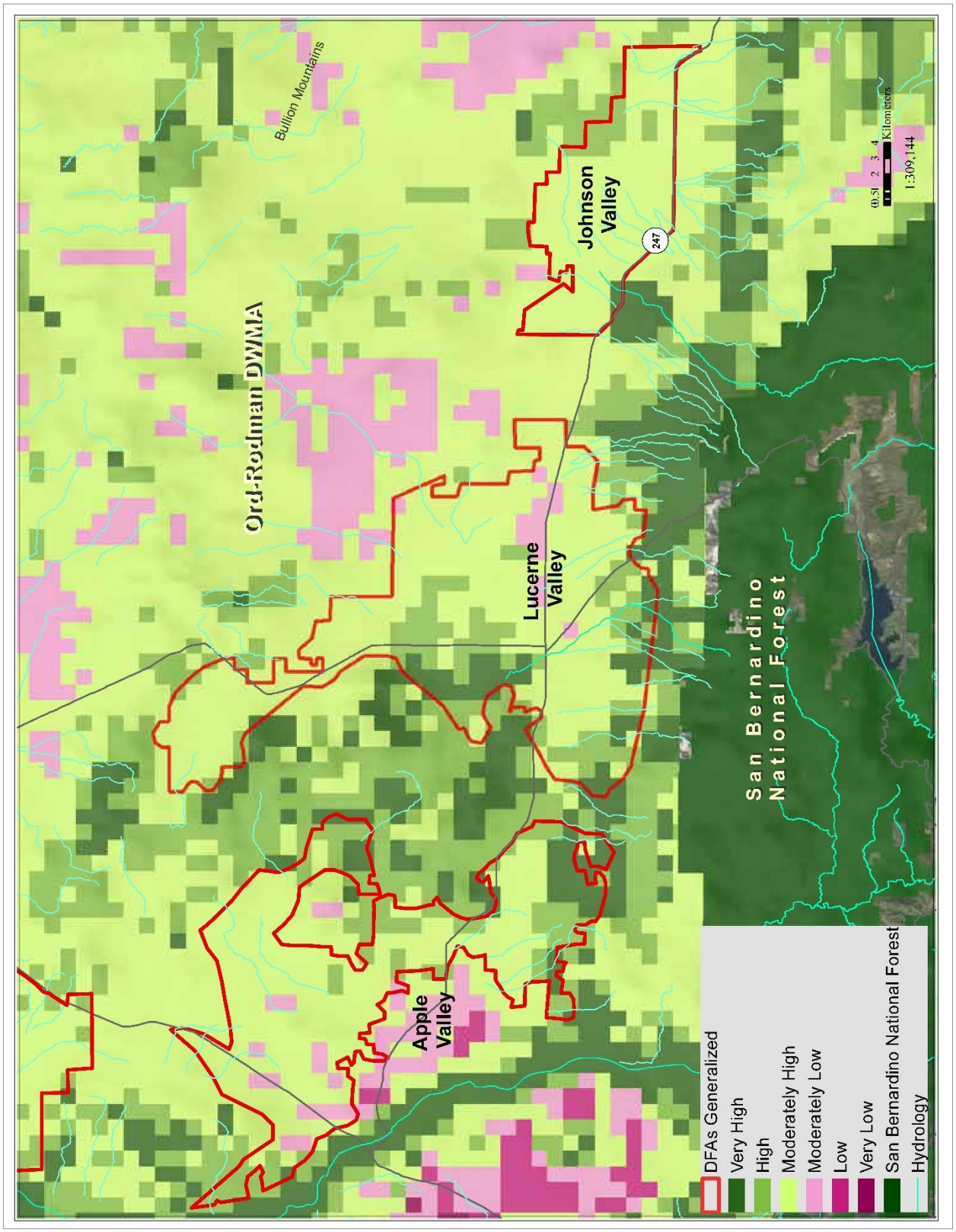


Figure 2. Coservation Values are High in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

linkages. Virtually all of the proposed Apple Valley, Lucerne Valley and Johnson Valley DFAs scored Moderately High to Very High with very few pixels scoring Moderately Low and no pixels scoring Low or Very Low. Section (II.3, Page 347), describes the Pinto Lucerne Valley and Eastern Slopes Subarea as, "some of the most diverse and threatened habitats in the California desert".

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

While the Mojave Riverbed itself is identified as a Conservation Planning Area for much of its length, virtually all of the uplands are proposed as either DFAs or Undesignated land that could be available for "disposal" The Mojave River flows from the South Coast Ecoregion through much of the Mojave Ecoregion. It is one of three major rivers in the desert and the only one that traverses from the West to the East Mojave, covering a distance of roughly 80 miles - it is a key wildlife movement corridor. The Mojave River is also essential habitat for several listed and sensitive species with portions of the river designated as critical habitat for southwestern willow flycatcher. According to the USFWS (1986), over 200 species of migratory birds have been recorded in the Mojave River, near the Mojave River Forks Dam Water Conservation Project. These hundreds of migratory bird species use the Mojave River, Deep Creek, mountain lakes, riparian drainages and seeps and springs throughout desert facing slopes of the San Bernardino and San Gabriel Ranges. No DFAs should be sited within the 500 year flood plain and all Undesignated areas along the Mojave River should be included in the Reserve Design to ensure wildlife have access to this essential resource, which will be even more indispensible with climate change.

The hydrology of the northern slopes of the San Bernardino Mountains is not just an essential resource for the flora and fauna. It is also extremely important to recharging groundwater basins in Apple, Lucerne and Johnson Valleys. Massive renewable energy projects use enormous

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

amounts of water both in construction and maintenance, which could further exacerbate already severely distressed overdraft conditions in these groundwater basins.

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

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

These refinements would benefit 18 of the Covered Species. According to the DRECP Composite Ecological Baseline, each pixel in the refinements to the Apple Valley DFA (573 pixels) benefit 4 to 11 Covered Species (MEAN 6.9 species), with a total species count of 3,959 in the 573 pixels. Each pixel in the refinements to the Lucerne Valley DFA (787 pixels) benefit 2 to 10 Covered Species (MEAN 6.45 species), with a total species count of 5,080 in the 787 pixels. Each pixel in the Johnson Valley DFA (428 pixels) benefit 4 to 7 Covered Species (MEAN 5.48 species), with a total species count of 2,346 in the 428 pixels.

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

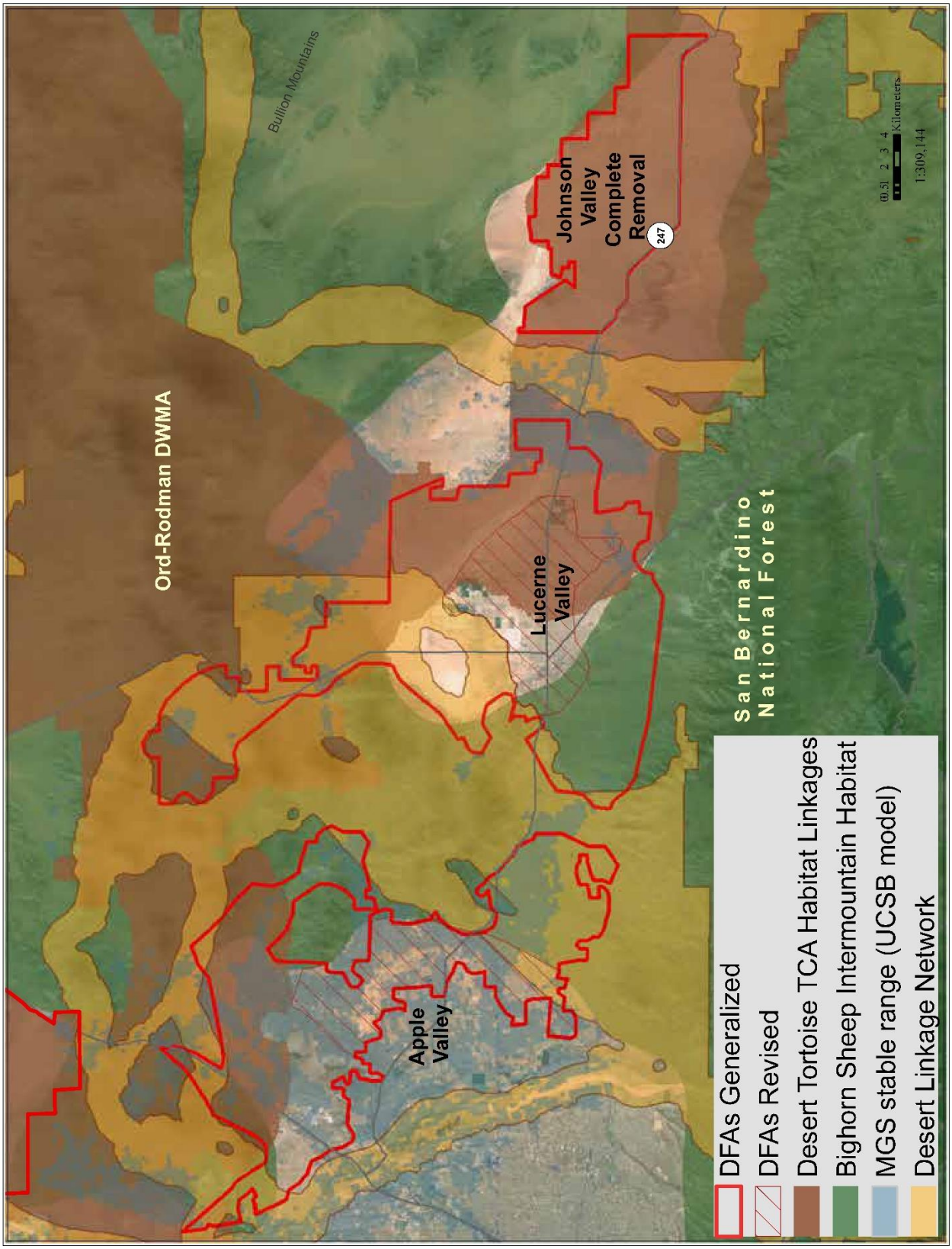


Figure 3. Refinements to and Removal of DFAs in the Pinto Lucerne Valley and Eastern Slopes Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

The Twentynine Palms Newberry Rodman-San Gabriel Connection and the Twentynine Palms Newberry Rodman-San Bernardino Connection of the Desert Linkage Network (Penrod et al. 2012) overlap one another in the area of the proposed Apple Valley and Lucerne Valley DFAs. Figure 4 of the Desert Linkage Network in this region also includes the Focal Species Linkage

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

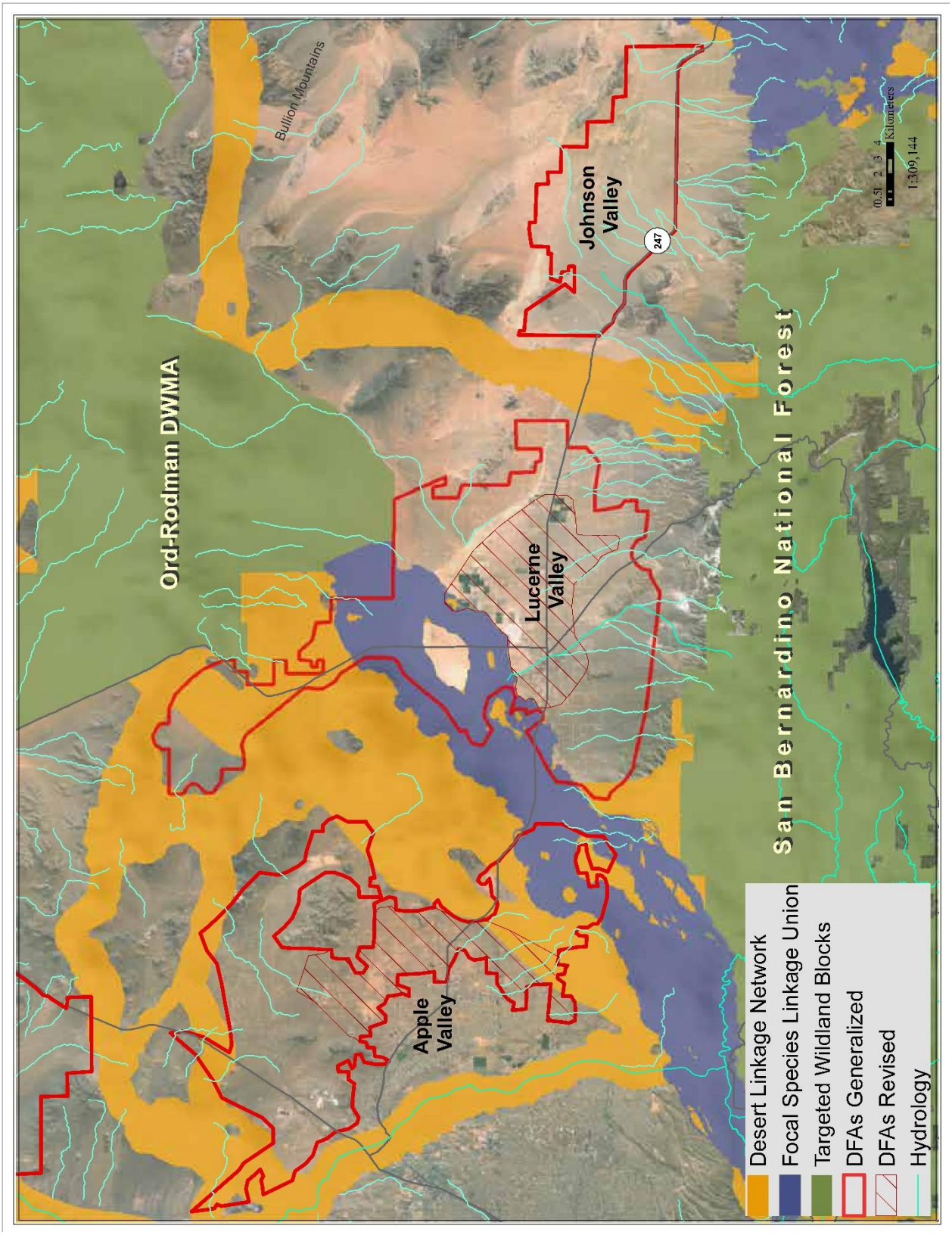


Figure 4. Desert Linkage Network Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

Figure 5a depicts Desert Bighorn Sheep - Intermountain & Unfiltered Core Habitat (California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California) in relation to the Preferred Alternative in this subarea. The Desert Bighorn Sheep Mountain Habitat identifies historic, current, and potential core habitat, while the Intermountain Habitat represents the intermountain, lower slope, valley bottom habitat used by desert bighorn sheep to move between mountain habitat. CDFW, also the lead agency on the NCCP, mapped an intermountain connection between San Bernardino National Forest (SBNF) and Ord-Rodman that has a minimum width of roughly 7.8 miles. Bighorn sheep mountain habitat and intermountain habitat largely overlap with the Desert Linkage Network. The upper arm of the Lucerne Valley DFA disrupts intermountain bighorn habitat and should be reconfigured. Further the FAA includes bighorn sheep mountain habitat in close proximity to mountain habitat in the Granite Mountain Linkage and should be included in the Newberry Rodman ACEC and NLCS. Finally, several areas of bighorn sheep mountain habitat are identified as Undesignated and available for "disposal". Bighorn mountain habitat along the perimeter of the proposed Granite Mountain and Northern Lucerne Wildlife Linkage ACECs should be included in the Reserve Design. Further, Undesignated land on the Ridgeline and slopes of the San Bernardino Mountains between the Juniper Flats NLCS and the Carbonate

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

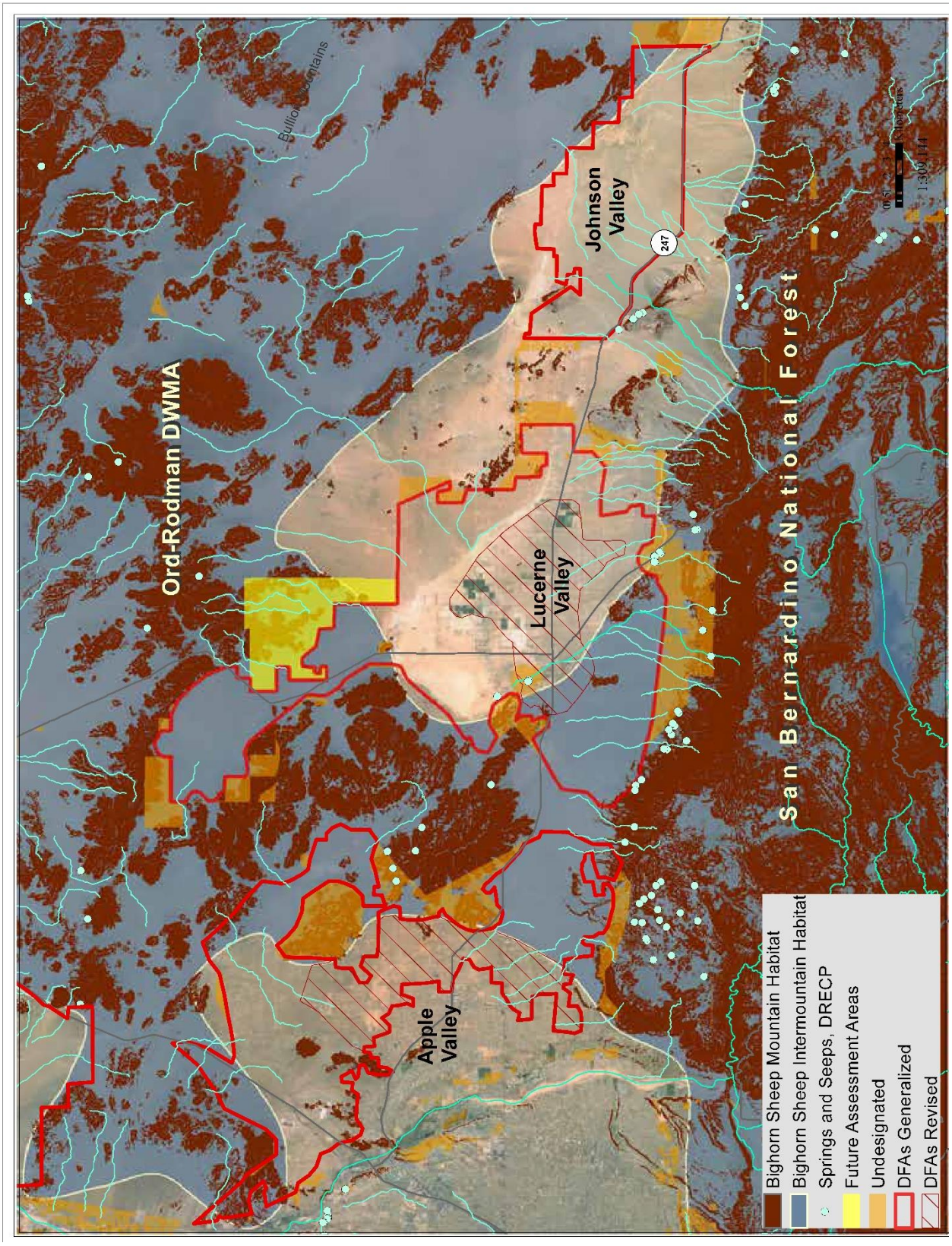


Figure 5a. Bighorn Sheep Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Endemic Plants NLCS (roughly 15 additional miles is the Grapevine Canyon Recreation Area also known as Juniper Flats by the BLM) should also be included in the Reserve Design (Figure 5b), consistent with Step-Down Biological Objective DBSH-B and because there are many springs, seeps, significant riparian canyons, alluvial fans (i.e. rare piedmont fans), and washes in this area essential for bighorn sheep and numerous other species. This area is currently designated as Undesignated in the Preferred Alternative.

