

**SOLAR ENERGY DEVELOPMENT
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
PUBLIC COMMENTS ON SOLAR ENERGY STUDY AREAS
OCTOBER 2009**

On June 30, 2009, the BLM initiated a second scoping period for the Solar Energy Development PEIS to solicit public comments on tracts of BLM-administered land to receive in-depth study for solar development in the PEIS. This action was in response to [Secretarial Order No. 3285](#) (issued March 11, 2009 by the Secretary of the Interior), which announced a policy goal of identifying and prioritizing specific locations best suited for large-scale production of solar energy. This scoping period was announced through a Federal Register Notice (Volume 74, No. 124), and extended through July 30, 2009. The scoping period was subsequently extended through September 14, 2009 (FR Volume 74, No. 142, July 27, 2009).

All public comments received during the second scoping period, including individual letters and comments received electronically, are contained in this file. Personal information has been withheld when requested. These comments can also be viewed on the Solar Energy Development PEIS website (<http://solareis.anl.gov>) using several search criteria (State/Country, Name, Organization, Study Area, Comment Number).

Thank you for your comment, Perry Mistry.

The comment tracking number that has been assigned to your comment is SolarM60001.

Comment Date: June 30, 2009 13:55:21PM
Solar Energy Development PEIS
Comment ID: SolarM60001

First Name: Perry
Middle Initial: M
Last Name: Mistry
Organization: Svpmtch-LabServices-San jose-CA
Address:
Address 2:
Address 3:
City: San jose
State: CA
Zip: 95148
Country: USA
Email: svpmtch@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

District 8-Evergreen Valley-San jose /San Jose City-Solar City Projects-Business Plan Development:

Participation from Local Evergreen valley/District 8 Small-Medium enterprise and Local Utility Power Company-PG&E

DEVELOPMENT OF STATE OF ART RENEWABLE ENERGY UTILITY POWER PROJECT:
Renewable Power Utility Project:
DISTRICT 8:Evergreen valley-San Jose-CA-USA:

SOLAR POWER:
WIND POWER:
GEO THERMAL POWER
Combination of Solar Power-Wind Power-Geothermal power

Solar Power operated RETAIL BUSINESS CENTER:
Scientific Labs-Pilot Labs -21st century Projects:
Renewable power /Solar Power operated Cold Storage for Food& vegetables & biotech-Pharma-Medical devices-Clean Rooms:
Solar Power Operated Swimming Pools:
Solar Power Operated Schools-Community Colleges-University:

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60002.

Comment Date: June 30, 2009 17:44:42PM

Solar Energy Development PEIS

Comment ID: SolarM60002

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address: [Withheld by requestor]

Address 2:

Address 3:

City: [Withheld by requestor]

State: [Withheld by requestor]

Zip: [Withheld by requestor]

Country: [Withheld by requestor]

Email: [Withheld by requestor]

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

I would like to see a monthly status report listed by Township and Range of applications for solar and wind. The private owners would like to be kept informed on what is going.

Thank you for your comment, William Modesitt.

The comment tracking number that has been assigned to your comment is SolarM60003.

Comment Date: July 1, 2009 11:52:42AM
Solar Energy Development PEIS
Comment ID: SolarM60003

First Name: William
Middle Initial: E
Last Name: Modesitt
Organization:
Address: 4728 Mount La Platta Dr
Address 2:
Address 3:
City: San Diego
State: CA
Zip: 92117
Country: USA
Email: kylekai@me.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Solar development is an excellent idea, something that is badly needed. However, solar farms should take the environmental impact of the land they're built on more seriously. Instead of building on open desert land, building solar farms on existing structures, such as parking lots, it a far better idea. Thank you.

Thank you for your comment, Rachel Shaw.

The comment tracking number that has been assigned to your comment is SolarM60004.

Comment Date: July 1, 2009 17:01:55PM
Solar Energy Development PEIS
Comment ID: SolarM60004

First Name: Rachel
Middle Initial:
Last Name: Shaw
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I am disturbed that this project, touted as a key to saving the environment (in terms of climate) has been inadequately attentive to the environmental impact on the desert ecologies in the proposed sites. It may be easy to assume that desert lands are rocky barrens devoid of life, but this is far from the truth. These areas are fragile, biologically rich ecosystems that are literally irreplaceable. Given that there are many damaged lands - public and private - that would better suit the needs of this project, I strongly encourage you to relocate it away from these sensitive areas.