This land known as the Juniper Flats subregion by the BLM stretches from the Mojave River to the Cushenbury Grade (Figure 5b). The area is continuous with the San Bernardino National Forest, which encompasses over 600,000 acres and boasts over 600 significant cultural sites. There are several unusual and unique plant assemblages here, with oak woodlands intermixed with pinyon-juniper and Joshua trees and spectacular rock outcroppings. The area is extremely close to the Pacific Crest National Scenic Trail and Deep Creek, which has been nominated as a National Wild and Scenic river as part of the Feinstein Bill. The Juniper Flats area has been submitted to the BLM for consideration for NLCS designation and over 25 NGO's and individuals have endorsed this effort. SC Wildlands strongly supports an NLCS designation for this remarkable area.

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

Step-Down Biological Objective DBSH-B: Protect, maintain, and manage for the duration of the NCCP on BLM LUPA conservation designation lands and prioritize for conservation on non-BLM lands substantial representative desert bighorn sheep habitat in the following areas:
o Newberry, Ord, and Rodman Mountains
o North San Bernardino Mountains
o El Paso Mountains
o **Corridors** between the North San Bernardino Mountains and Newberry Mountains
o Corridors between the San Gorgonio Wilderness Area and the western extremity of the Little San Bernardino Mountains
o Portions of the valley habitats between the Palen-McCoy Mountains, Chuckwalla Valley between the Eagle Mountains and the Chuckwalla Mountains
o Portions of the valley habitats between the Little Chuckwalla Mountains, Palo Verde Mountains, McCoy Mountains, Mule Mountains
Comment: The Granite Mountains Wildlife Linkage ACEC as currently proposed is a "corridor" to the south of SR-18 but with our proposed modifications to the DFAs it will be a landscape-level linkage.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

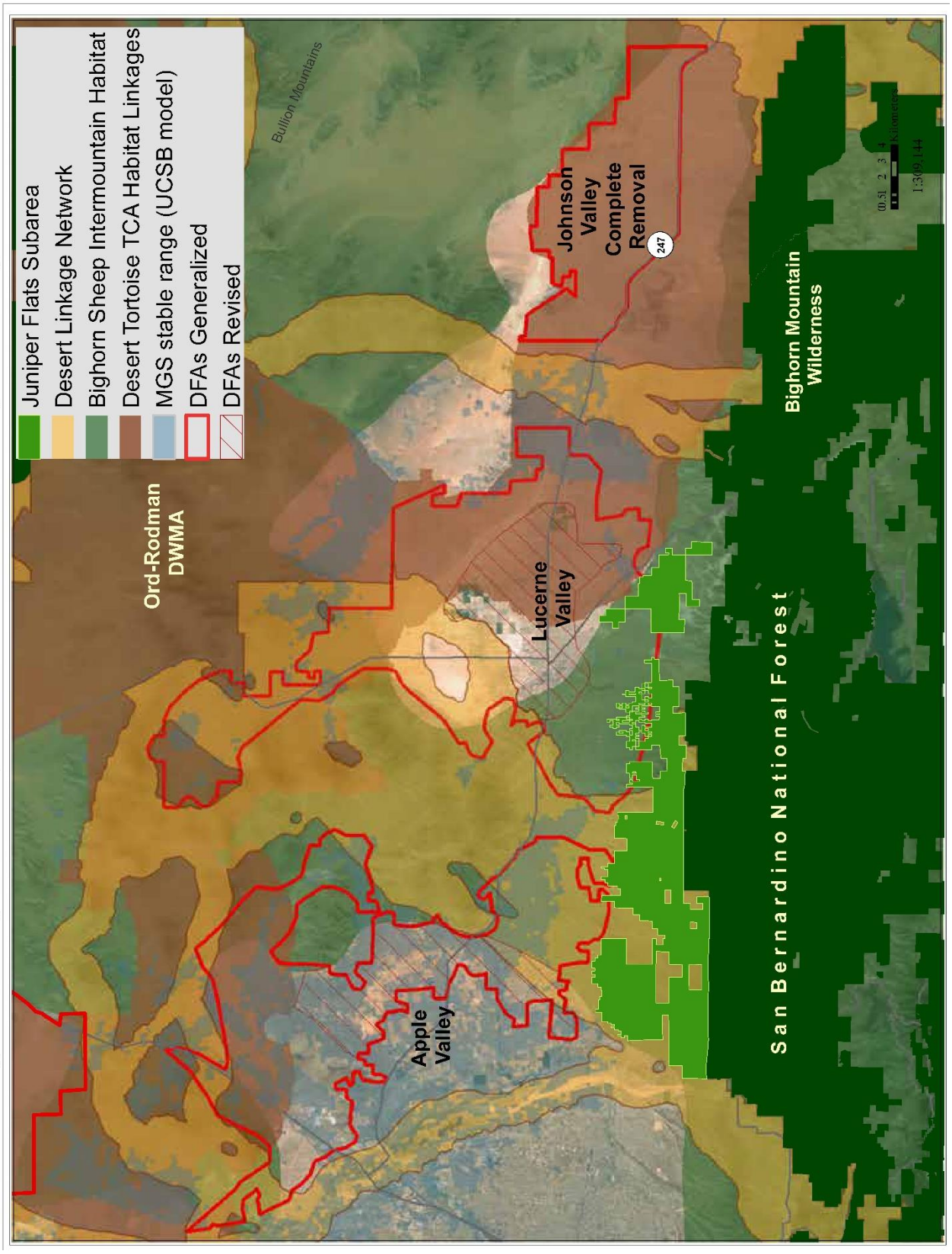


Figure 5b. Juniper Flats Proposed NLCS in Relation to Composite of Key Drivers

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Conservation and Management Actions for bighorn sheep are pretty slim and the DRECP says, "Within DFAs on BLM-administered lands Desert Bighorn Sheep CMAs would be implemented to the extent feasible and allowable under existing permits, leases, and allotment plans". Why only to "the extent feasible" rather than to the maximum extent possible? Does this mean CMAs would not be implemented on lands not administered by BLM within the DFAs?

- **AM-DFA-ICS-34:** Access to, and use of, designated water sources will not be affected by Covered Activities in designated and new utility corridors.
- **AM-DFA-ICS-35:** Transmission projects and new utility corridors will minimize effects on access to, and use of, designated water sources.

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

One of the primary goals for the Desert Tortoise Linkages (Goal DETO2) is to "Maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas. Emphasize inclusion of high value contiguous habitats pursuant to Nussear et al. (2001) and avoidance of disturbance in habitat with high desert tortoise habitat potential (see Figure C-35)". It is Nussear et al. 2009, not 2001! Nussear et al. (2009) identifies much of the Apple Valley, Lucerne Valley and Johnson Valley DFAs as highly suitable habitat for tortoise (Figure 6).

There are several areas where the Lucerne Valley and Johnson Valley DFAs conflict with two desert tortoise linkages in the Western Mojave Recovery Unit, Fremont-Kramer to Ord-Rodman Linkage and the Ord-Rodman to Joshua Tree linkage (Figure 7). The upper arm of the Lucerne Valley DFA coincides with intact desert tortoise habitat in the Fremont Kramer to Ord-Rodman

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

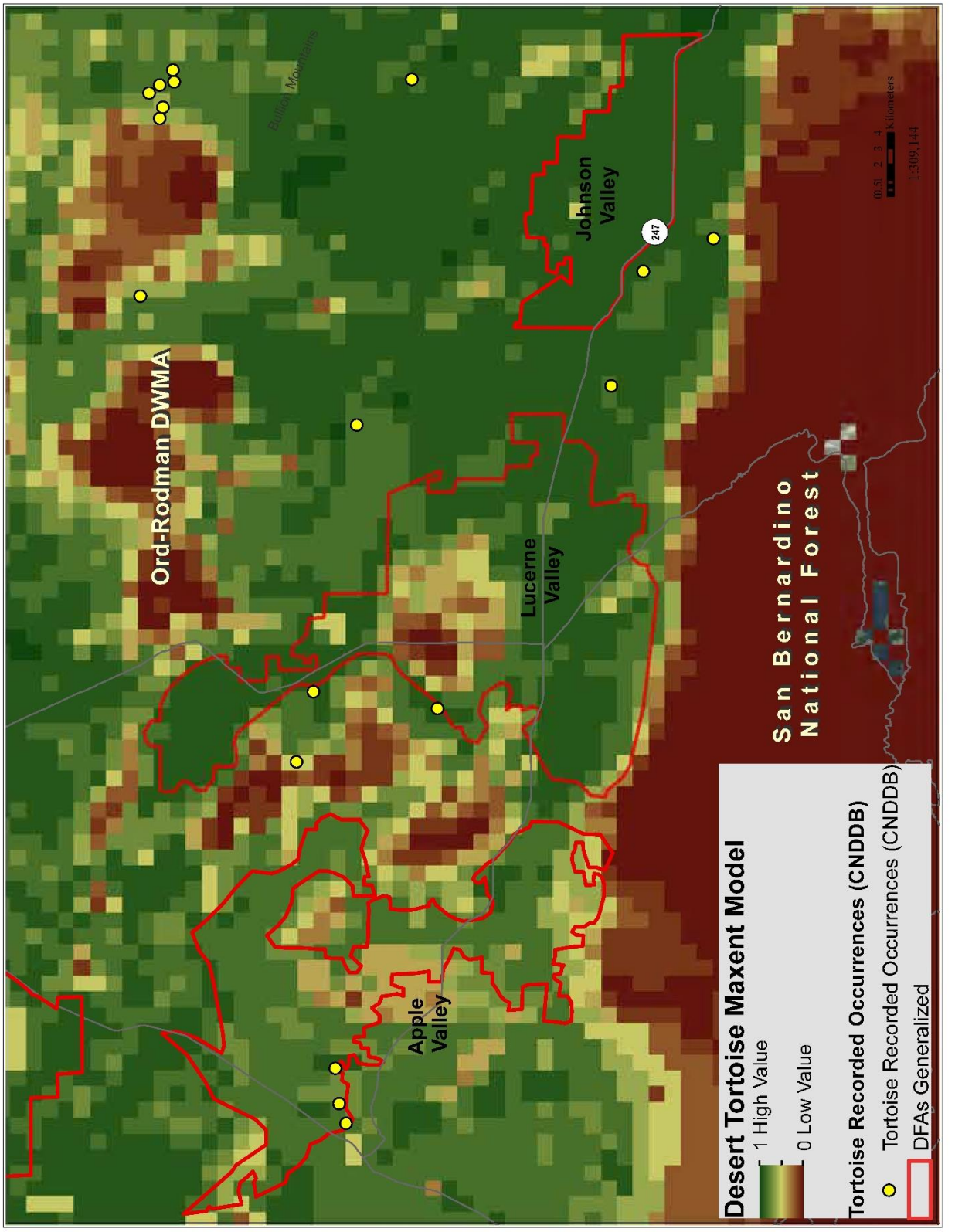


Figure 6. High Value Desert Tortoise Habitat in the Pinto Lucerne Valley Eastern Slopes (Nussear et al. 2009)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

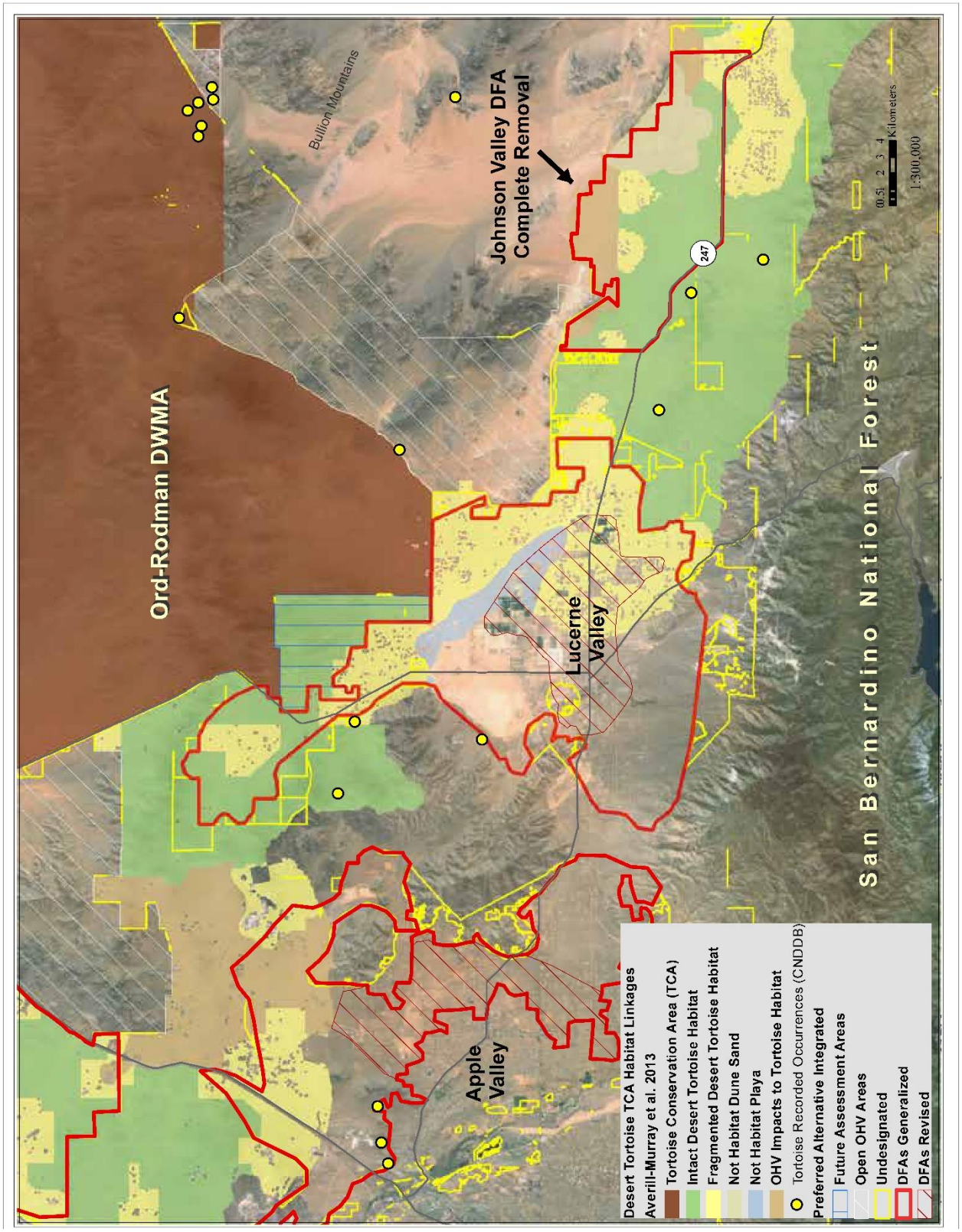


Figure 7. Desert Tortoise TCA Linkage Conflicts in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

AM-DFA-ICS-6 Comment (1): A population viability analysis (PVA) should have been conducted Plan-Wide for desert tortoise as part of the DRECP process. This information should have been presented in Vol. III to assess existing recovery efforts under baseline conditions and in Vol. IV to compare the potential impacts of habitat loss proposed under each Alternative. AM-DFA-IC-6 refers to "the maintenance of long term viable desert tortoise populations within the affected linkage". While each of the desert tortoise linkages identified in Figure H-7 provide live-in and move-through habitat, these linkage are intended to provide connectivity between the TCAs to maintain the viability of the entire population. As stated in Section III.7.6.1.1, " Linkage habitat are important areas identified by Recovery Implementation Teams, such as

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

important genetic linkages identified by Hagerty et al. 2010 (cited in USFWS 2011a) that are important to maintaining the species' distribution throughout its range". A PVA for a "linkage population" doesn't make sense.

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

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

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

The Johnson Valley DFA as currently proposed (Figures 7 and 8) would severely compromise the function of the Or-Rodman to Joshua Tree linkage. This proposed DFA is roughly 27,258 acres, much of it Intact Desert Tortoise Habitat as identified in Attachment B to Appendix D and Figures C-35 and C-36. The area of intact habitat in the linkage currently ranges in width from roughly 5 to 8 miles wide. The proposed Johnson Valley DFA would reduce the width of the linkage to about 3 miles wide in this stretch of the linkage. The average home range size for desert tortoise in the Western Mojave Recovery Unit is 125 acres (USFWS 1994, Boarman 2002). Would this significant reduction of intact habitat allow for "the maintenance of long-term

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

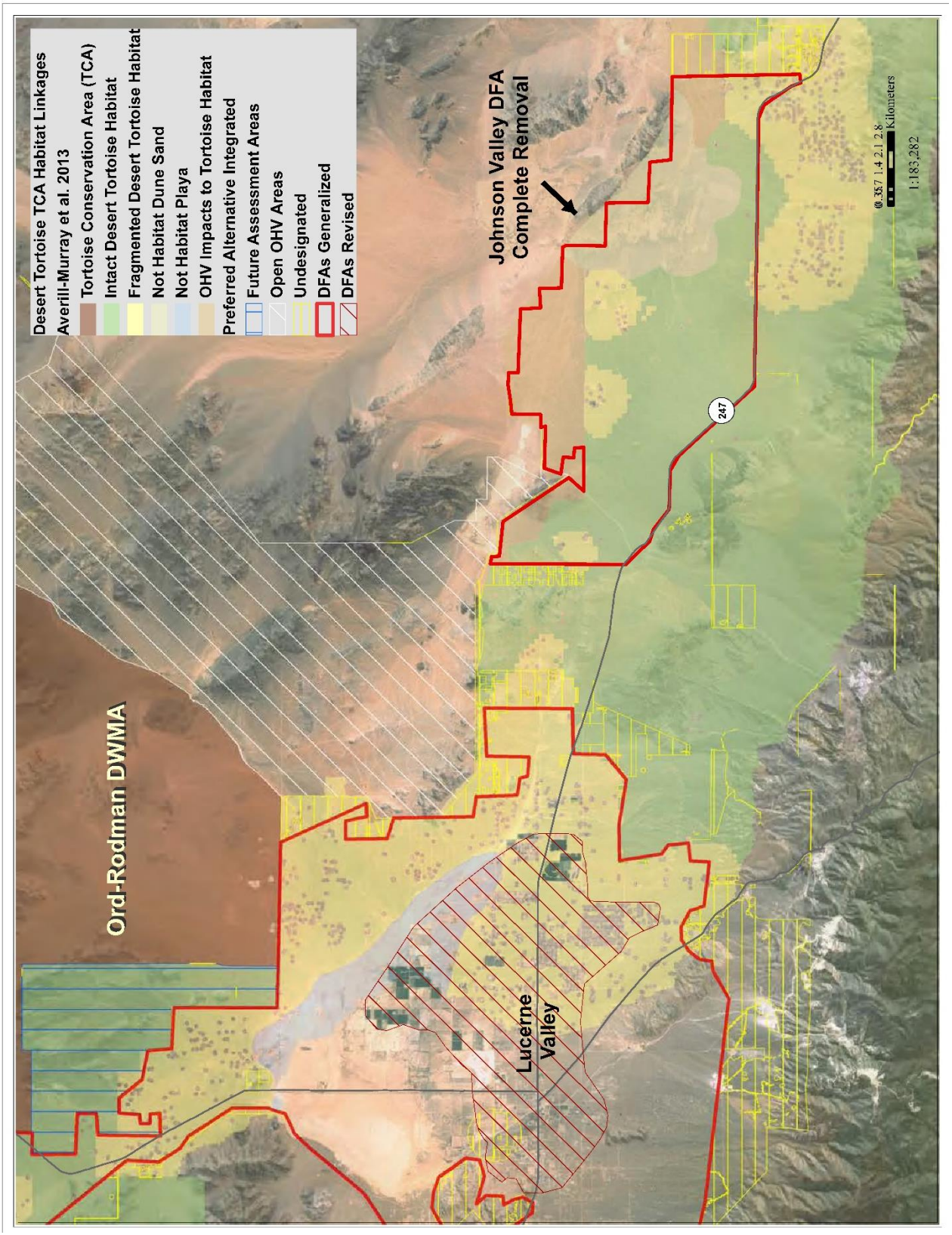


Figure 8. Desert Tortoise Ord-Rodman to Joshua Tree Linkage Conflicts

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

viable desert tortoise populations within the affected linkage (AM-DFA-ICS-6)"? This entire DFA is identified as highly suitable in the desert tortoise Maxent model (Nussear et al.2009) and the great majority of it is BLM land. This linkage must not be written off, especially since one of the overarching Biological Goals is to, "Preserve, restore, and enhance natural communities and ecosystems including those that support Covered Species within the Plan Area". We recommend complete removal of this DFA to avoid this linkage in order to "maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas" and meet the intent of Goal DETO2 (Desert Tortoise Linkages).

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

o Pinto Wash Linkage
*ADD Ord-Rodman to Joshua Tree Linkage
*ADD Fremont Kramer to Ord-Rodman Linkage

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

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

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

Step-Down Biological Objective DETO-C: Establish long-term conservation to protect, manage, and enhance habitat value for 266,000 acres of desert tortoise habitat that contributes to the DRECP NCCP reserve design in and around the following areas: Desert Tortoise Research Natural Area, Fremont-Kramer Desert Wildlife Management Area and Critical Habitat Unit, Ord-Rodman to Joshua Tree Linkage, Fremont Kramer to Ord-Rodman Linkage, Pinto Wash Linkage, and Chemehuevi to Chuckwalla Linkage. COMMENT: FAA just outside of Ord-Rodman ACEC/NLCS is intact desert tortoise habitat, mountain and intermountain habitat for bighorn sheep, part of land facet linkages and habitat for numerous focal species in the Desert

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

linkage Network, and other Covered Species (e.g., golden eagle, burrowing owl). In the Overview of the Preferred Alternative II.3.1.1., it says "The current known value of these areas for ecological conservation is moderate to low". Please! The current known value of this FAA for ecological conservation is very high.

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

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

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

Summary: Under the current pace of development, natural resource agencies need to make near-term decisions in the face of existing land use pressures as well as long-term change. The one thing that is certain about climate change is that it is highly uncertain. Penrod et al. (2012) did not design corridors using complex models of future climate and biotic responses to climate change. Such an approach uses 4 models, with outputs of each model used as input to the next model. Specifically modeled future emissions of CO2 (1st model) drive global circulation models (2nd) which are then downscaled using regional models (3rd) to predict future climate. Then climate envelope models (4th) are used to produce maps of the expected future distribution of species. We avoided this approach for two reasons: (1) Each of the 4 models involves too much uncertainty, which is compounded from model to model and from one predicted decade to the next. In 1999 the IPCC developed 7 major scenarios of possible CO2 emissions during 2000-2011. The total emissions over the century vary by a factor of 6 among scenarios. *Actual emissions during 2000-2010 were higher than the most pessimistic scenario*. For a single emission scenario, different air-ocean global circulation models produce markedly different climate projections (Raper & Giorgi 2005). Finally climate envelope models may perform no better than chance (Beale et al. 2008). Because these sophisticated models have not simulated the large shifts during the last 100,000 years of glacial oscillations, Overpeck et al. (2005:99) conclude the "lesson for conservationists is not to put too much faith in simulations of future regional climate change" in designing robust conservation strategies. (2) These models produce outputs at a spatial resolution too coarse to support decision making in the California desert. The downscaled climate projections have minimum cells sizes measured in square kilometers. Penrod et al. (2012) used an alternative "land facets" approach to design climate-robust linkages that maximize continuity of the enduring features (topographic elements such as sunny lowland flats,

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

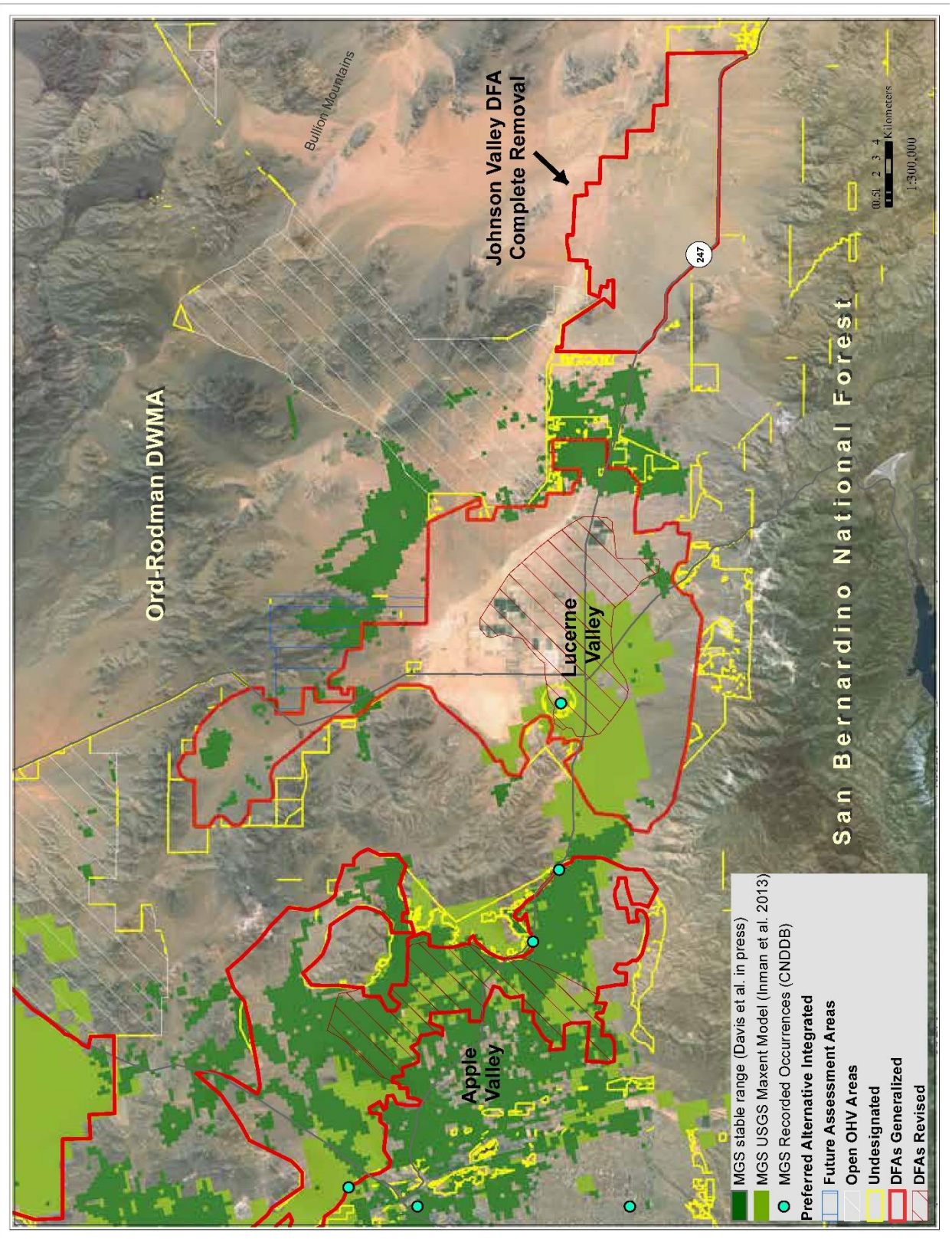


Figure 9. Mohave Ground Squirrel Conflicts in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

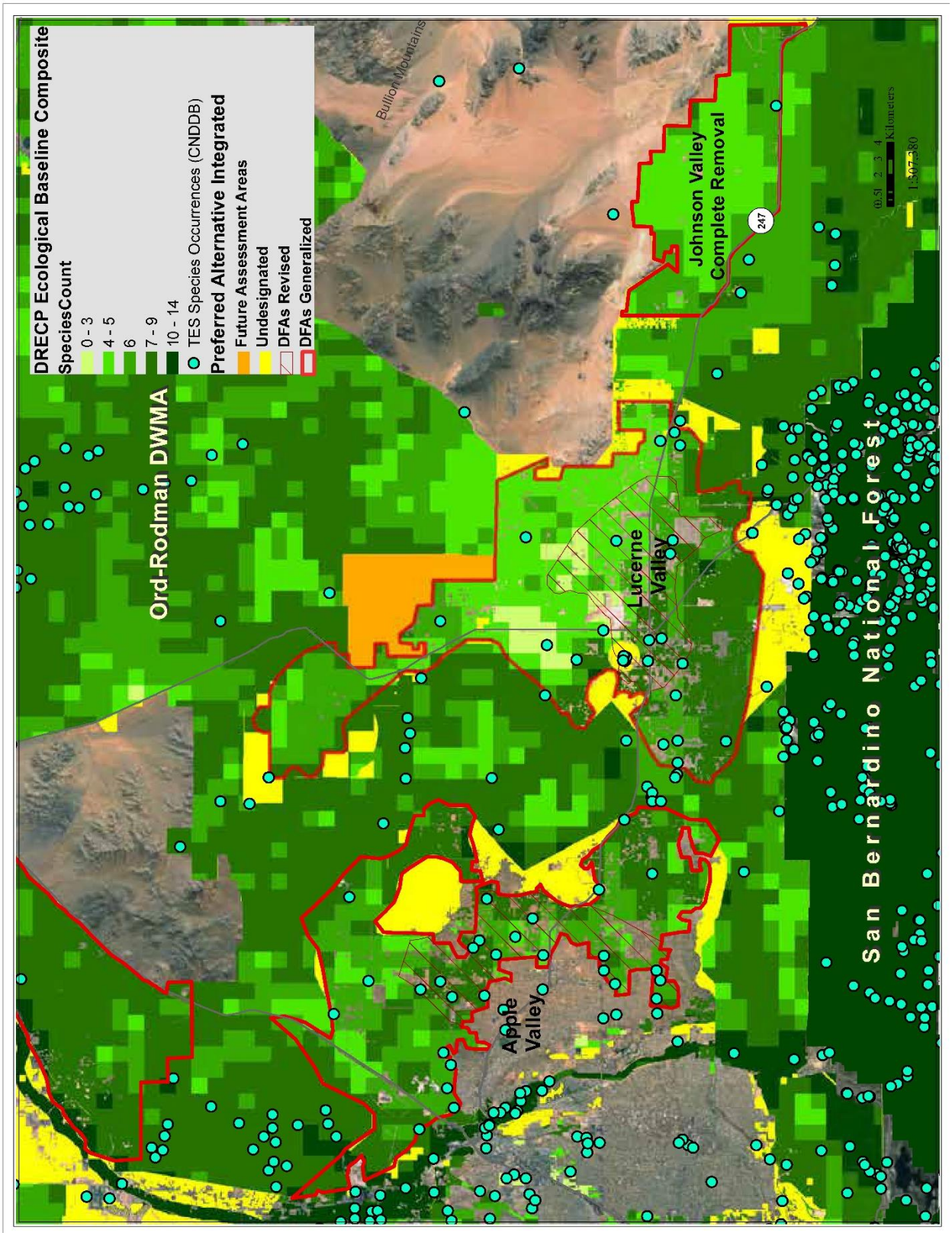


Figure 10. Covered Species Count in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

or steep north-facing slopes) that will interact with future climate to support future biotic communities. Enduring features reflect the stable state factors, namely topography, geology, and time. The uncertainties of the land facets approach are almost certainly less than the 6-fold uncertainty in emission scenarios multiplied by the uncertainty in general circulation models multiplied by the uncertainty in regional downscaling multiplied by the uncertainty in climate envelope models.

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

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

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

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

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

Respectfully Submitted,
Kristeen Penrod
Director, SC Wildlands
kristeen@scwildlands.org
Direct line: 206/285-1916

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Literature Cited

Averill-Murray, R.C., C.R. Darst, N. Strout, and M. Wong. 2013. Conserving population linkages for the Mojave desert tortoise (Gopherus agassizii). Herpetological Conservation and Biology 8(1):1-15.

Beale, C. M., J. J. Lennon, and A. Gimona. 2008. Opening the climate envelope reveals no macroscale associations with climate in European birds. Proceedings of the National Academy of Sciences 105:14908-14912.

Beier, P., and B. Brost. 2010. Use of land facets to plan for climate change: conserving the arenas, not the actors. Conservation Biology 24:701-710.

Boarman, W. I. 2002. Desert tortoise (Gopherus agassizii). In Boarman, W. I. and K. Beaman (eds), The sensitive plant and animal species of the Western Mojave Desert. U. S. Geological Survey, Western Ecological Research Center, Sacramento, Ca.

California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California

California Natural Resources Agency. 2014. Safeguarding California: Reducing Climate Risk An update to the 2009 California Climate Adaptation Strategy.

California Natural Resources Agency. 2009. 2009 California Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008

Davis, F. et al. *In Press*. Cumulative Biological Impacts Framework for Solar Energy in the California Desert.

Field, C.B., G.C. Daily, S. Gaines, P.A. Matson, J. Melack, and N.L. Miller. 1999. Confronting climate change in California: ecological impacts on the Golden State. Union of Concerned Scientists and Ecological Society of America, Washington D.C.

Heller, N. E. and E. S. Zavaleta. 2009. Biodiversity management in the face of climate change: a review of 22 years of recommendations. Biological Conservation 142:14-32.

Hunter, Jr., M. L., G. L. Jacobson, Jr., and T.Webb, III. 1988. Paleoecology and the coarse-filter approach to maintaining biological diversity. Conservation Biology 2:375-385.

Inman, RD, Esque TC, Nussear KE, Leitner P, Matocq MD, Weisberg PJ, Diltd TE, Vandergast AG. 2013. Is there room for all of us? Renewable energy and Xerospermophilus mohavensis. Endang Species Res 20:1-18.

Notaro, M., A. Mauss, and J.W. Williams. 2012. "Projected Vegetation Changes for the American Southwest: Combined Dynamic Modeling and Bioclimatic-Envelope Approach." *Ecological Applications* 22:1365–1388.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Nussear, K.E., T.C. Esque, R.D. Inman, L. Gass, K.A. Thomas, C.S.A. Wallace, J.B. Blainey, D.M. Miller, and R.H.Webb. 2009. Modeling habitat of the desert tortoise (Gopherus agassizii) in the Mojave and parts of the Sonoran Deserts of California, Nevada, Utah, and Arizona. U.S. Geological Survey Open-File Report 2009-1102.

Overpeck, J., J. Cole, and P. Bartlein. 2005. A 'paleoperspective' on climate variability and change. Pages 91-108 in T. E. Lovejoy and L. Hanna, editors. Climate change and biodiversity. Yale University Press, New Haven, Connecticut.

Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona http://oak.ucc.nau.edu/pb1/.

Penrod, K., C. Cabañero, P. Beier, C. Luke, W. Spencer, and E. Rubin. 2005. South Coast Missing Linkages Project: A Linkage Design for the San Bernardino-Granite Connection. South Coast Wildlands, Idyllwild, CA. www.scwildlands.org.

Raper, S. C. B., and F. Giorgi. 2005 Climate change projections and models. Pages 199-210 in T. E. Lovejoy and L. Hanna, editors. Climate change and biodiversity. Yale University Press, New Haven, Connecticut.

Sazaki, M., W. I. Boarman, G. Goodlet, and T. Okamoto. 1995. Risk associated with long distance movements by desert tortoises. Proceedings of the 1994 Desert Tortoise Council Symposium 1995:33-48.

Seavy, N.E., T. Gardali, G.H. Golet, F.T. Griggs, C.A. Howell, R. Kelsey, S.L. Small, J.H. Viers and J.F. Weigand. 2009. Why Climate Change Makes Riparian Restoration More Important than Ever: Recommendations for Practices and Research. Ecological Restoration 27(3): 330-338.

U.S. Fish and Wildlife Service. 1994. Desert tortoise (Mojave population) recovery plan. Portland,
Oregon.

UCSB. 2013. Mojave ground squirrel Species Distribution Models.

DRECP APPROACH Margules and Pressey 2000; Carroll et al. 2003; Moilanen et al. 2009

U.S. Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the desert tortoise (Gopherus agassizii). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. 222pp.

1986. USFWS. Fish and Wildlife Coordination Act Report Mojave River Forks Dam Water Conservation Project. Prepared for Army Corps of Engineers. Prepared by Ray Bransfield, US Fish and Wildlife Service.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-45
(for entire attachment)

Attachment 4

SC Wildlands' Report for the Alliance for Desert Preservation

dated February 23, 2015

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

Via email only

February 23, 2015

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

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

Table 3. Tricolored blackbird habitat overlap with integrated Preferred Alternative

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

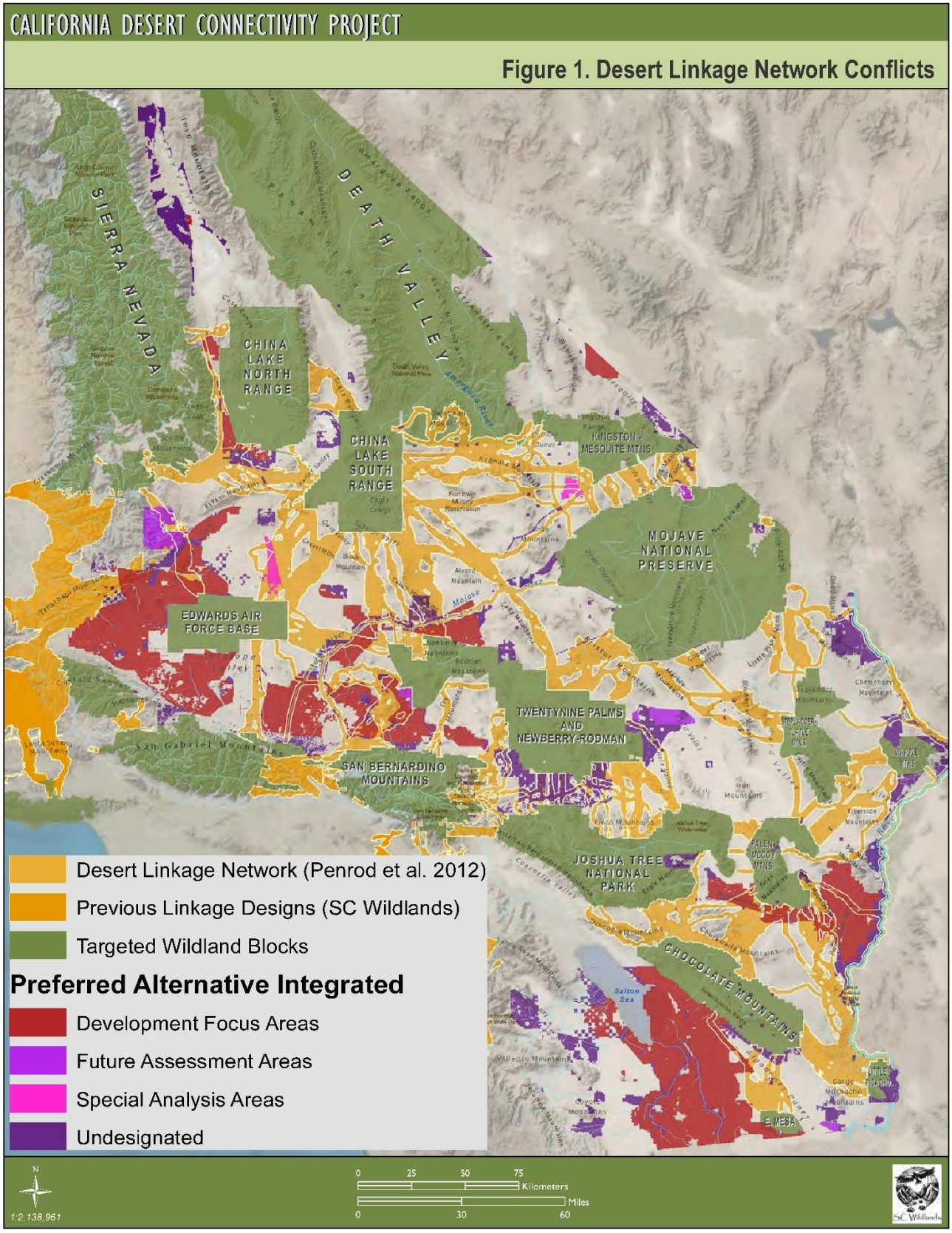
how the DFAs, FAAs, SAAs, Variance Lands, or Undesignated Lands in the Preferred Alternative coincide with the Desert Linkage Network, not to mention transmission corridors! Volume IV is the **Environmental Consequences / Affects Analysis** yet this section repeatedly refers to maps in Volume III, "Affected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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