See the explanation at this link for more details:

http://theclade.faultline.org/index.php/site/article/interior_fast-tracks_big_solar_on_public_lands/

Thank you for your comment, Johanna Wald.

The comment tracking number that has been assigned to your comment is SolarM60005.

Comment Date: July 2, 2009 18:26:04PM
Solar Energy Development PEIS
Comment ID: SolarM60005

First Name: Johanna
Middle Initial: H
Last Name: Wald
Organization: Natural Resources Defense Council
Address: 111 Sutter Street
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94104
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: desert working group extension request.doc

Comment Submitted:

DESERT WORKING GROUP

July 2, 2009

Via Solar PEIS comment form and electronic mail

Linda Resseguie
Bureau of Land Management Washington Office

Dear Ms. Resseguie:

As you may know, we are an informal working group recently formed to examine ways to balance the need for timely development of utility-scale solar energy sources with the need to protect desert ecosystems, landscapes and species. Our group, which is currently focused on desert ecosystems and potential solar energy projects in California, includes representatives of solar energy companies, the electric utility sector, desert conservation groups, environmental groups and philanthropies. As we have told the Administration, including officials at the Interior Department, we are very supportive of the Bureau of Land Management's focus on potential study zones for the solar programmatic environmental impact statement (PEIS) and appreciate the opportunity, as part of this process, to identify solutions to renewable energy siting issues that can meet the Administration's climate goals while safeguarding the nation's valuable natural and cultural resources.

We write now to request an extension of 45 days to the comment period established for review of the Administration's plans for its solar program. Several of our participating organizations have interests in more than one state and need the additional time in order to prepare comments which reflect all of their respective interests. Even more significantly, we believe that with more time we will be able to prepare joint comments of this working group which will provide significant assistance on both substance and process to the BLM and the Interior Department as you move forward with this PEIS.

The members of our group fully recognize the urgent need to move forward to find appropriate areas for solar development. At the same time, we are agreed that we must take the time necessary to plan carefully and comprehensively and to select the right places that are both protective of desert ecosystems, landscapes, and species and are practical for solar energy development. Affording us the requested additional time at the beginning of this process will benefit all concerned in the long run and will further the Administration's climate change, natural resource protection and renewable energy goals.

Thank you in advance for consideration of this request.

Sincerely,



Ilene Anderson
Center for Biological Diversity

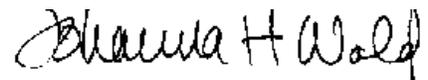


Rainer Aringhoff
Solar Millenium

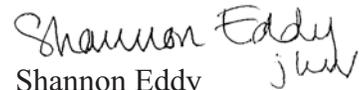
Linda Resseguie
July 2, 2009
Page 2


Kim Delfino
Defenders of Wildlife

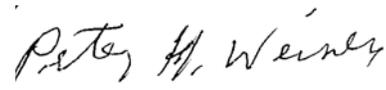

Arthur Haubenstock
BrightSource Energy

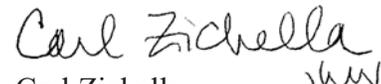

Johanna Wald
Natural Resources Defense Council


V. John White
Center for Renewable Energy Efficiency
and Renewable Technology


Shannon Eddy
Large-scale Solar Association


Wendy Pulling
Pacific Gas & Electric


Peter Weiner
Paul Hastings


Carl Zichella
Sierra Club

cc: Mike Pool, Acting BLM Director
Ashley Conrad-Saydah, Renewable Energy Project Manager, CA BLM

Thank you for your comment, Austin Puglisi.

The comment tracking number that has been assigned to your comment is SolarM60006.

Comment Date: July 4, 2009 18:34:49PM
Solar Energy Development PEIS
Comment ID: SolarM60006

First Name: Austin
Middle Initial:
Last Name: Puglisi
Organization:
Address:
Address 2:
Address 3:
City: Morongo Valley
State: CA
Zip:
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is the first of four comments I wish to make on the PEIS process.

This comment covers land use, water resources, ecological resources, and environmental justice.

Large tracts of the Mojave Desert have already been developed. Many plant and animal species are threatened or endangered as a result of range encroachment and habitat fragmentation. Industrial-scale solar projects will further stress these species, likely past the "tipping point" beyond which they cannot recover. Not nearly enough research has been done on desert ecosystems to know what effects development (on virtually all the Mojave flatlands) would have. In the great rush to give our public lands to energy companies for development, there has been much talk about speeding up the environmental review. We need more study, not less.