A Conservation Alternative for the Pinto Lucerne Valley and Eastern Slopes

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

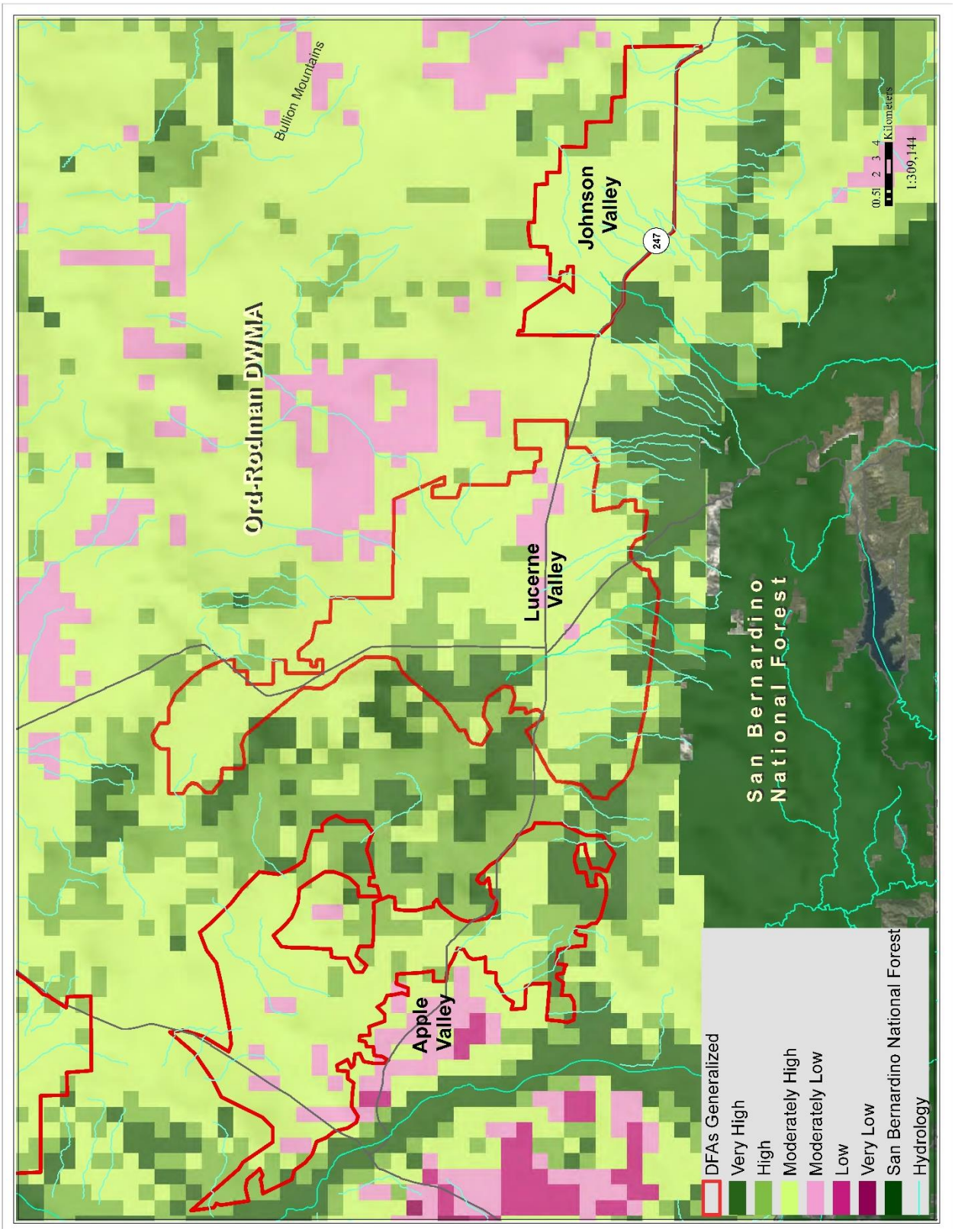


Figure 2. Coservation Values are High in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

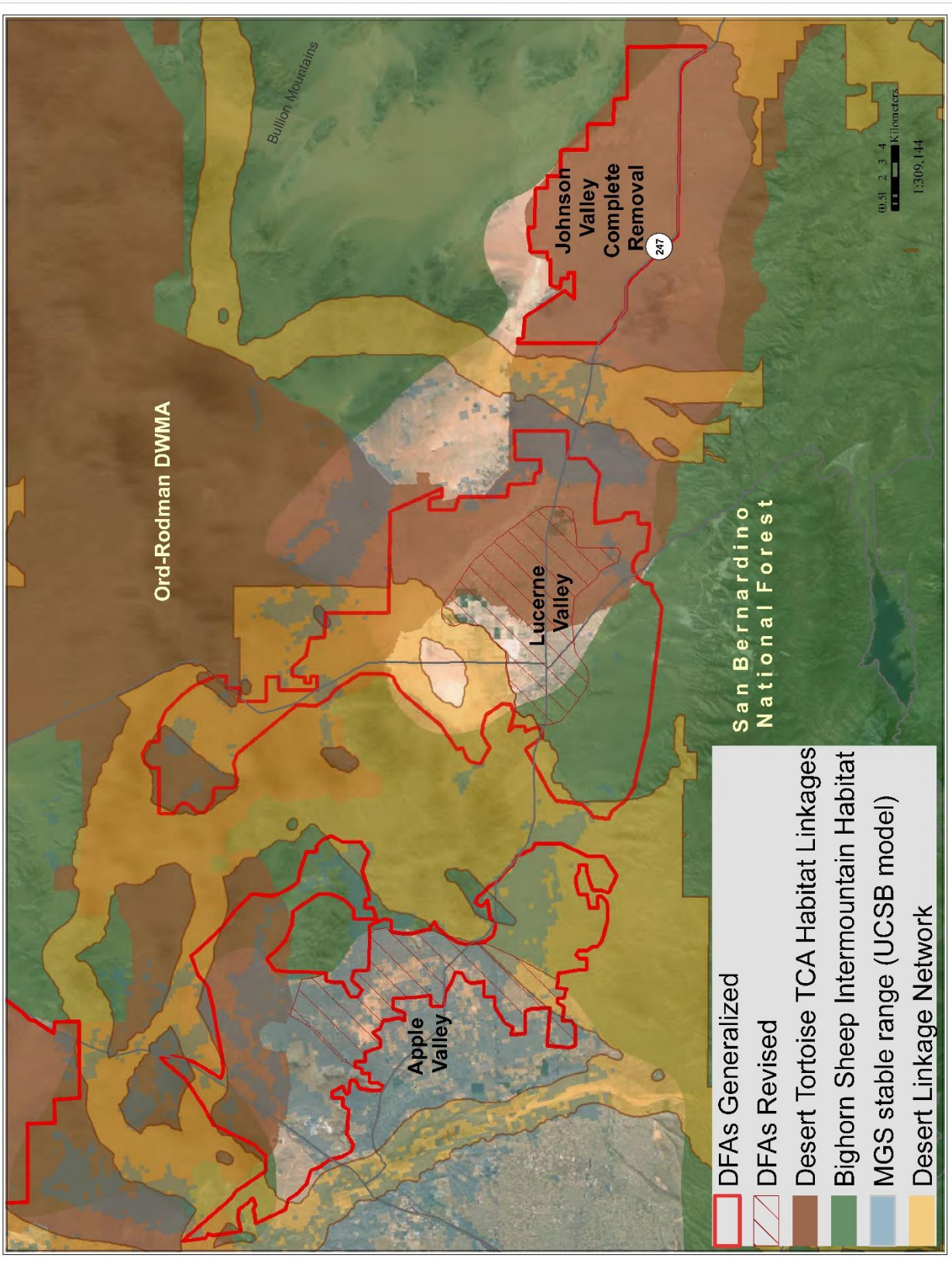


Figure 3. Refinements to and Removal of DFAs in the Pinto Lucerne Valley and Eastern Slopes Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

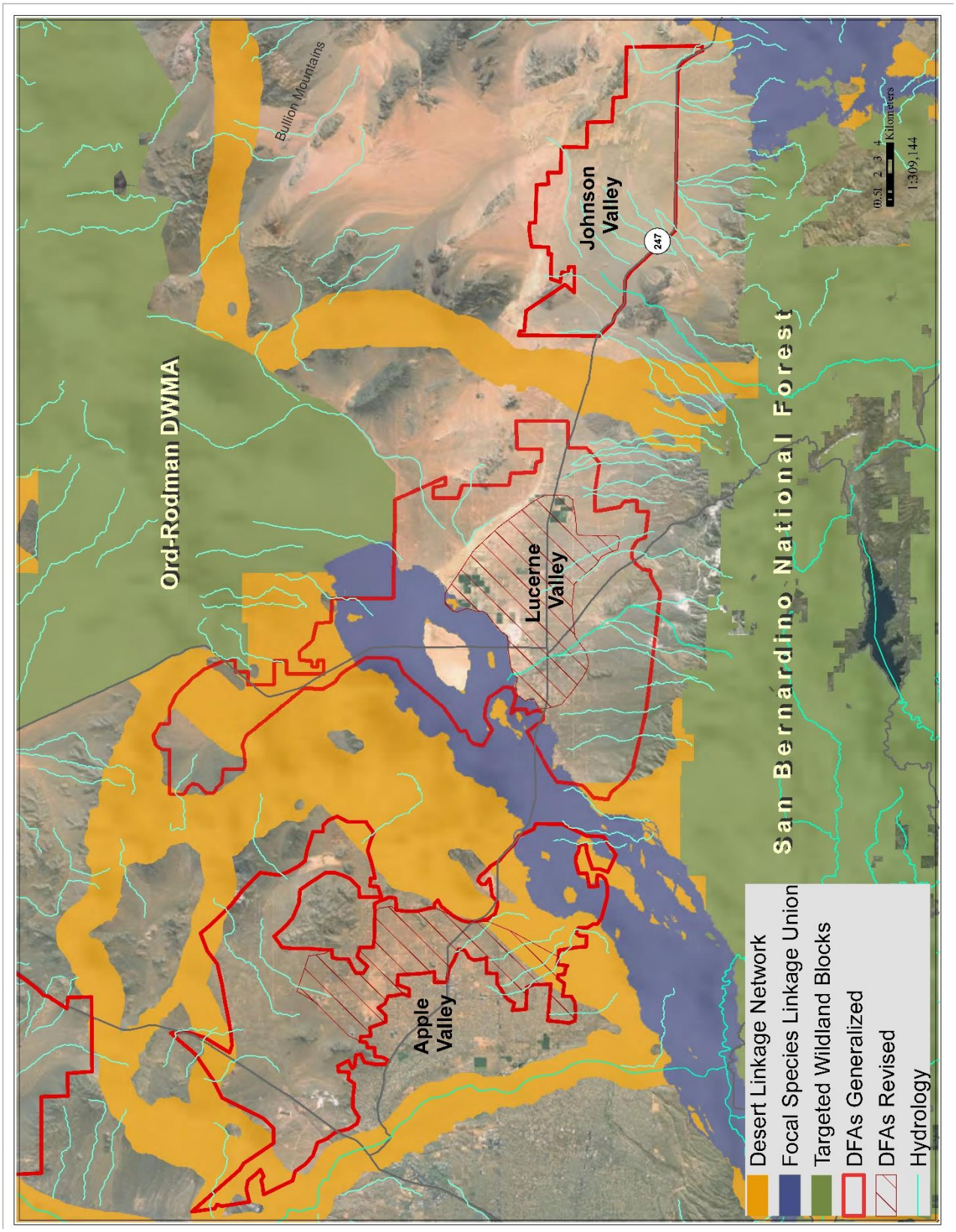


Figure 4. Desert Linkage Network Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

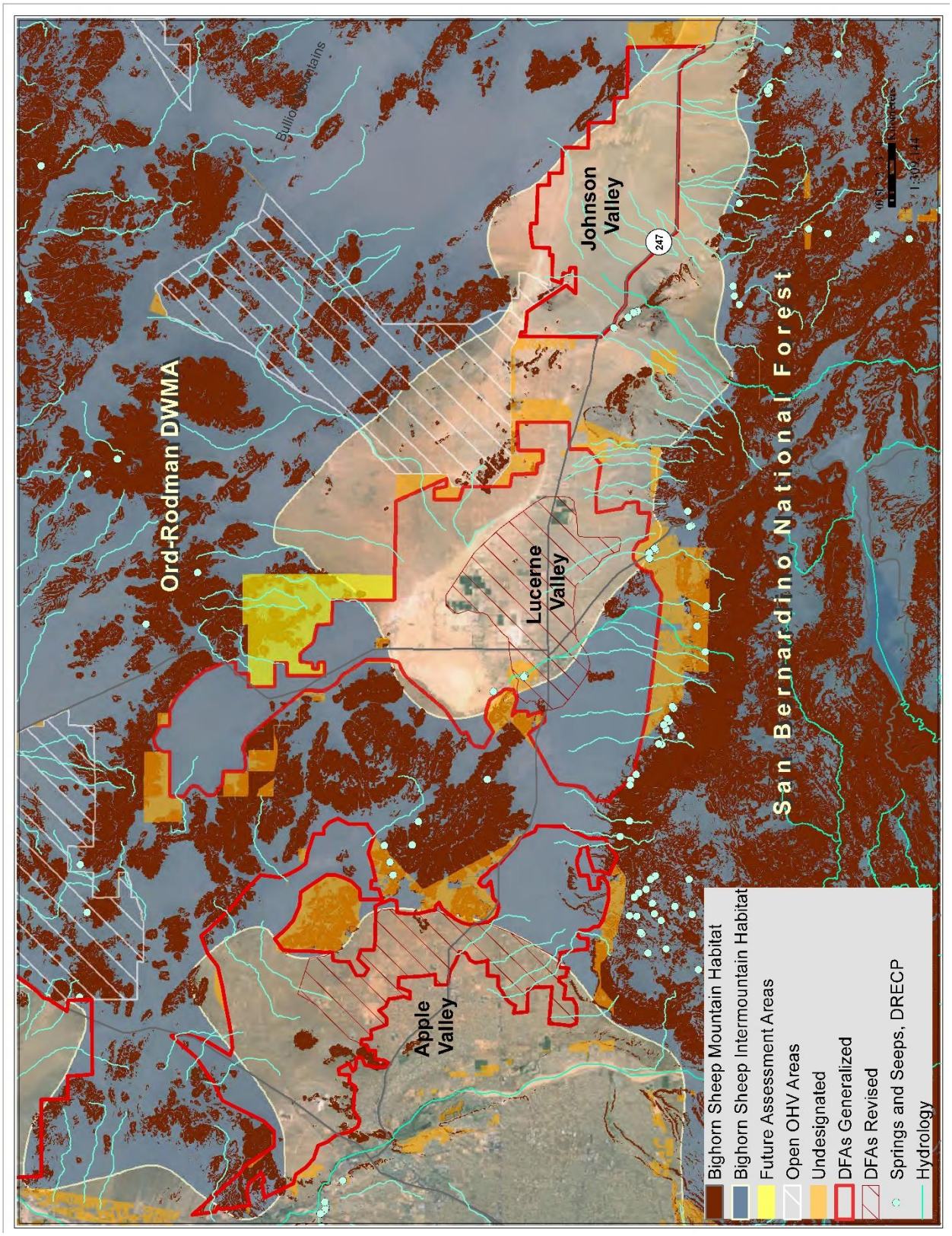


Figure 5. Bighorn Sheep Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

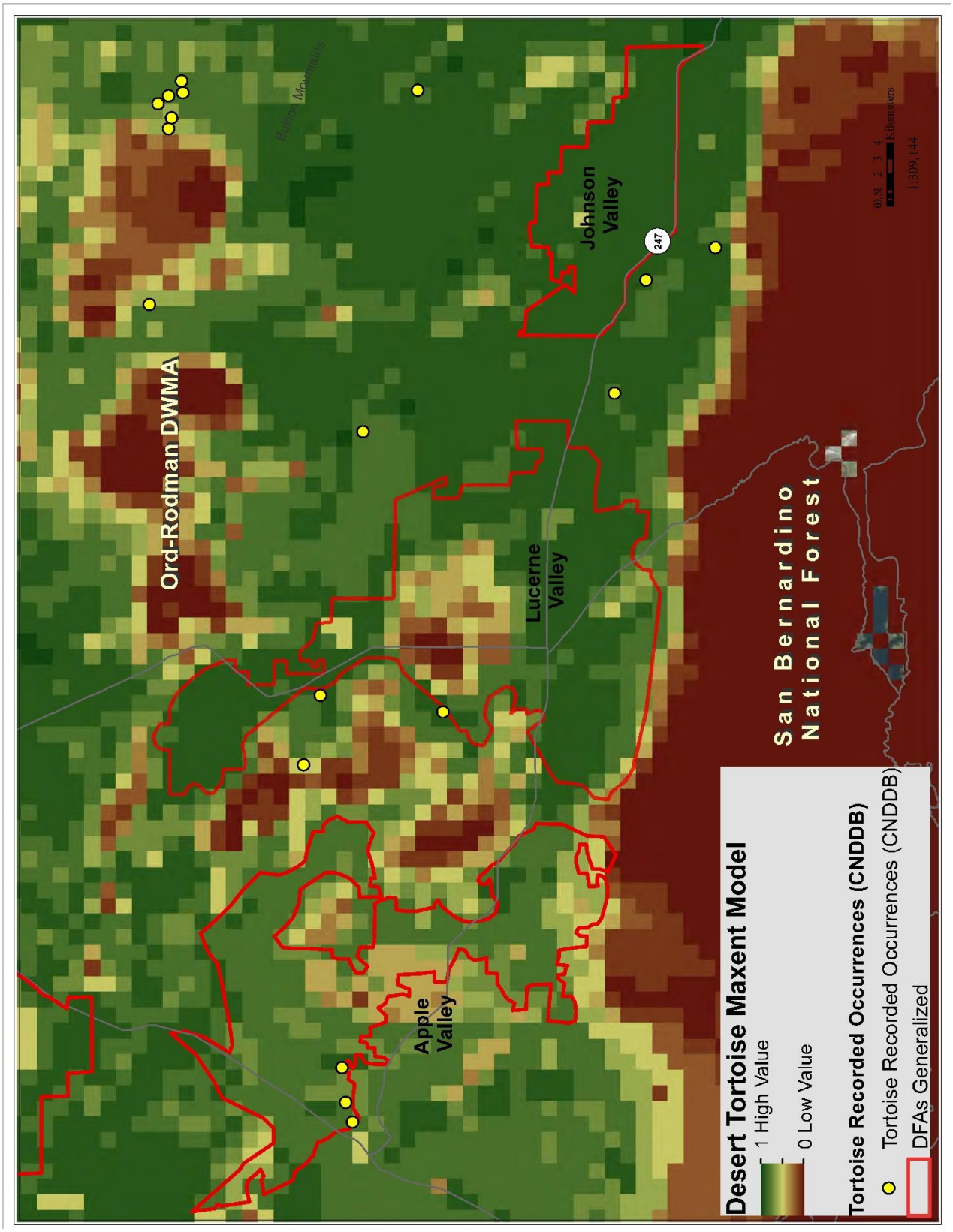


Figure 6. High Value Desert Tortoise Habitat in the Pinto Lucerne Valley Eastern Slopes (Nussear et al. 2009)

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

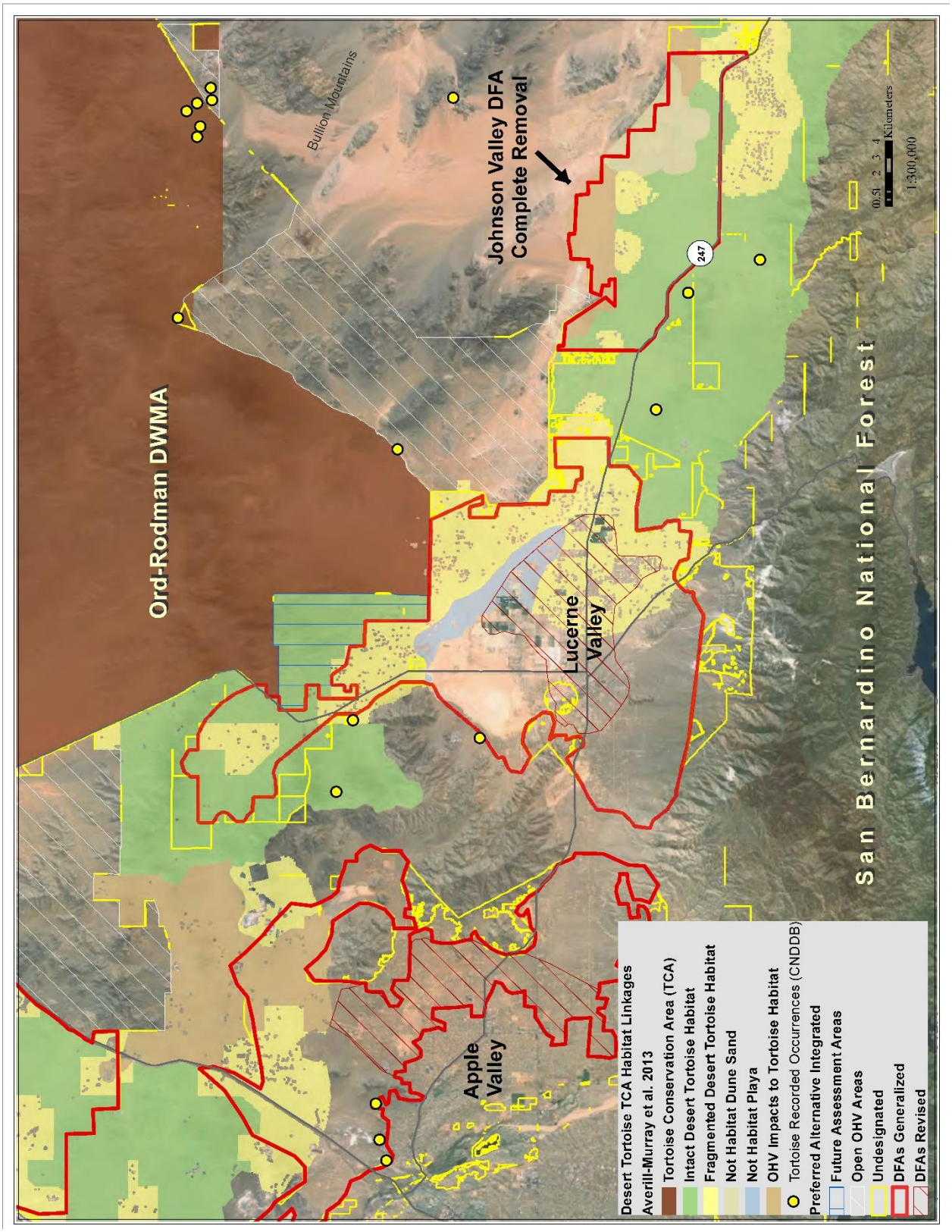


Figure 7. Desert Tortoise TCA Linkage Conflicts in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

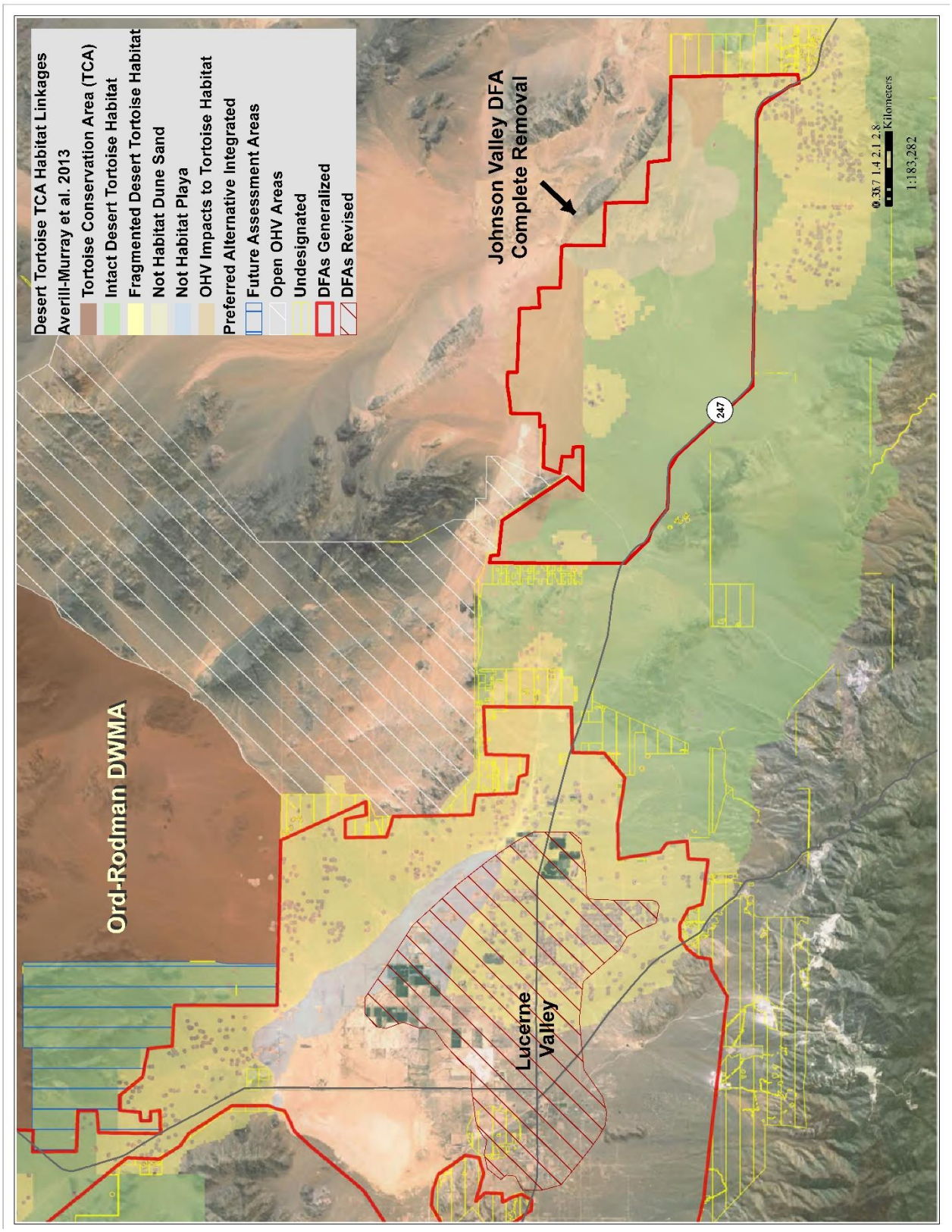


Figure 8. Desert Tortoise Ord-Rodman to Joshua Tree Linkage Conflicts

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

o Pinto Wash Linkage

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

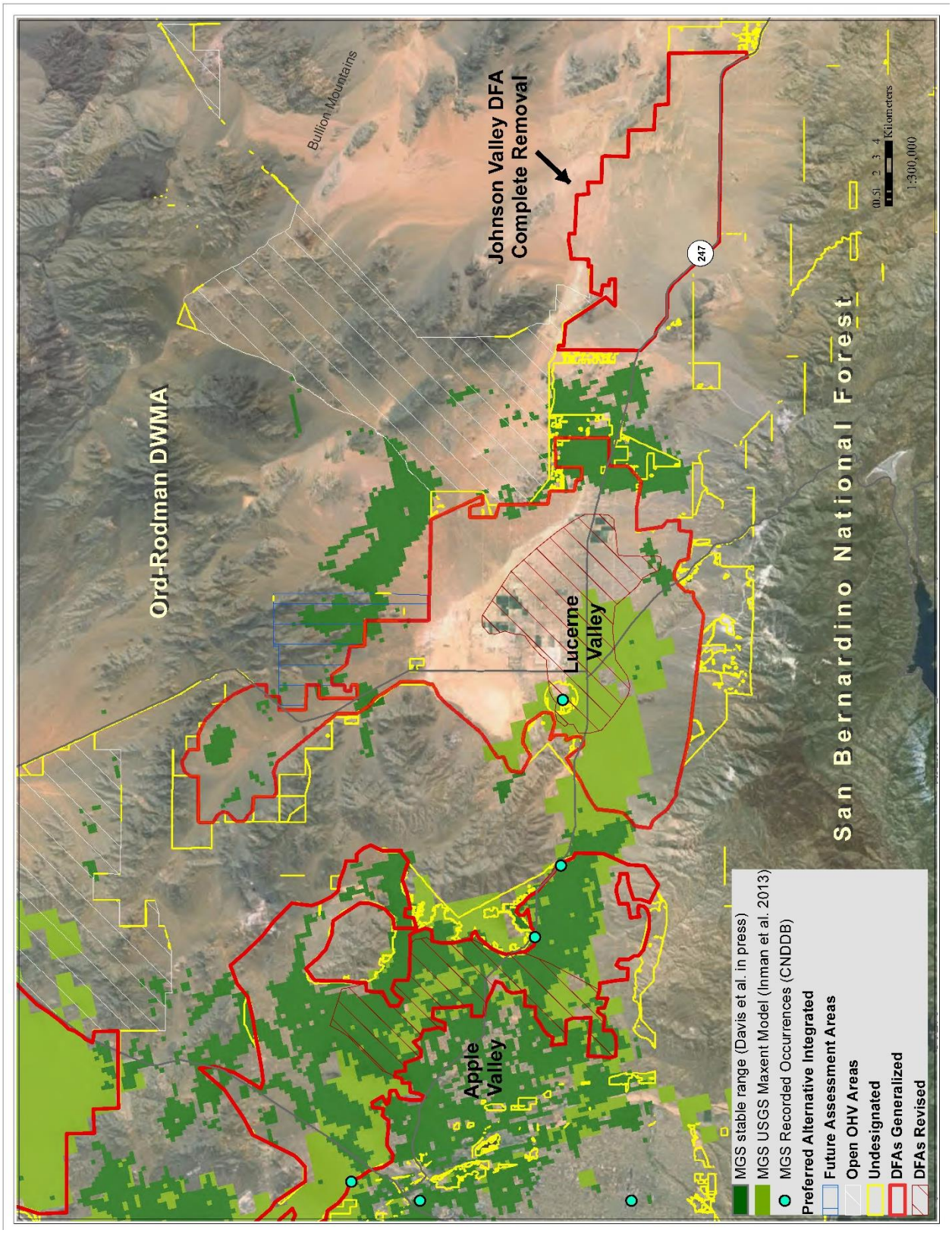


Figure 9. Mohave Ground Squirrel Conflicts in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

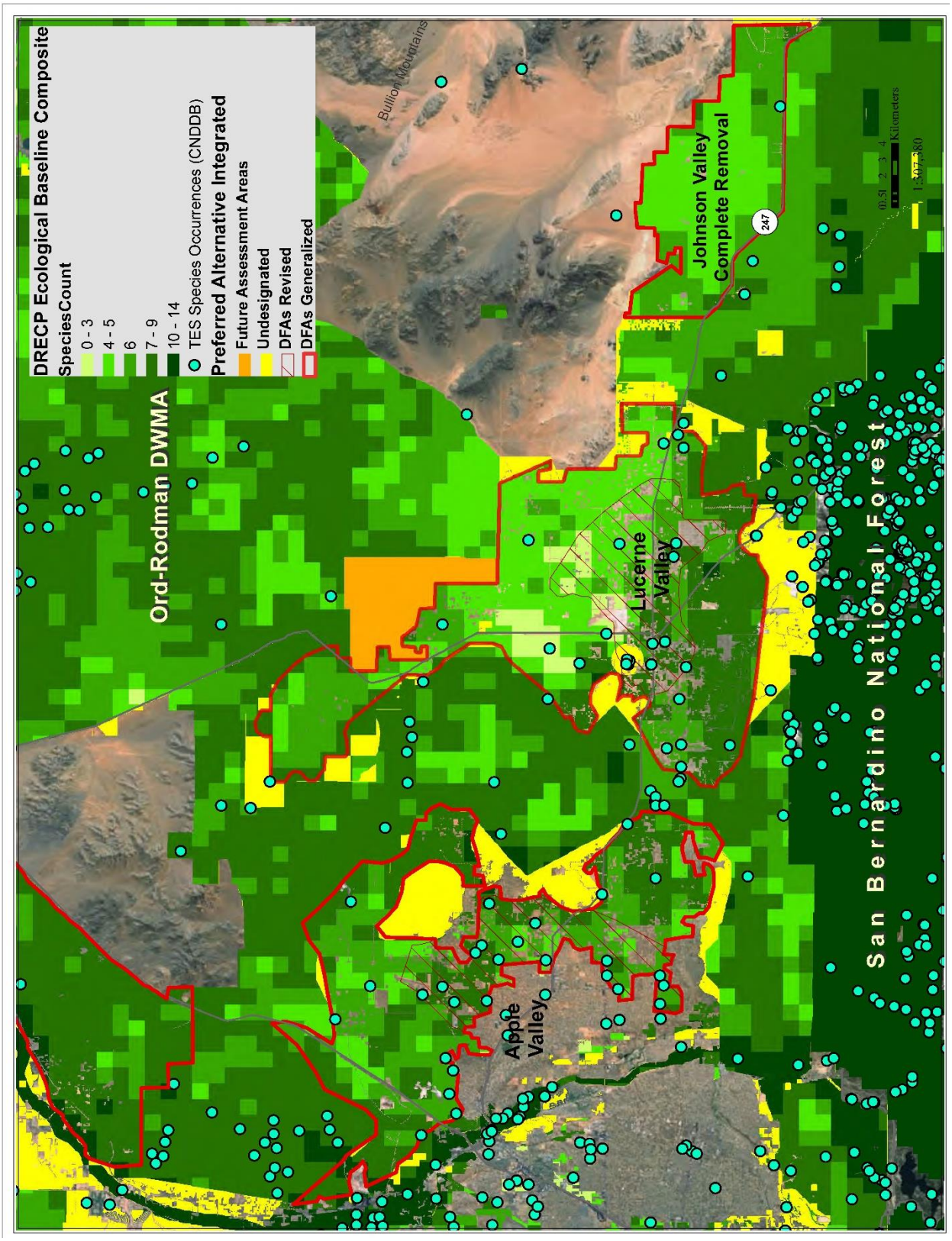


Figure 10. Covered Species Count in the Pinto Lucerne Valley Eastern Slopes

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

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

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

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

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

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

Respectfully Submitted,
Kristeen Penrod
Director, SC Wildlands
kristeen@scwildlands.org
Direct line: 206/285-1916

Literature Cited

Averill-Murray, R.C., C.R. Darst, N. Strout, and M. Wong. 2013. Conserving population linkages for the Mojave desert tortoise (Gopherus agassizii). Herpetological Conservation and Biology 8(1):1-15.

Beale, C. M., J. J. Lennon, and A. Gimona. 2008. Opening the climate envelope reveals no macroscale associations with climate in European birds. Proceedings of the National Academy of Sciences 105:14908-14912.

Beier, P., and B. Brost. 2010. Use of land facets to plan for climate change: conserving the arenas, not the actors. Conservation Biology 24:701-710.

Boarman, W. I. 2002. Desert tortoise (Gopherus agassizii). In Boarman, W. I. and K. Beaman (eds), The sensitive plant and animal species of the Western Mojave Desert. U. S. Geological Survey, Western Ecological Research Center, Sacramento, Ca.

California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California

California Natural Resources Agency. 2014. Safeguarding California: Reducing Climate Risk An update to the 2009 California Climate Adaptation Strategy.

California Natural Resources Agency. 2009. 2009 California Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008

Davis, F. et al. *In Press*. Cumulative Biological Impacts Framework for Solar Energy in the California Desert.

Field, C.B., G.C. Daily, S. Gaines, P.A. Matson, J. Melack, and N.L. Miller. 1999. Confronting climate change in California: ecological impacts on the Golden State. Union of Concerned Scientists and Ecological Society of America, Washington D.C.

Heller, N. E. and E. S. Zavaleta. 2009. Biodiversity management in the face of climate change: a review of 22 years of recommendations. Biological Conservation 142:14-32.

Hunter, Jr., M. L., G. L. Jacobson, Jr., and T.Webb, III. 1988. Paleoecology and the coarse-filter

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

approach to maintaining biological diversity. Conservation Biology 2:375-385.

Inman, RD, Esque TC, Nussear KE, Leitner P, Matocq MD, Weisberg PJ, Diltd TE, Vandergast AG. 2013. Is there room for all of us? Renewable energy and Xerospermophilus mohavensis. Endang Species Res 20:1-18.

Notaro, M., A. Mauss, and J.W. Williams. 2012. "Projected Vegetation Changes for the American Southwest: Combined Dynamic Modeling and Bioclimatic-Envelope Approach." *Ecological Applications* 22:1365–1388.

Nussear, K.E., T.C. Esque, R.D. Inman, L. Gass, K.A. Thomas, C.S.A. Wallace, J.B. Blainey, D.M. Miller, and R.H.Webb. 2009. Modeling habitat of the desert tortoise (Gopherus agassizii) in the Mojave and parts of the Sonoran Deserts of California, Nevada, Utah, and Arizona. U.S. Geological Survey Open-File Report 2009-1102.

Overpeck, J., J. Cole, and P. Bartlein. 2005. A 'paleoperspective' on climate variability and change. Pages 91-108 in T. E. Lovejoy and L. Hanna, editors. Climate change and biodiversity. Yale University Press, New Haven, Connecticut.

Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona http://oak.ucc.nau.edu/pb1/.

Penrod, K., C. Cabañero, P. Beier, C. Luke, W. Spencer, and E. Rubin. 2005. South Coast Missing Linkages Project: A Linkage Design for the San Bernardino-Granite Connection. South Coast Wildlands, Idyllwild, CA. www.scwildlands.org.

Raper, S. C. B., and F. Giorgi. 2005 Climate change projections and models. Pages 199-210 in T. E. Lovejoy and L. Hanna, editors. Climate change and biodiversity. Yale University Press, New Haven, Connecticut.

Sazaki, M., W. I. Boarman, G. Goodlet, and T. Okamoto. 1995. Risk associated with long distance movements by desert tortoises. Proceedings of the 1994 Desert Tortoise Council Symposium 1995:33-48.

Seavy, N.E., T. Gardali, G.H. Golet, F.T. Griggs, C.A. Howell, R. Kelsey, S.L. Small, J.H. Viers and J.F. Weigand. 2009. Why Climate Change Makes Riparian Restoration More Important than Ever: Recommendations for Practices and Research. Ecological Restoration 27(3): 330-338.

U.S. Fish and Wildlife Service. 1994. Desert tortoise (Mojave population) recovery plan. Portland,
Oregon.