(1) More research should be done on the effects of deforestation. Desert vegetation and desert soil have been shown to absorb significant amounts of greenhouse gases. These studies are very recent and need to be expanded and duplicated so we know what we are losing before we lose it.

(2) Some policy-makers seem to have forgotten that the desert is a desert. Water is scarce. Already there is not enough to support current residential, agricultural, and industrial needs. Solar projects requiring water should be rejected if they can not demonstrate where that water will come from. If they are buying up water rights from others then they are creating a potentially devastating effect on local communities. Some rural citizens will lose their homes, or their farms, by Federal decree, so that urban citizens will have more energy.

(3) The flow of underground water and the extent of aquifers in the desert has not been fully documented or studied. Projects depending on new wells may end up dropping the water level so that other wells far from the project go dry. Fauna and flora may be disturbed many miles from the project. This needs to be considered. Projects on untouched desert lands must not be considered benign until proven harmful; they must be assumed harmful until proven benign.

(4) The cumulative effect of dozens of industrial-scale projects needs to be considered. One such development may have only a small effect on the desert ecosystem. But if evaluated only as individual projects, too many will certainly be approved.

(5) Projects must not be considered with the assumption that adequate transmission infrastructure is already in place. For example the maps provided for the California study area show a transmission corridor along the route of the LADWP's proposed "Green Path North" but this corridor does not currently exist. In many cases the need for construction of new high-voltage transmission lines would be more expensive, and more environmentally destructive, than the solar farms themselves. Proponents of these projects should not get a "pass" simply because another entity will be building the transmission lines.

In summary, we shouldn't "sacrifice" large tracts of desert when we don't know the effects of doing so. Many of the concerns outlined above would be minimized if the BLM were to prioritize local power generation (near point-of-use) with a distributed grid, and to limit new development to previously disturbed lands adjacent to existing power transmission lines. These areas exist. There will be political opposition to such a policy because some of that land is more expensive than the BLM's below-market-value fees, but policy changes on this scale need to be done based on what is right, not what is politically expedient.

Thank you for your comment, Austin Puglisi.

The comment tracking number that has been assigned to your comment is SolarM60007.

Comment Date: July 4, 2009 18:53:31PM
Solar Energy Development PEIS
Comment ID: SolarM60007

First Name: Austin
Middle Initial:
Last Name: Puglisi
Organization:
Address:
Address 2:
Address 3:
City: Morongo Valley
State: CA
Zip:
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is the second of four comments I wish to make on the PEIS process.

This comment covers land use, visual resources, socioeconomic resources, environmental justice, and health/safety.

American citizens who live in rural areas throughout the United States are being asked to pay a disproportionate cost of developing renewable energy. The residents of the deserts in California, Nevada, and Arizona are facing irreversible changes to their neighborhoods for little benefit.

"Visual resources" in the desert means much more than being able to look out our windows without seeing power lines. Most of the rural communities in the Mojave Desert, especially those near Joshua Tree National Park and Death Valley National Park, depend on tourism. Desert tourism depends entirely on stark beauty, wildlife not found elsewhere, and wide open vistas. All of these will be marred if industrial-scale solar projects are built on pristine desert land. The negative effects will extend far beyond the boundaries of the BLM lands under consideration. Activities that will be detrimentally impacted include camping, hiking, legal off-road vehicle riding, movie and television production, birdwatching, and visits by artists who find inspiration from the desert. Yet almost all of the power generated by these projects will be transmitted to Los Angeles, Las Vegas, and Phoenix.

Safety is also an issue of concern in the desert. Many of the proposed solar projects are on remote lands with little or no law enforcement. Already the BLM in California is unable to stem vandalism, theft, violence, and arson. When new roads (necessary for construction) open up even more remote areas, who will police them? When earthquakes, terrorist acts, or wildfire threaten the remote transmission lines, who will protect them?

Localized power generation would ensure that those who stand most to benefit from new power generation would be the ones to pay the true cost. A distributed power grid is also a more resilient one, less vulnerable to widespread outages.

In some situations this would require rooftop solar power, or feed-in tariffs without caps, or multiple medium-sized projects instead of a few giant ones. But it is the right thing to do.

Thank you for your comment, Austin Puglisi.