UCSB. 2013. Mojave ground squirrel Species Distribution Models.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

DRECP APPROACH Margules and Pressey 2000; Carroll et al. 2003; Moilanen et al. 2009

U.S. Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the desert tortoise (Gopherus agassizii). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. 222pp.

1986. USFWS. Fish and Wildlife Coordination Act Report Mojave River Forks Dam Water Conservation Project. Prepared for Army Corps of Engineers. Prepared by Ray Bransfield, US Fish and Wildlife Service.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

B8-46
(for entire attachment)

Attachment 5

SC Wildlands' Letter Commenting on the Proposed Stagecoach Solar Project NOP

dated November 10, 2020

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

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

November 10, 2020

Sarah Mongano
Senior Environmental Scientist
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825
Submitted via e-mail: CEQA.comments@slc.ca.gov

Subject: Stagecoach Solar Project NOP Comments

Dear Ms. Mongano,

Thank you for the opportunity to comment on the Proposed Stagecoach Solar Project Notice of Preparation (NOP) to prepare an Environmental Impact Report (EIR). SC Wildlands was alerted to the Proposed Stagecoach Solar Project by Neil Nadler, a Lucerne Valley resident, because of the Proposed Project's impacts to wildlife movement corridors and habitat linkages. SC Wildlands' mission is to protect and restore systems of connected wildlands that support native species and the ecosystems upon which they rely. As such, our comments on the NOP largely focus on the potential impacts of the proposed project on habitat connectivity and wildlife movement corridors.

The NOP is supposed to identify potential environmental effects of the proposed project as identified through the initial study, which is largely based on the Environmental Checklist in Appendix G of the CEQA Guidelines. Under Biological Resources, the NOP stated that:

The EIR will examine proposed Project activities on federally or State-listed species or species proposed for listing; conflicts with any local policies on biological resources; and any conflicts with local, regional, or State habitat conservation plans.

Section IV of the Environmental Checklist under CEQA covers Biological Resources, which has six different questions project proponents must answer. The Anticipated Project Impacts on Biological Resources identified in the NOP address 3 of the 6 questions, a, e and f but neglected to include d – will the project:

> d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

The EIR must address potential impacts of the proposed project on habitat connectivity and wildlife movement for ALL native resident or migratory wildlife species, not just listed and candidate species, and established wildlife corridors as called for in the CEQA guidelines.

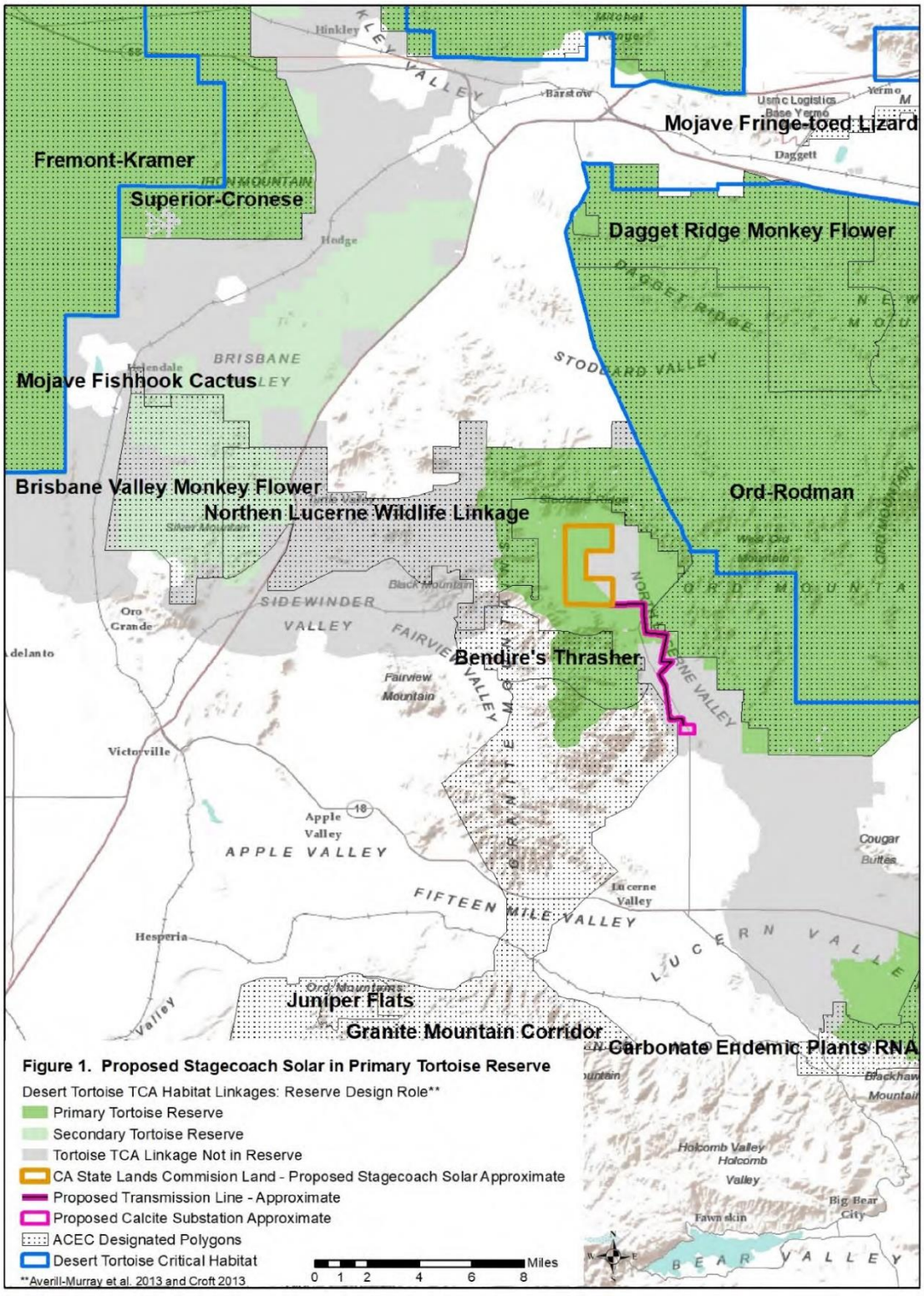
Several connectivity models, reports, and plans highlight the importance of the Proposed Project Site to maintaining habitat connectivity and wildlife movement corridors. The includes several connectivity models used by the 2016 Desert Renewable Energy Conservation Plan (DRECP), including the Desert Linkage Network (Penrod et al. 2012), Bighorn Sheep Intermountain Habitat (California Department of Fish and Wildlife 2013), and Desert Tortoise TCA Habitat Linkages (Averill-Murray et al. 2013, Croft 2013). A range wide model of omnidirectional connectivity for the Mojave Desert tortoise (*Gopherus agassizii)* (Gray et al. 2019) also shows the Proposed Project Site provides high connectivity for desert tortoise movements. The State Wildlife Action Plan (CDFW 2015) also highlighted the importance of the Draft Apple Valley MSHCP/NCCP to maintaining wildlife movement and habitat connectivity.

The Desert Tortoise Habitat Linkages (Averill-Murray et al. in 2013) were delineated to identify areas important to the conservation of the desert tortoise (*Gopherus agassizii*) under the Desert Renewable Energy Conservation Plan (DRECP). The linkages were designed to connect desert tortoise conservation areas (TCAs) identified in the recovery plan (USFWS 2011), which include designated critical habitat, Bureau of Land Management Areas of Critical Environmental Concern (ACEC), and National Park Units (Figure 1). One of the primary goals for the Desert Tortoise TCA Linkages (Goal DETO2 of the DRECP) is to "Maintain functional linkages between Tortoise Conservation Areas to provide for long term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas." This is especially important for the Ord-Rodman TCA because it does not meet the minimum size threshold (2590 km^2) to support a viable tortoise population over the long term (Croft 2013). The proposed Stagecoach Solar Project, 9.1 km of transmission lines, and the proposed Calcite Substation are all within the Ord-Rodman to Fremont-Kramer linkage (Figure 1; Averill-Murray et al. 2013).

The U.S. Fish and Wildlife Service Desert Tortoise Recovery Office (DTRO) identified how different areas of the linkage conservation network for the tortoise would be treated relative to conservation reserve establishment and application of biological goals and objectives under the DRECP. The DTRO also conducted additional analyses and field work in two of the linkages, including Ord-Rodman to Fremont-Kramer linkage and Ord-Rodman to Joshua Tree National Park linkage, to more precisely identify primary and secondary reserve areas more accurately (Figure 1; Croft 2013). Croft (2013) described Upper Lucerne Valley as a large expanse of intact tortoise habitat that is contiguous with the Ord-Rodman TCA. Virtually all of the State Lands Commission land proposed for Stagecoach Solar and roughly 4 km of the associated transmission lines are identified as Primary Tortoise Reserve (Figure 1; Croft 2013).

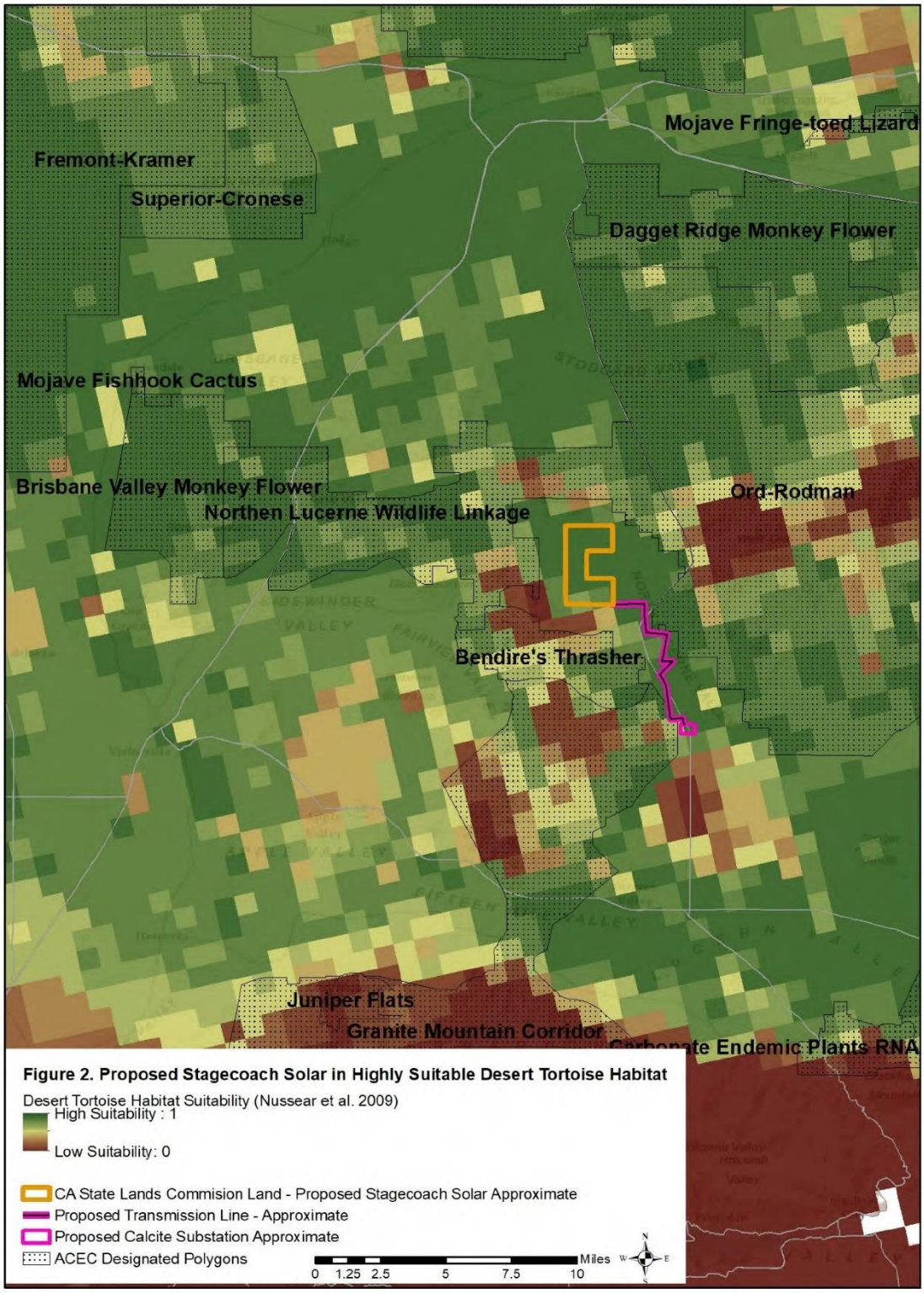
The Desert Tortoise Habitat Linkages (Averill-Murray et al. 2013) were developed based on a habitat model developed for the tortoise (Figure 2) by U.S. Geological Survey (Nussear et al. 2009). Nussear et al. (2009) identifies virtually all of the Proposed Stagecoach Solar, associated transmission lines, and Calcite Substation as highly suitable habitat for desert tortoise (Figure 2).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



SC WILDLANDS 3

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



SC WILDLANDS 4

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Croft (2013) recommended the DRECP Reserve Design include "Preservation of the intact habitat in the valley bottom areas of Upper Lucerne Valley would provide a more suitable linkage for desert tortoise" than the Northern Lucerne Wildlife Linkage ACEC, which is not as suitable for desert tortoise because of the mountainous terrain. For any proposed renewable energy projects in Upper Lucerne Valley, Croft (2013) recommended "stringent conservation management actions and high mitigation ratios in this portion of the DFA. All projects considered in this location must perform an analysis of effects on connectivity and effects on population viability within the Ord-Rodman DWMA. Projects that cannot show sufficient mitigation of their impacts on these factors are prohibited."

According to the Desert Tortoise Modeled Future Distribution – developed by Davis and Soong for the DRECP (https://databasin.org/datasets/bdcf1adfefb74db28d7878d4c0e05c79), the proposed project site is especially important for the desert tortoise to have a chance of adapting to climate change. That model projected desert tortoise distribution for the period 2040-2069 based on statistically downscaled outputs of 5 different global climate models, and has recently been updated to symbolize Range Stability and Range Expansion (Figure 3). Range Stability

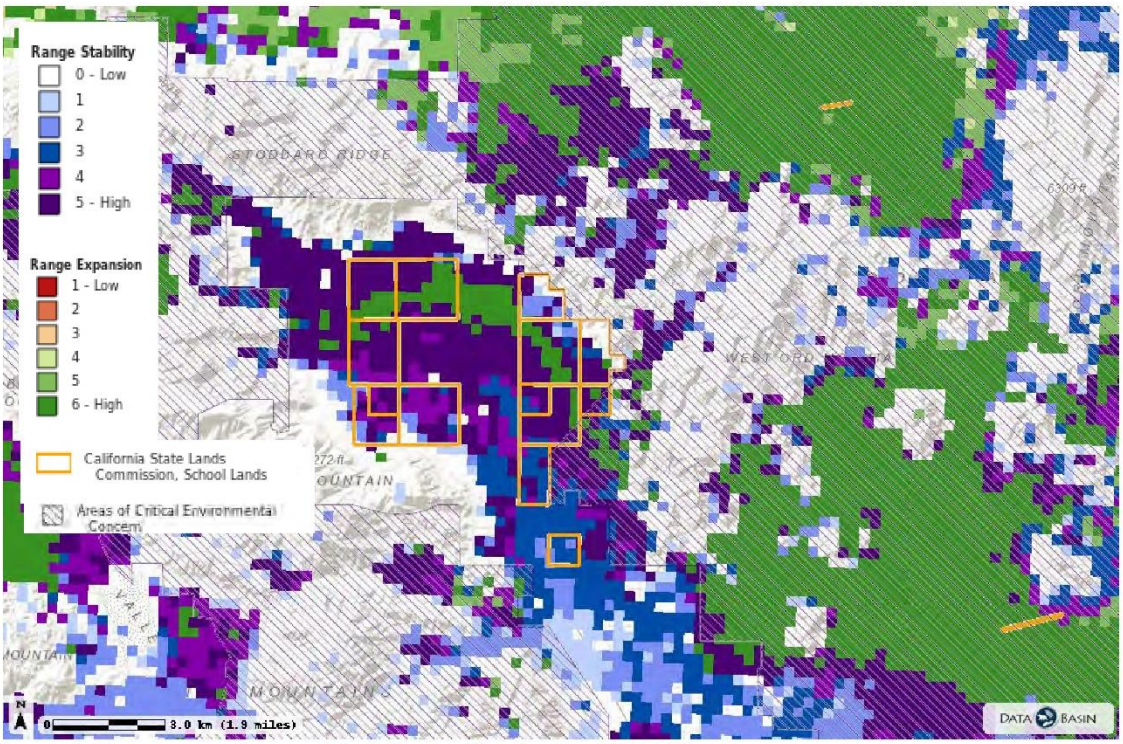


Figure 3. Desert tortoise modeled future distribution DRECP.

depicts the level of agreement between the current distribution and the predicted future distributions of the species colored light blue to dark purple. Light blue indicates areas that currently support tortoise habitat that is not predicted to be there in the future, while dark blue indicates areas that currently support tortoise habitat that will remain in the future (Figure 3).

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Range Expansion depicts areas that are likely to be suitable for tortoise in the future, colored from red to green, with green areas where four and five models predict range expansion (Figure 3). Highly suitable desert tortoise habitat throughout the proposed project site is expected to remain relatively stable and provide for range expansion under projected climate scenarios.

A recent USFWS Internal Discussion Draft, dated Sept 25, 2020, entitled, *Connectivity of Mojave Desert Tortoise Populations: Management Implications for Maintaining a Viable Recovery Network,* emphasized the importance of the State Land Commission land proposed for Stagecoach Solar to the desert tortoise. USFWS (2020) proclaimed, "tortoise populations adjacent to and contiguous with populations within TCAs are essential for long-term species viability and recovery." Desert TCAs and linkages in the DRECP (BLM 2016) also have surface-disturbance caps, with the Fremont-Kramer to Ord-Rodman Linkage having a disturbance cap of 0.5%. USFWS (2020) suggested, "To help maintain tortoise occupancy and permeability across all other non-conservation-designated tortoise habitat, surface disturbance could be limited to <5% development per square kilometer (Carter et al. 2020). This would be particularly useful in areas within the upper 5th percentile of connectivity values modeled by Gray et al. (2019)" Figure 4. The development proposed for Stagecoach Solar on just the State Lands Commission land is 1,950 acres = 7.89 km^2, far and above what is suggested by USFWS.

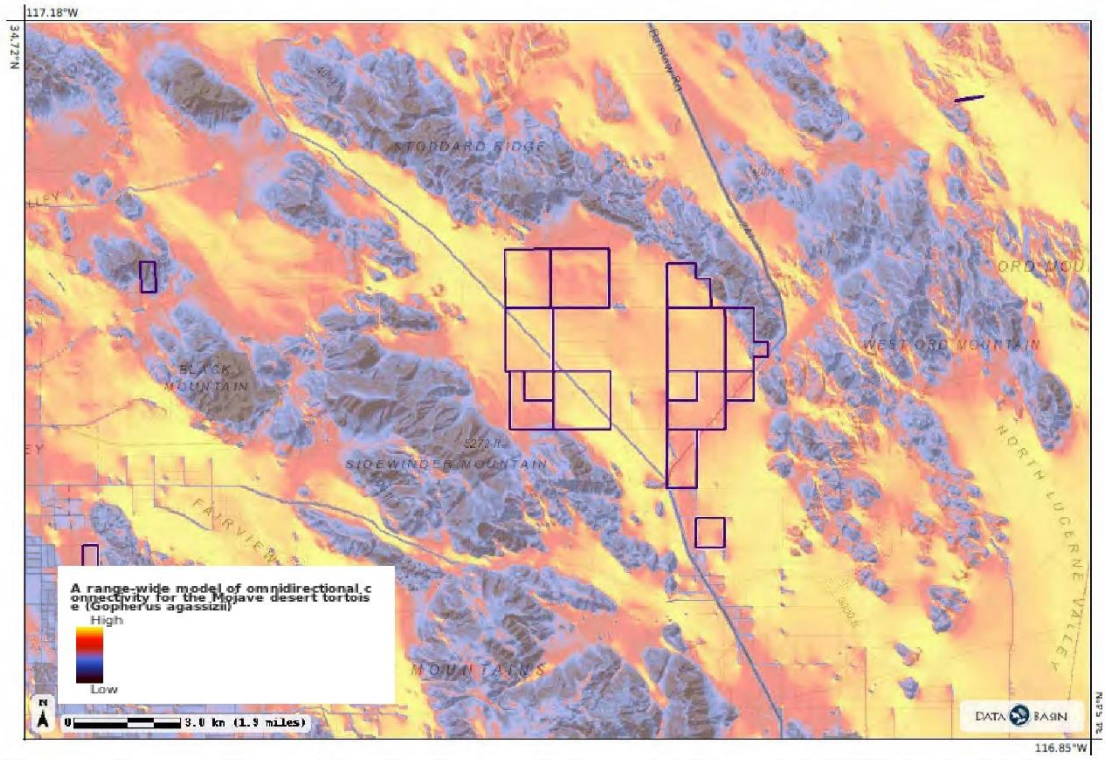


Figure 4. Range-wide omnidirectional connectivity model (Gray et al. 2019) for the Mojave Desert Tortoise

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

The desert tortoise is a corridor dweller that may take multiple generations to move between TCAs. In order to sustain desert tortoise populations, habitat linkages between TCAs must be wide enough to support multiple home ranges (Beier et al. 2008, USFWS 2020. Sazaki et al. (1995) estimated dispersal distance for pre-breeding male tortoises to be between 6.21-9.32 miles. Forcing desert tortoises to go around the fenced perimeter of the entire 1,950 acre proposed Stagecoach Solar project would create a significant barrier to movement of desert tortoises, especially dispersing juveniles. The Stagecoach Solar footprint measures roughly 3 miles north to south, stretching from the foothills of Stoddard Ridge to the foothills of Sidewinder Mountain (Figure 4), essentially severing desert tortoise habitat on either side of the proposed project, which could not be mitigated to a threshold that is less than significant.

The Draft Apple Valley MSHCP/NCCP also identifies the State Lands Commission land as important desert tortoise habitat (Figure 5) in the Wild Wash linkage in their reserve design, which is part of the Fremont Kramer – Ord Rodman linkage for desert tortoise. Although Interstate 15 is a significant barrier to tortoise movement between these TCAs, Croft (2013) confirmed that "there are seven underpasses (Wild Wash Bridge and 6 passable culverts) under Interstate 15 that likely provide for some level of continued population connectivity."

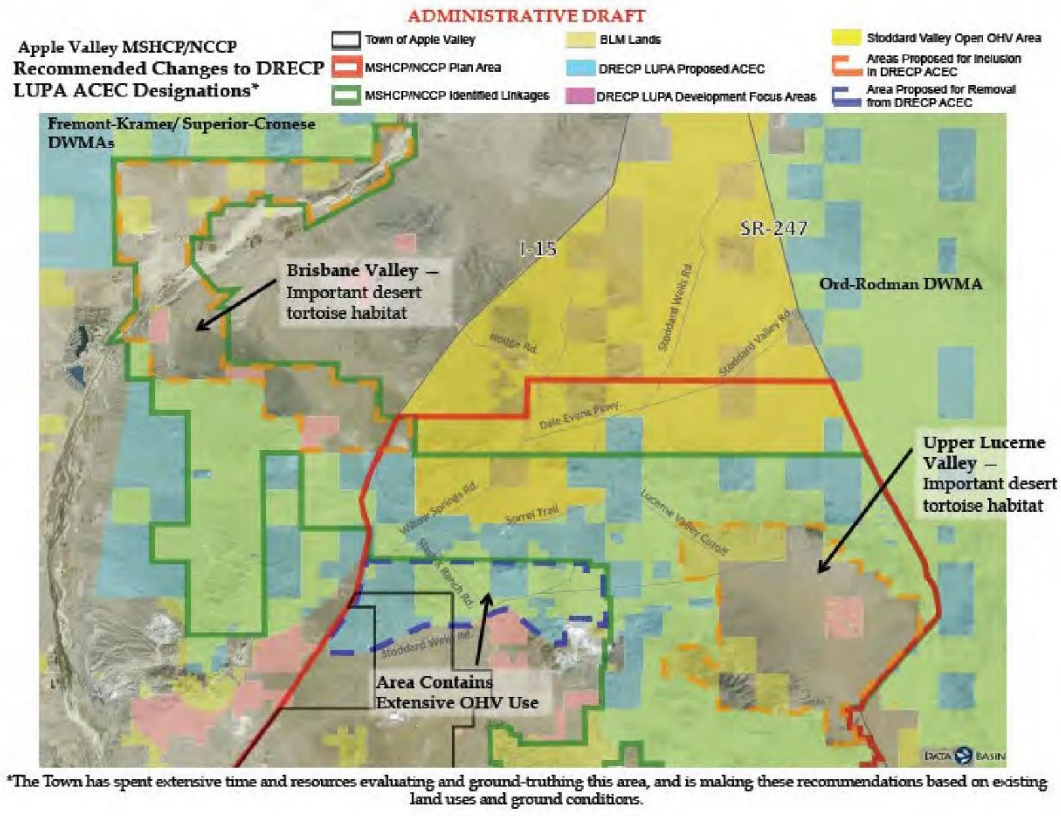


Figure 5. Draft Apple Valley MSHCP/NCCP stressed the importance of the State Land Commission lands in Upper Lucerne Valley to desert tortoise.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

The primary vegetation community on the State Lands Commission land proposed for Stagecoach Solar is creosote bush scrub. Creosote bush is often the dominant plant in desert tortoise habitat (USFWS 2011). Section 2.5 of the NOP on Closure and Decommissioning, stated "If, at the end of the CSLC lease and/or contract term to sell energy to the utility buyer, no contract extension is available or no other buyer of the energy emerges, the solar plant would be decommissioned and dismantled. After removal of all construction related on-site improvements, remediation and restoration of the area would be performed on the site to its pre-construction condition." Creosote bush scrub is the main vegetation community on the proposed project site. Of significance, there are several clusters of ancient creosote rings along washes on the proposed site. As Tim Thomas, former President of the Mojave Chapter of California Native Plant Society said, "Lots of rings indicate old, 3-4,000-year-old, intact habitat." As such, it would be impossible to restore habitat "on the site to its pre-construction condition."

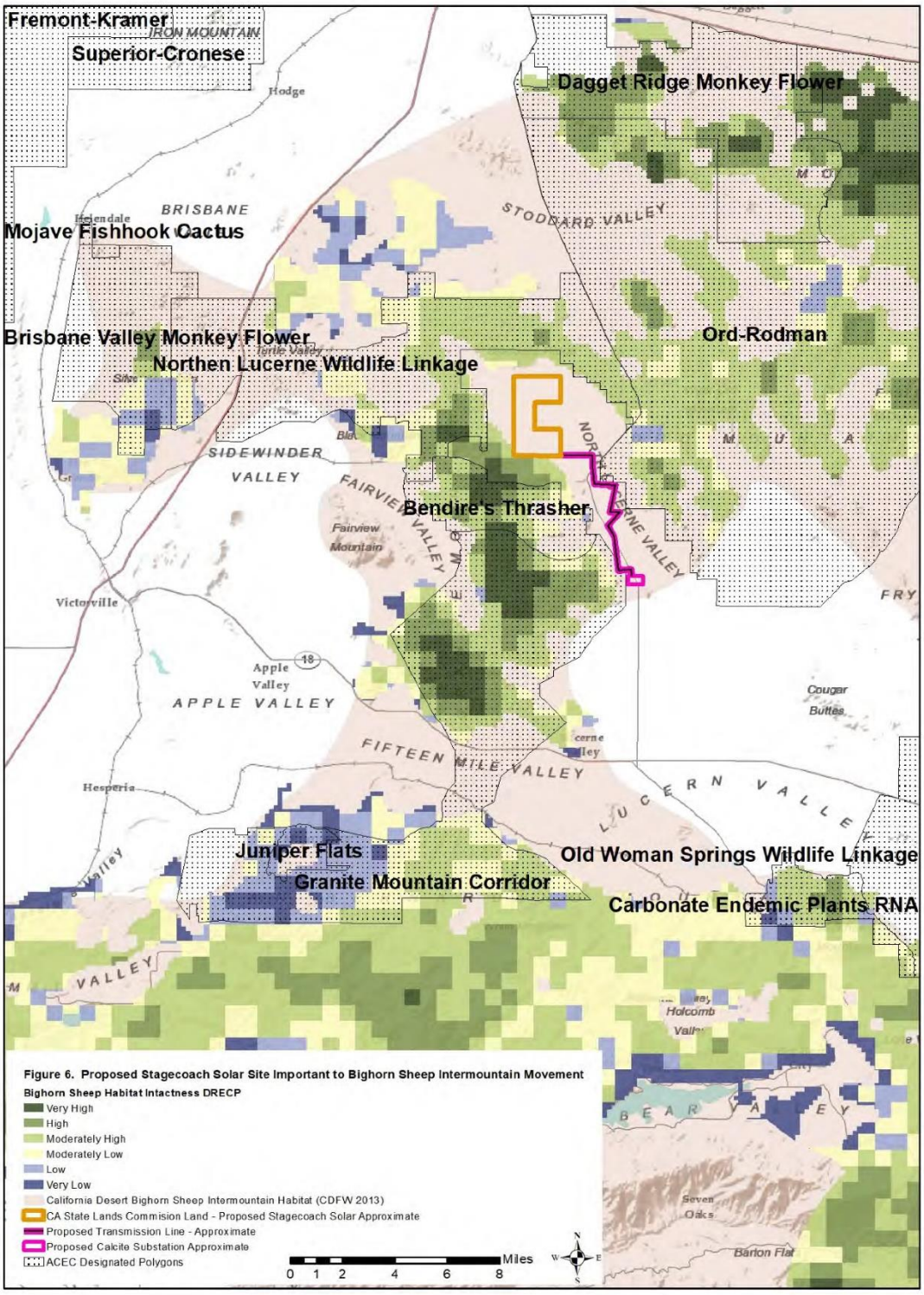
The proposed Stagecoach Solar Project, including the transmission lines, and the Calcite Substation nearly touch the Final Granite Mountain Wildlife Linkage Area of Critical Environmental Concern (ACEC) (Figure 6). The DRECP's Relevance and Importance Criteria for this ACEC states, "the area is critical for bighorn sheep, golden eagles, desert tortoise and prairie falcons and several other species. Additionally, numerous rare and sensitive plants have major populations here, making the area regionally important". Goals: "Protect biological values including habitat quality, populations of sensitive species, and landscape connectivity while providing for compatible public uses" (BLM 2016).

Bighorn sheep have extensive spatial requirements, make pronounced seasonal movements, and require habitat connectivity between subpopulations. Bighorn sheep are extremely sensitive to habitat loss and fragmentation (Bleich et al. 1996, Rubin et al. 1998, Singer et al. 2000, USFWS 2000). Although typically associated with rugged mountainous terrain, bighorn sheep commonly use a variety of desert terrain types, including canyon bottoms, washes, alluvial fans, plateaus, and valley floors (Figure 6). These areas may be used both for movement between mountainous areas and as important foraging areas (Schwartz et al. 1986, Bleich et al. 1997). CDFW (2013) identifies the proposed project site as intermountain habitat known to support bighorn sheep movements between the Granite Mountains and the Ord and Newberry Mountains.

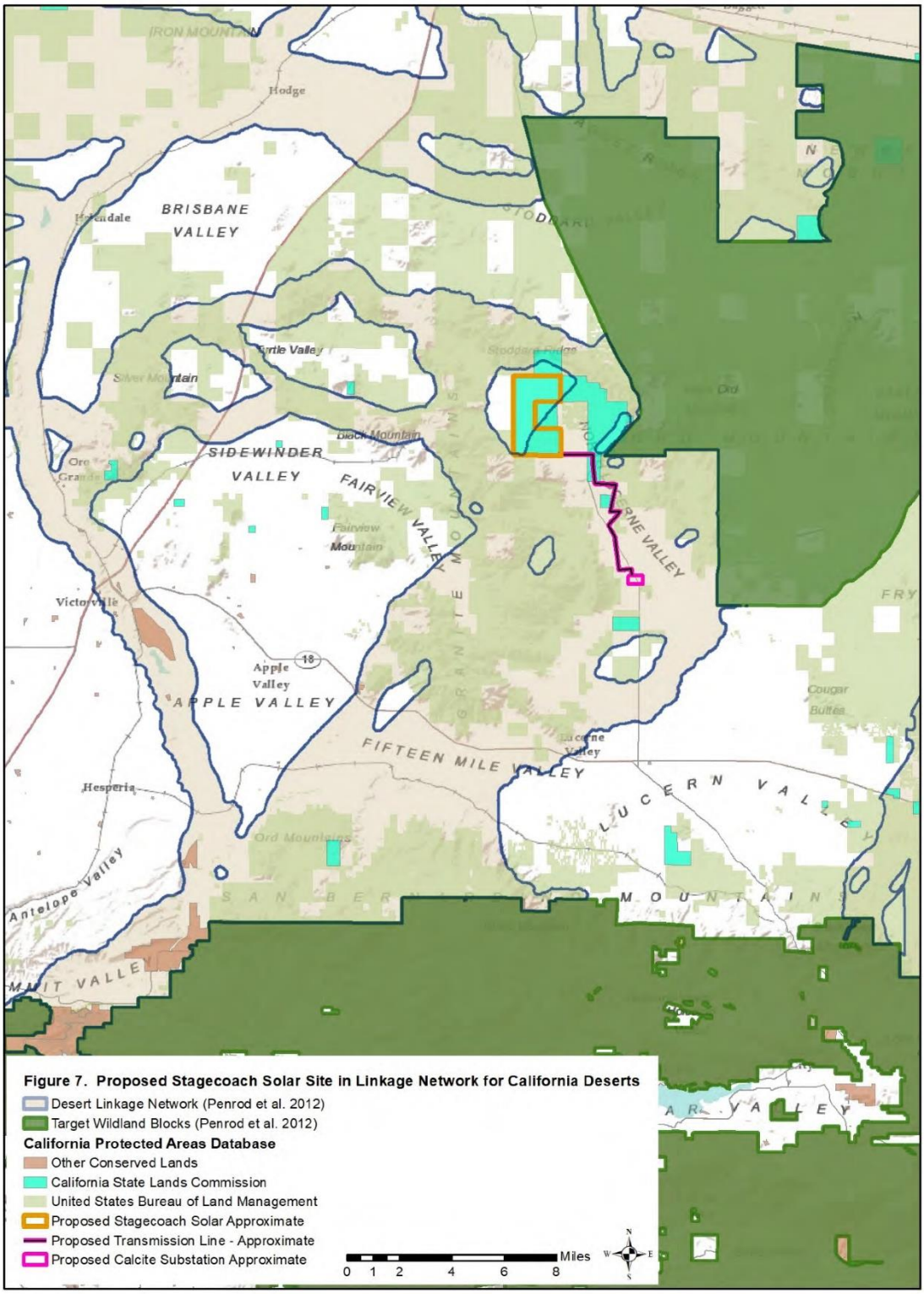
A Linkage Network for the California Deserts (Penrod et al. 2012), commissioned by the Bureau of Land Management and The Wildlands Conservancy, was intended to provide more information to natural resource agencies, environmental consulting firms, and the general public concerning where and how to maintain connectivity and sustain ecological functions in a changing climate. Penrod et al.'s (2012) study area encompassed the entire DRECP area with a buffer into the neighboring Sierra Nevada and South Coast Ecoregions, and was a key input to the reserve design of the DRECP. The Desert Linkage Network (Figure 7) was designed to help meet Goal L1 of the DRECP, "Create a Plan-wide reserve design consisting of a mosaic of natural communities with habitat linkages that is adaptive to changing conditions and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets that provide for movement and gene flow and accommodate range shifts and expansions in response to climate change."

The Desert Linkage Network (Penrod et al. 2012) was developed in part based on the habitat

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)



Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

and movement requirements of 44 different focal species, including desert tortoise and bighorn sheep, that were selected to represent a diversity of ecological interactions and are intended to serve as an umbrella for all native species and ecological processes of interest in the region. These 44 focal species capture a diversity of movement needs and ecological requirements and include area-sensitive species, barrier-sensitive species, less mobile species or corridor-dwellers, habitat specialists, and ecological indicator species. Quite a few of these focal species, roughly 27 out of 44, have the potential to use habitat on the land proposed to be leased from the State Lands Commission for the Stagecoach Solar project, along the transmission line, or on the Calcite Substation. Potential adverse impacts of the proposed project on the habitat and movement needs of all of these focal species should be evaluated as part of the DEIR.

Maintaining habitat connectivity is one of the most important climate adaptation strategies. As such, in addition to evaluating impacts of the proposed project on current conditions of habitat connectivity and wildlife movement, the DEIR should also evaluate impacts to corridors designed to accommodate wildlife movements driven by climate change. Penrod et al. (2012) used a land facets approach (Beier and Brost 2010) to design climate-robust corridors. These corridors maximize continuity of the enduring features (topographic elements such as sunny lowland flats, or steep north-facing slopes) that will interact with future climate to support future biotic communities. Each land facet corridor was designed to maximize continuity of one of the major land facets that occurs within the two targeted areas. Each such corridor is intended to support occupancy and between-block movement by species associated with that land facet in periods of climate quasi-equilibrium. Each linkage design also includes one corridor with high local interspersion of facets intended to support short distance shifts, species turnover, and other ecological processes relying on interaction between species and environments. The proposed Stagecoach Solar project would impact several land facet corridors associated with three linkage designs in the California Desert Linkage Network (Figures 8, 9, and 10).