The comment tracking number that has been assigned to your comment is SolarM60008.

Comment Date: July 4, 2009 19:10:37PM
Solar Energy Development PEIS
Comment ID: SolarM60008

First Name: Austin
Middle Initial:
Last Name: Puglisi
Organization:
Address:
Address 2:
Address 3:
City: Morongo Valley
State: CA
Zip:
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is the third of four comments I wish to make on the PEIS process.

This comment specifically discusses one power transmission project, the LADWP's proposed "Green Path North" which would cross BLM land in the Mojave Desert.

While some policy-makers insist that this project is irrelevant to the Solar PEIS, they are wrong. Even a cursory review at the location of many proposed industrial-scale projects reveals that many of these projects are on, or very close to, the favored route (the only one LADWP has surveyed) for GPN. These projects would be useless without new high-voltage transmission lines, and GPN would be much less profitable for the City of Los Angeles if these projects were denied (as they should be).

Green Path North is a high-voltage power transmission project designed purportedly to carry geothermal energy (from as-yet unbuilt facilities) to Los Angeles. The segment under most dispute runs from a substation in North Palm Springs, California to Upland, California. There is an existing, established transmission corridor along Interstate I-10 which makes an almost direct link between these endpoints. The LADWP however wishes to build a much longer GPN through the community of Desert Hot Springs, through the Big Morongo Canyon Area of Critical Environmental Concern, across roadless desert mountains in Morongo Valley, through the historic hamlet of Pioneertown, through the privately owned Pioneertown Mountains Preserve, through more desert communities and the San Bernardino National Forest.

The LADWP has publically admitted that their priority in building this transmission project is so that they own the means of transmission. Another utility, Southern California Edison, has offered to upgrade carrying capacity via the existing corridor. The LADWP has, in public meetings, and on the record, said this is unacceptable because it doesn't match their business plan.

When determining appropriate siting for industrial-scale solar projects, the BLM should reject those that are not adjacent to or very near existing power transmission infrastructure. When determining if new transmission lines are necessary, especially when they involve new rights-of-way or energy corridors, the BLM needs to be very leery of accepting proponents' claims of "need". The LADWP WANTS to build GPN through untouched BLM lands; it does not NEED to do so. While the cost to LADWP may be higher to do things the right way, it is more fair and just than LADWP shifting the true cost onto rural communities that are not in LADWP's sphere of influence (and don't wish to be).

Thank you for your comment, Austin Puglisi.

The comment tracking number that has been assigned to your comment is SolarM60009.

Comment Date: July 4, 2009 19:27:12PM
Solar Energy Development PEIS
Comment ID: SolarM60009

First Name: Austin
Middle Initial:
Last Name: Puglisi
Organization:
Address:
Address 2:
Address 3:
City: Morongo Valley
State: CA
Zip:
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is the fourth and final comment I wish to make on the PEIS process.

This comment discusses a factor not mentioned on the Solar PEIS website, which is due process.

The residents, municipalites, business interests, and environmental groups based in the Mojave and Great Basin Deserts have been denied representation in the decision-making process.

While I am grateful for the opportunity to post comments to the BLM during this scoping period, it is no more of an opportunity than would be extended to a utility company based in China. The American citizens who have the most to lose from multiple industrial-scale energy projects (and the associated transmission lines which would need to be built) have had no say in which lands are being considered. Industry lobbyists, nonlocal environmental groups, and unelected public officials far from the desert are deciding our fate, while we sit and wonder.

Will high-voltage transmission lines cross our communities? Will we lose my lands to eminent domain because the BLM approved a project next door? Will tourists (and their money) still come to the desert? Will Hollywood still want to film in the desert? Will OHV riders tear up our private lands because they have lost their designated legal riding areas? Will there be enough water to grow our crops? Will the bighorn sheep and desert tortoise be sacrificed for someone else's vision of "the greater good"?

Climate change is a very real and a very immediate problem. Living in the hottest and driest part of the United States, we are very aware of the urgency with which we need to address climate change. But we are outraged that we have been unable to participate in finding solutions. Destroying the Mojave Desert in order to save it, without giving a voice to those who know it best, is sheer folly. We expect better from a Government that supposedly represents us.

Thank you for your comment, Peter Bray.

The comment tracking number that has been assigned to your comment is SolarM60010.