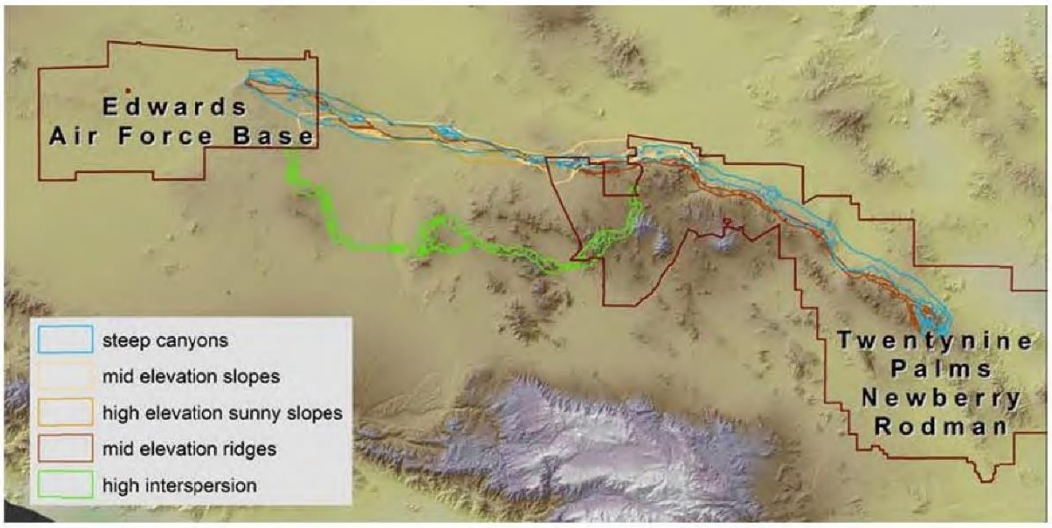


Figure 8. Edwards Air Force Base – Twentynine Palms & Newberry Rodman Land Facets. The southern strand is the corridor for high interspersion of land facets that passes through the footprint of the proposed Stagecoach Solar project.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

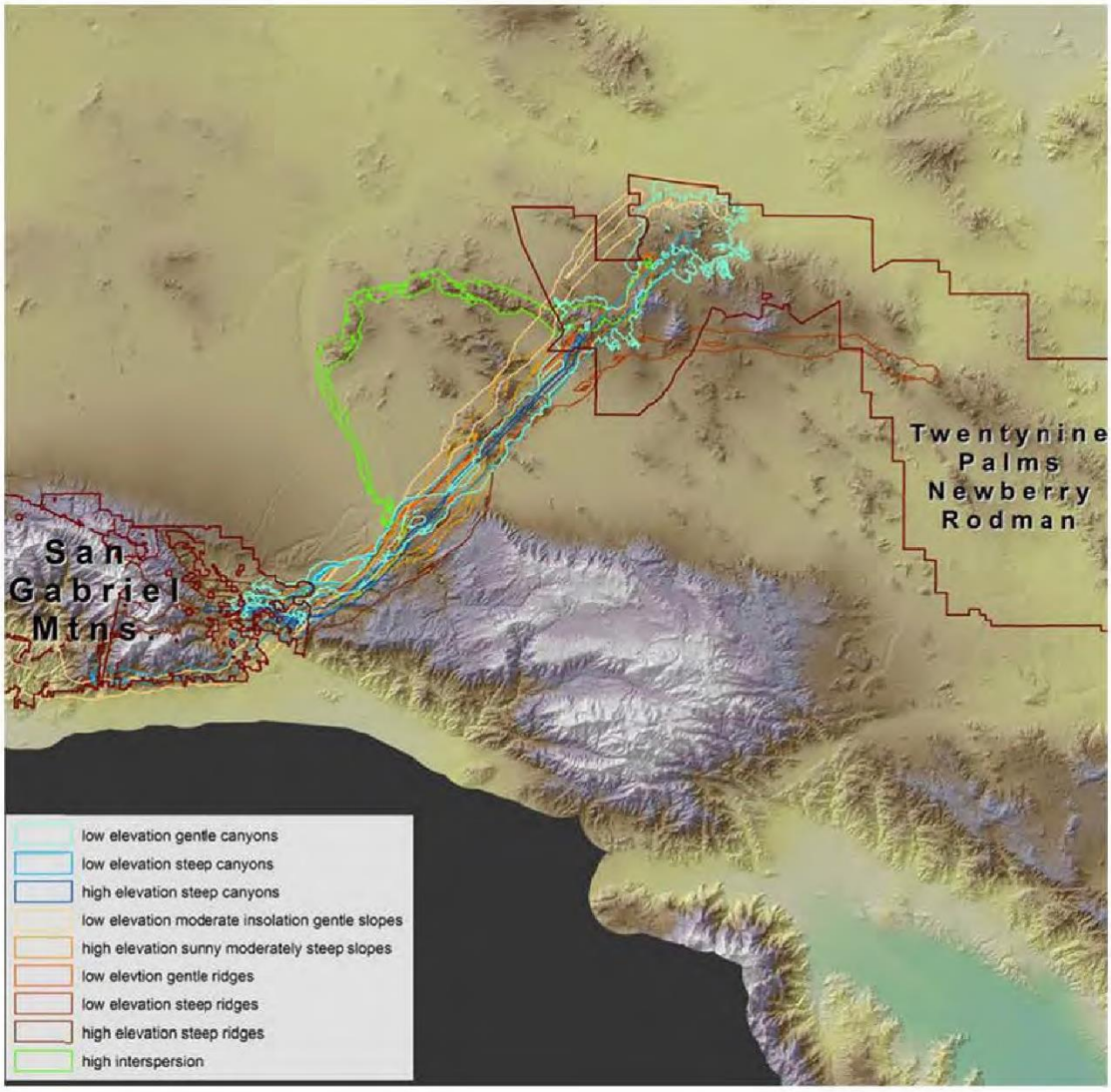


Figure 9. Twentynine Palms and Newberry Rodman – San Gabriel Mountains land facets. The westernmost, arcing strand is the corridor with high interspersion of land facets. All land facet corridors intermix in the south, but the corridors diverge as they approach the northern wildland block (29 Palms Newberry-Rodman ACEC). Here the western branch is the low elevation, gentle slope corridor, the middle branch includes 6 land facet corridors (high elevation, sunny, moderately steep slopes; low elevation, gentle ridges; high elevation, steep ridges; low elevation, steep canyon bottoms; low elevation, gentle canyon bottoms; and high elevation, steep canyon bottoms) and the eastern branch is the low elevation, steep ridges corridor. All of these land facet corridors pass through the footprint of the proposed Stagecoach Solar project.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

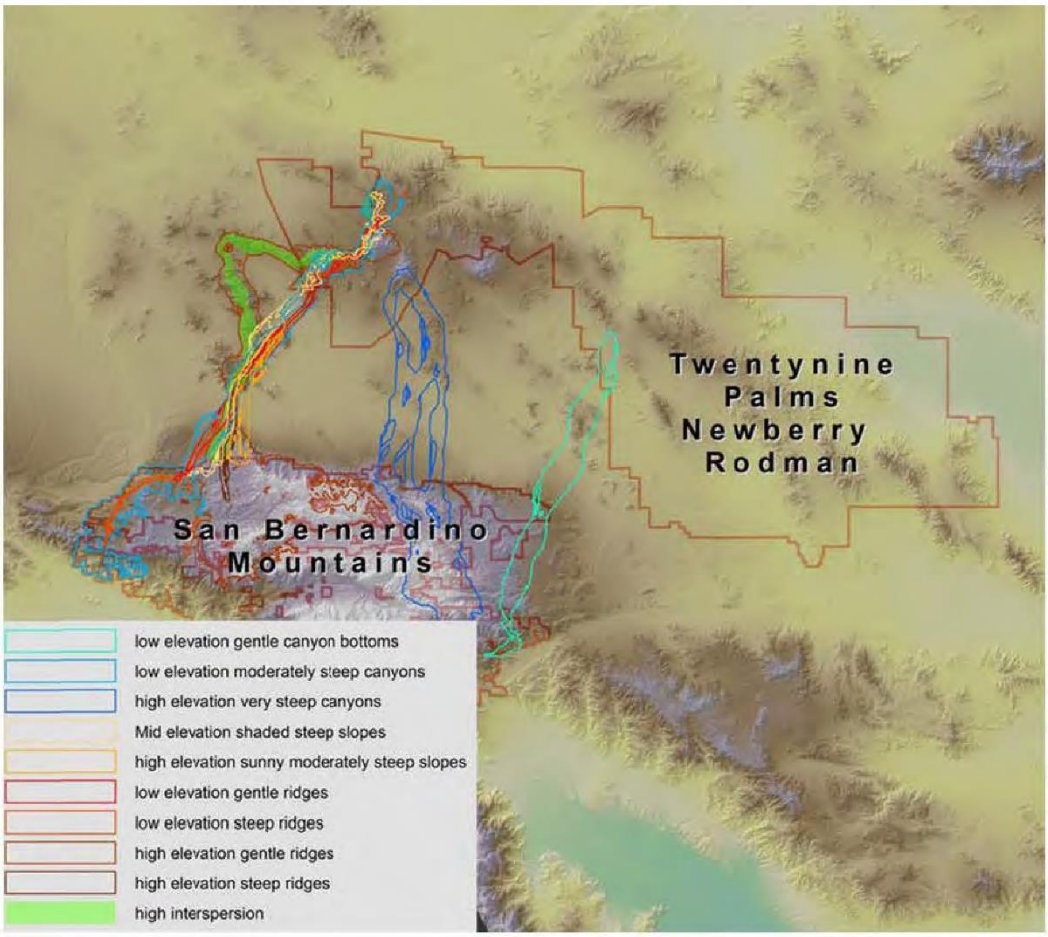


Figure 10. Twentynine Palms and Newberry Rodman – San Bernardino Mountains land facets. The northwesternmost arcing strand contains the corridor with high interspersion of land facets and the corridor for high elevation, gentle ridges. This strand also captures much of the headwaters of the Mohave River. This intertwines with a strand that includes 7 corridors (low elevation, moderately steep canyon bottoms; mid elevation, shaded, steep slopes; high elevation, sunny, moderately steep slopes; low elevation gentle ridges; low elevation, steep ridges, and high elevation, steep ridges). All but two of the land facet corridors pass through the footprint of the proposed Stagecoach Solar project.

The Planning Agreement for the Apple Valley Multispecies Habitat Conservation Plan/Natural Community Conservation Plan (MSHCP/NCCP) was signed in 2017 by the City of Apple Valley, San Bernardino County, CDFW, and USFWS. Section 5.6.3.4 of the California State Wildlife Action Plan (CDFW 2015) included the following on the Apple Valley MSHCP/NCCP:

> *The town of Apple Valley in San Bernardino County is currently preparing a Multispecies Habitat Conservation Plan/Natural Community Conservation Plan (MSHCP/NCCP). Much like SWAP 2015, the MSHCP/NCCP planning effort is focusing*

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

on addressing landscape-scale conservation needs, climate change, and protection of species diversity while at the same time addressing local community needs to ensure ecological and economic resilience now and in the future.

The Planning Area includes Apple Valley, surrounding San Bernardino County lands, Bureau of Land Management lands, ***and state lands****. The Plan Area is approximately 345.6 square miles. The Town's MSHCP/ NCCP planning effort focuses on landscape level conservation. Overall, the Plan will connect through its linkages over 2.1 million acres on conservation lands in the West Mojave Desert. Apple Valley's MSHCP/NCCP Plan Area is rich in natural resources and important to the West Mojave Desert. The area was recently identified by the U.S.* Geological *Survey as one of ten genetic divergence and diversity hotspots in the West Mojave Desert.*

These areas, due to the high degree of genetic diversity and divergence among species present, can be considered evolutionary hotspots (Vandergast 2013). Because of the variation in elevation, slope, and aspect, the Town's Plan Area is composed of 21 plant communities as recently mapped by the DRECP. These communities include, but are not limited to, forest and woodland communities, desert scrub communities, grasslands, and riparian/wetland areas. Due to the rich variation in community types, the Town is evaluating 50 listed and/or sensitive species that may occur within the Plan Area for inclusion in the MSHCP/NCCP.

The Town is situated at the intersection of three landscape-level linkages. These important features are critical for desert conservation. Their preservation will benefit the region by maintaining connectivity for plant and wildlife species and by helping mitigate impacts from climate change. The three linkages are:

… The San Bernardino-Granite Mountain Connection is a north-south linkage connecting the desert ranges to the coastal ranges via the Granite and San Bernardino Mountains. In 2005, South Coast Wildlands ranked this linkage as one of the top 12 southern California linkages for priority conservation. The linkage represents a landscape-level connection between the coastal and desert mountains. It facilitates the direct dispersal and multigenerational movement of over 14 focal species, including desert bighorn sheep, American badger, Pacific kangaroo rat, and Joshua tree. …

The Northern Lucerne Wildlife Linkage/Wild Wash Linkage is an east-west linkage created by a series of interconnected desert valleys that provides regional connectivity between three of the four Desert Wildlife Management Areas (DWMAs) in the West Mojave Desert. The Northern Lucerne Wildlife Linkage/Wild Wash Linkage incorporates the Wild Wash, the only natural and undeveloped I-15 undercrossing between Victorville and Barstow. This linkage has high quality tortoise habitat and is critical for mitigating the effects of climate change on desert tortoise populations. It is a multigenerational

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

> *linkage between designated critical habitat units for desert tortoise. The linkage also benefits the movement of other desert plants and animals allowing them to adjust to climate change. … The Mojave River Corridor is a north-south linkage that is recognized as an important regional wildlife corridor in San Bernardino County. The Mojave River, specifically the Mojave Narrows, provides critical riparian habitat for a wide variety of resident and neotropical migrating birds. The portion of the Mojave River within the Town's MSHCP/NCCP Plan Area supports the highest number of special status species in the Plan Area and is designated critical habitat for southwestern willow flycatcher.*
>
> *As stated previously, these linkages connect approximately 2.1 million acres of federal lands currently managed for conservation of species and habitats, and they are built upon a largely contiguous framework of federal land managed by BLM. The Apple Valley MSHCP/NCCP planning effort will aid the state in achieving many of the conservation strategies proposed for the Mojave Desert Ecoregion (Shadescale-Saltbush Scrub) because of the natural resource values found within the Planning Area.*

Potential impacts to resident and migratory birds must be evaluated in the DEIR. Avian collisions with transmission lines are a significant impediment, particularly for large-bodied birds such as raptors. There are 40 golden eagle nests within an 11-mile radius of the project. A number of different bird species have been recorded crashing into solar power arrays or getting burned by the concentrated rays (Upton 2014). The Preliminary Solar Design for Stagecoach (Westwood 2020) also show plans for electrified fences around the majority of the property. The Bendire's thrasher ACEC is immediately west of the proposed project and the Mojave River Important Bird Area is also in the vicinity of the proposed project. There are a number of listed and sensitive birds that have the potential to occur on the proposed project site.

Cumulative Impacts as they relate to habitat connectivity and wildlife movement corridors must be evaluated in the DEIR. A list of proposed and approved solar projects and their associated acreages and dots on a map are not sufficient to evaluate cumulative impacts to wildlife movement. The boundaries for each approved and proposed project (e.g., Ord Mountain Solar, Calcite Substation) should be included on a map that clearly shows existing development and natural habitat and measurements should be taken and disclosed for how the proposed Stagecoach Solar project would further constrain wildlife movement corridors and habitat linkages.

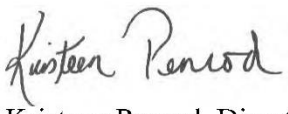
We highly recommend that the proposed Stagecoach Solar project in Upper Lucerne Valley on California State Land Commission land not proceed with the environmental review process. As a state agency, the California State Lands Commission has a mandate to protect the environment and avoid land with significant environmental values. The proposed project site is important for habitat connectivity and wildlife movement, provides highly suitable habitat for federally and state listed species, is surrounded on all sides by ACECs, and is included in the Apple Valley MSHCP/NCCP.

Thank you for the opportunity to comment. Please feel free to contact me with any questions

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

or requests for more data or information.

Respectfully submitted,



Kristeen Penrod, Director
SC Wildlands

Literature Cited

Averill-Murray, R.C., C.R. Darst, N. Strout, and M. Wong. 2013. Conserving population linkages for the Mojave desert tortoise (Gopherus agassizii). Herpetological Conservation and Biology 8(1):1-15.

Beier, P., and B. Brost. 2010. Use of land facets to plan for climate change: conserving the arenas, not the actors. Conservation Biology 24:701-710.

Beier, P., D. R. Majka, and W. D. Spencer. 2008. Forks in the road: choices in procedures for designing wildland linkages. Conservation Biology 22:836-851.

Bleich, V. C., R. T. Bowyer, and J. D. Wehausen. 1997. Sexual segregation in mountain sheep: resources or predation? Wildlife Monographs. No. 134. The Wildlife Society. 50pp.

Bleich, V. C., J. D. Wehausen, R. R. Ramey II, and J. L. Rechel. 1996. Metapopulation theory and mountain sheep: implications for conservation. Pages 353-373 in Metapopulations and Wildlife Conservation. D. R. McCullough (ed.). Island Press, Washington, D. C. 429pp.

California Department of Fish and Wildlife (CDFW). 2015. California State Wildlife Action Plan, 2015 Update: A Conservation Legacy for Californians. Edited by Armand G. Gonzales and Junko Hoshi, PhD. Prepared with assistance from Ascent Environmental, Inc., Sacramento, CA.

California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California

Carter, S.K., I.I.F. Leinwand, K.E. Nussear, T.C. Esque, E. Masters, R.D. Inman, N.B. Carr, and L.J. Allison. 2020. Quantifying development to inform management of Mojave and Sonoran desert tortoise habitat. Endangered Species Research 42:167-184.

Croft, B. 2013. Desert Renewable Energy Conservation Plan – Desert Tortoise Linkage Evaluations – Ord-Rodman Linkages. Prepared by U.S. Fish and Wildlife Service Desert Tortoise Recovery Office. 14 pp.

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

Davis, F. and O. Soong. Dataset | Desert Tortoise Modeled Future Distribution – DRECP. University of California, Santa Barbara, Biogeography Lab, Bren School of Environmental Science & Management. https://databasin.org/datasets/bdcf1adfefb74db28d7878d4c0e05c79.

Gray, M.E., B.G. Dickson, K.E. Nussear, T.C. Esque, and T. Chang. 2019. A range-wide model of contemporary, omnidirectional connectivity for the threatened Mojave desert tortoise. Ecosphere 10(9):e02847. 10.1002/ecs2.2847

Nussear, K.E., Esque, T.C., Inman, R.D., Gass, Leila, Thomas, K.A., Wallace, C.S.A., Blainey, J.B., Miller, D.M., and Webb, R.H., 2009, Modeling habitat of the desert tortoise (Gopherus agassizii) in the Mojave and parts of the Sonoran Deserts of California, Nevada, Utah, and Arizona: U.S. Geological Survey Open-File Report 2009-1102, 18 p.

Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona http://oak.ucc.nau.edu/pb1/.

Rubin, E.S., W.M. Boyce, M.C. Jorgensen, S.G. Torres, C.L. Hayes, C.S. O'Brien, and D.A. Jessup. 1998. Distribution and abundance of bighorn sheep in the Peninsular Ranges, California. Wildlife Society Bulletin, 26:539-551.

Sazaki, M., W. I. Boarman, G. Goodlet, and T. Okamoto. 1995. Risk associated with long distance movements by desert tortoises. Proceedings of the 1994 Desert Tortoise Council Symposium 1995:33-48.

Schwartz, O. A., V. C. Bleich, and S. A. Holl. 1986. Genetics and the conservation of mountain sheep Ovis canadensis nelsoni. Biological Conservation 37:179-190.

Singer, F.J., V.C. Bleich, and M.A. Gudorf. 2000. Restoration of Bighorn Sheep Metapopulations in and Near Western National Parks. Restoration Ecology 8: 14-24.

Upton, J. 2014. Solar Farms Threaten Birds. Climate Central Scientific American. https://www.scientificamerican.com/article/solar-farms-threaten-birds/.

U.S. Bureau of Land Management. 2016. Desert Renewable Energy Conservation Plan Land Use Plan Amendment to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. BLM/CA/PL-2016/03+1793+8321.

U.S. Fish and Wildlife Service. 2020. Connectivity of Mojave Desert Tortoise Populations: Management Implications for Maintaining a Viable Recovery Network. Internal Discussion Draft, dated Sept 25, 2020. 20 pp. https://www.fws.gov/nevada/desert_tortoise/documents/mog/2020/ConnectivityWhitePaper_MOGdraft.pdf

Comment Set B8 – Coalition of Community Groups and Individuals (cont.)

U.S. Fish and Wildlife Service. 2011. Revised recovery plan for the Mojave population of the desert tortoise (Gopherus agassizii). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. 222pp.

U. S. Fish and Wildlife Service. 2000. Recovery plan for bighorn sheep in the Peninsular Ranges, California. U. S. Fish and Wildlife Service, Portland, Oregon. xv + 251pp.

Vandergast, A.G., R.D. Inman, K.R. Barr, K.E. Nussear, T.C. Esque, S.A. Hathaway, D.A. Wood, P.A. Medica, J.W. Breinholt, C.L. Stephen, A.D. Gottscho, S.B. Marks, W.B. Jennings, R.N. Fisher. 2013. Evolutionary Hotspots in the Mojave Desert. *Diversity 5*:293-319.

Westwood Professional Services. 2020. Stagecoach Solar Project San Bernardino County, California Preliminary Solar Design. 10pp.