Comment Date: July 5, 2009 13:11:36PM
Solar Energy Development PEIS
Comment ID: SolarM60010

First Name: Peter
Middle Initial: J
Last Name: Bray
Organization:
Address: 3169 NE Irving St
Address 2:
Address 3:
City: Portland
State: OR
Zip: 97232
Country: USA
Email: misterbray@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Any fast-track energy development should only consider lands that are of minimal ecological value.

As such, the proposal to fast-track development of lands bordering Joshua Tree National Park is inappropriate.

Lands immediately bordering Joshua Tree NP provide an important buffer and transition zone for that ecosystem.

More rigorous environmental analysis than that afforded by fast-track status needs to be done before energy development on these sensitive lands.

Thank you for your comment, Jennifer Godfrey.

The comment tracking number that has been assigned to your comment is SolarM60011.

Comment Date: July 6, 2009 16:31:27PM
Solar Energy Development PEIS
Comment ID: SolarM60011

First Name: Jennifer
Middle Initial: G
Last Name: Godfrey
Organization: Citizen's Alliance for Wonder Valley
Address: 2954 Shelton Rd
Address 2:
Address 3:
City: Wonder Valley
State: CA
Zip: 92277
Country: USA
Email: jjjjjjjjj@wildblue.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

There is an awful lot of technical jargon to read through here. I can not at this time make an educated not informed comment in regards to this/these projects. I find my home is in the middle of your solar thermal area on the eastern side of Twentynine Palms and the MCAGCC. None of the neighbors understand or even know about our properties being eaten up by this energy rush. I find that offensive at best because as the wife of a US Marine and many of my neighbors service both currently Active and retired alike fought for our rights to due process. Please check with the entity that provides you with information for notice because none of the people in these areas have a clue.

Would you please consider attending one of our CAWV meetings to explain to our area the potential impact so that we may be able to comment on all this?? We have some legal issues going on currently brought to our attention by the MCAGCC's proposed expansion and apparently we have the same issues here. I have seen nothing in our local papers in the legal notice column of any sort. The Desert Trail qualifies as "newspaper of record" in this area.

Please contact me @ jjjjjjjjj@wildblue.net so that we can do this properly and inform the public that has much to loose in this area.

Thank you,

Jennifer Godfrey

Thank you for your comment, Joe Ross.

The comment tracking number that has been assigned to your comment is SolarM60012.

Comment Date: July 9, 2009 18:11:40PM
Solar Energy Development PEIS
Comment ID: SolarM60012

First Name: Joe
Middle Initial: V
Last Name: Ross
Organization: self
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

11 July 2009

Hello,

Thanks much for the info on the 24 tracts of public land where solar energy applications will be given priority processing by BLM. I caught the breaking news in the Riverside Press-Enterprise.

Below are my personal comments and do not represent the views, interests, or positions of any business or organization with which I am currently or formerly affiliated. I also request that my personal address be withheld from public disclosure.

With 52% of the total 676,048 acres within California, I hope that residents of this states will take notice and step forward with their comments.

With regard to the "Notice of Proposed Withdrawal and Opportunity for Public Meeting," published in the Federal Register, I believe that it's very important (nearly imperative) that the BLM Director agree to holding various public meetings to inform, educate, and listen to the public's concerns about the 2-year segregation and proposed withdrawal of the 676,048 acres of public lands in the six states. The EIS should explain how these areas were configured to minimize the amount of land involved.

My recommendation would be for meetings in each of the six states impacted. Within California, locations should be Barstow, Yucca Valley (or 29 Palms), Palm Springs (or Indio) and El Centro.

I've looked at maps for each of the 4 priority sites in California. At 202,295 acres, Riverside East is very extensive, and I'm sure that there are some resource conflicts there, esp. in light of its proximity to Joshua Tree National Park. The 109,642-acre Iron Mountain site correlates with Ward Valley between the Turtle and Old Woman Mountains. Danby dry lake is within the solar study area, and that entire area makes sense to me for priority development. At 26,282 acres, the Pisgah area is well situated in flat terrain and near existing transmission facilities. I cannot comment on the 12,830-acre Imperial East site. Other authorized uses at all sites must be fully analyzed.

Within BLM's notice of proposed withdrawal "and opportunity for public meeting" is a statement that says: "The BLM's petition for withdrawal has been approved by the Secretary of the Interior." That is a statement that could be confusing and misleading to the public. It could be construed as pre-decisional. Please clarify if it just means that BLM has been given the green light to publish this notice and segregate the public lands pending further study...or if, in fact, the Secretary of the Interior has already approved th withdrawal prior to public input and meetings.

I encourage BLM and DOE to be more proactive in contacting key statewide media outlets (newspaper, radio, television) to build public understanding of the Programmatic EIS process and announce key dates for public involvement. I hope that you'll consider issuing regular project updates and news releases to media. With various other similar initiative and projects currently being

undertaken, I sense that the public may not be fully aware or understand how they interrelate.

Also, it appears that the 24 solar study areas will be subjected to a higher level of NEPA analysis. It is somewhat a misnomer to continue calling the EIS a programmatic document. Of particular importance is the need for adequate biological and cultural resource surveys, reports and consultation with the U.S. Fish & Wildlife Service, California State Historic Preservation Office, and Native American Tribes before any "ground-breaking" activities commence.

I suggest that BLM and DOE do more community outreach and host public meetings to build public awareness and encourage discussion about the EIS. While I appreciate BLM/DOE's desire to keep the process moving and to accelerate development, I also feel that a few strategically located open house public meetings are needed to inform, educate and more thoroughly involve the public in the process. As your goals should be for open government, transparent decisionmaking, public engagement and understanding, I encourage you to hold open houses regularly.

I appreciate the leadership that BLM, DOE and the State of California are showing on climate, global warming and alternative renewable energy issues. In 2002, California enacted a Renewable Portfolio Standard requiring 20 percent of the State's electricity to be from renewable sources. In 2006, California's Global Warming Solutions Act ("AB 32") stated that California is required to reduce its global warming emissions to 1990 levels by 2020. This equates to nearly a 30% cut from existing levels. Then in 2008, Governor Schwarzenegger issued Executive Order S-14-08 raising California's Renewable Portfolio Standard to 33 percent by 2020 and calling on the State to reduce its global warming emissions 80 percent below 1990 levels by 2050. All of these components of the State's energy development leadership should be acknowledged in the EIS.

I am concerned about inconsistencies between this and other alternative energy or land use planning processes. One example is that CREZ maps developed as part of the Renewable Energy Transmission Initiative (RETI) don't necessarily jive with those from this process. RETI maps are viewable at:
<http://www.energy.ca.gov/reti/index.html>

With the same agencies collaborating and working hand-in-hand on both projects, it would more comprehensible and palatable for the public to see the same mapped transmission corridors, facility siting development areas, conclusions and recommendations coming out of both such projects.

The EIS should further expound on how the potential transmission corridors will be considered in the future under the California Energy Commission's SB1059 designation process.

Your EIS should be clear in its relationship and conformity with the Final Programmatic EIS for wind development.

In the same vein, the EIS report should acknowledge how consistency will be obtained with other planning efforts in the region (e.g. Western renewable Energy Zones in a 17-state region, Westwide Energy Corridors EIS). BLM, in cooperation with the Forest Service and DOE, recently completed the Westwide Energy Corridor Programmatic Environmental Impact Statement process, pursuant to the Energy Policy Act of 2005. The Solar EIS should acknowledge, ensure consistency and build upon that effort.

You can see why the public may be confused with so many planning efforts being undertaken, many with apparent similar and related goals and objectives. It's unfortunate that the public is burning out from infomania, data smog and attentional overload. Due to the sheer bulk of information constantly bombarding the public, many of these important planning efforts may not be getting the due diligence, scrutiny and attention they deserve. I encourage you and other agencies to try harder to coordinate, eliminate redundant efforts, jointly inform and educate. That will help with info-overload and cyber-indigestion being experienced by all.

Finally, I would particularly like to see more from BLM and DOE in terms of alternative energy development leadership and specific recommendations for dealing with bureaucratic red tape, procedures and process predicament that could hinder energy development. Siting, permitting, financing, and constructing projects and transmission is a very complex process that requires substantial coordination among various agencies. Certainly, added financial and human resources will help to expedite permitting.

As part of the prioritization, will any shortcuts be identified for commercial solar power or photovoltaic electric generating facilities to avoid or reduce compliance with the BLM's planning, environmental and right-of-way application requirements?

Will adequate funding and staffing be provided for the applications to be properly reviewed, with field work planned when necessary?

Will most solar development right-of-way applications be processed as Category 6, full cost recovery applications? Currently, solar energy right-of-way applications and authorizations are subject to appropriate cost recovery and rental payments required by 43 CFR 2804.14, 43 CFR 2805.16, and 43 CFR 2806.10, and the bonding requirements of 43 CFR 2805.12(g). If some flexibility and discretion can be allowed without adverse impacts, I'm all for it and supportive. For example, if right-of-way authorizations and Plan of Development can be processed simultaneously, that would be more efficient and result in overall time-savings with serious detriment.

I'm a strong opponent to "analysis paralysis." Determine what needs to be done, develop an action plan and get on with it. I would like to see an all-encompassing coordinated plan for all applicable agencies to efficiently work together to avoid redundancies and cut the red tape without ignoring laws, regulations, and their mandated responsibilities.

Look for additional ways to streamline the process and be consistent with Departmental policy on intergovernmental cooperation. For example, it may be possible to combine the required environmental review process for a solar energy development project with other required State or local environmental requirements or project clearance actions.

Will the right-of-way authorizations contain appropriate stipulations relating to all aspects of project development including such items as road construction and maintenance, vegetation removal, natural, cultural and biological resources mitigation and monitoring, and site reclamation?

Will approved and completed Plans of Development (POD) be required for construction and operation of the solar facility prior to beginning construction?

Will bonds be required for solar energy development right-of-way grants to ensure compliance with the terms and conditions of the authorization and the requirements of the regulations, including reclamation?

What will the terms be for the solar energy authorizations for commercial facilities? They should not exceed the design life of the project, typically 30 years.

What will the authorizations include relative to renewals?

Will other compatible uses be authorized in the priority (and other) solar development areas? These seem unlikely due to the intensive use of the site for siting facility equipment and transmission.

I'm a firm believer that the solar energy industry should do more to educate as well as promote themselves. Right-of-way holders should be required, through terms and conditions of the right-of-way authorization, to work with the BLM, DOE and State and local agencies to increase public acceptance and awareness of the benefits of solar energy development by providing information and public viewing areas at safe locations near the development. Working together, positive messages about the responsible use of renewable resources and the multiple resource use on public lands can be provided.

How will the EIS address Section 102(2)(B) of NEPA (along with 40 CFR 1502.23) that deals with "cost-benefit analysis"? I hope to see diligent analysis focus on many areas for economic analysis (cost & revenue analysis, value analysis, decision rules, behavior predictions, budget & fiscal impacts, economic activity impacts, changes to rural lifestyles and attitudes, economic & social structural changes associated with solar energy development).

Another issue that needs to be addressed is the impact to wildlife (specifically avian species) as a result of "tower-kill" (esp. when such technology as the power tower is used).

Regarding development of reasonable alternatives ("practical or feasible from the technical and economic standpoint and using common sense"), I'd like to suggest an additional one for analysis. Because these areas within the six states have become so heavily allocated for land uses, I would like to see an alternative that also analyzes the potential for compatible solar development in areas that are currently not available for such development. This would include designated wilderness areas where flat terrain exists and where visitor use statistics may indicate that the potential undesignation of wilderness (and associated energy development) may be in the national interest (based on the President's priority agenda and Executive Order).

Further, such an alternative should document and analyze opportunities to work with the various military services that have large acreages of withdrawn lands in arid and desert areas. This alternative would identify opportunities for compatible development on areas already allocated or withdrawn for other uses. I have a gut feeling that potential for such compatibility may exist, and the BLM and DOE should make stronger efforts to coordinate with the wilderness, wildlife advocates and DOD for full use of wilderness and military lands to optimize solar energy development where it can co-exist with other uses.

Additional utility corridors should be minimized, and the EIS should clearly establish (perhaps with varying alternatives showing the range of impacts) by using existing corridors vs. development of new ones.

Impact analysis should differentiate between technologies that use water-cooled vs. air-cooled systems. One example of a question to be answered is: how can the policies subsequently developed be written to encourage a less-impacting technology over one that is more adverse in nature?

With the fast growth of this industry (and related technology), I question if your 20-year timeframe is appropriate. I believe that a better planning cycle/horizon might be 10 years, and I would like you to consider this for your programmatic analysis period (with the option to update or supplement in the future if needed).

I encourage the promulgation of Memos of Understanding between BLM and local water districts to incorporate best management practices into all forms of energy development.

Additional issues within the scope of the EIS required by NEPA for solar energy development projects include, but are not limited to:

** all aspects of the solar project, including direct, indirect, and cumulative effects of the proposed action.

** compliance requirements with the Endangered Species Act, Migratory Bird Treaty Act, National Historic Preservation Act, and other applicable laws and regulations.

** installation and maintenance of solar collectors, water for steam generation and cooling purposes, oil or gas used by backup generators, thermal or electrical storage, turbines or engines, access roads and electrical inverters and transmission facilities.

** Scope and level of site clearance should include the areas of proposed surface disturbance and areas potentially affected by the project.

** The level of analysis will reflect the amount of land needed for the solar energy collection and associated support facilities, amount of surface to be disturbed, water requirements, and potential impacts on wildlife and other resources.

The BLM and DOE should be commended for their identification and NEPA-compliant environmental review of priority development areas within the context of their great programmatic EIS for solar development in a 6-state region.

While I receive News.Bytes and info via various ListServes, please include me on your mailing list for future information and contact as the EIS progresses. I can be reached via email to [REDACTED]

Please note that these comments are mine alone, and they do not represent the views of any organization, business or association with which I am affiliated.

Thanks very much for your consideration.

Best wishes,
Joe Ross

[REDACTED]

Thank you for your comment, William Solomon.

The comment tracking number that has been assigned to your comment is SolarM60013.

Comment Date: July 9, 2009 19:04:56PM
Solar Energy Development PEIS
Comment ID: SolarM60013

First Name: William
Middle Initial: A
Last Name: Solomon
Organization:
Address:
Address 2:
Address 3:
City: Shipman
State: VA
Zip: 22971
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Because I live so far from the subject areas, I have little personal knowledge of the possible issues there. However, I feel that the currently mandated comment period is far too short to allow individuals and organizations to properly respond. Also, the BLM should perform a proper environmental study for any proposed project regardless of whether or not commentators raise particular concerns about it.
WAS

Thank you for your comment, Richard Williams.

The comment tracking number that has been assigned to your comment is SolarM60014.

Comment Date: July 10, 2009 10:21:27AM

Solar Energy Development PEIS

Comment ID: SolarM60014

First Name: Richard

Middle Initial:

Last Name: Williams

Organization: D-37

Address: 7533 oakwood ave

Address 2:

Address 3:

City: Hesperia

State: CA

Zip: 92345

Country: USA

Email: thehbmccowboy@verizon.net

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

To whom it may concern, I am a every weekend rider and desert racer as well as my two boys, lossing this land to a bunch off solar power, that will not even supply power to the High desert would be devestating to our sport and the future of our kids. surly there is other locations that this power plant can be put. Thanks for your time

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60015.

Comment Date: July 10, 2009 12:06:30PM
Solar Energy Development PEIS
Comment ID: SolarM60015

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

The areas of concern for development are used by a lot of private personal for outdoor enjoyment. I feel the loss of this use will hurt the community overhaul by taking away the economic gain through off road users. These areas are remote at best and do not have a large scale economy, with the influx off outside outdoor enthusiast, their economy grows. Please take this into consideration before developing an area that takes away life and does not allow the community to share the great outdoors with their children.

Thank you for your comment, Donn Nay.

The comment tracking number that has been assigned to your comment is SolarM60016.

Comment Date: July 10, 2009 12:29:49PM
Solar Energy Development PEIS
Comment ID: SolarM60016

First Name: Donn
Middle Initial: E
Last Name: Nay
Organization:
Address: 1820 N. Naomi
Address 2:
Address 3:
City: Burbank
State: CA
Zip: 91505
Country: USA
Email: nays5@sbcglobal.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I strongly oppose the use of this area for solar energy. This area is used by many off road recreationists and there are too few acres available now for this activity. With Johnson Valley being threatened for closure by the Marines the loss of the Big Rock area would be devastating. While I understand the need for clean energy I cannot support the removal of open land for this purpose.

Thank you for your comment, Rachel McMahon.

The comment tracking number that has been assigned to your comment is SolarM60017.

Comment Date: July 10, 2009 14:23:27PM
Solar Energy Development PEIS
Comment ID: SolarM60017

First Name: Rachel
Middle Initial:
Last Name: McMahon
Organization: Solar Millennium, LLC
Address: 1625 Shattuck Ave., Suite 270
Address 2:
Address 3:
City: Berkeley
State: CA
Zip: 947091161
Country: USA
Email: mcmahon@solarmillennium.com
Privacy Preference: Don't withhold name or address from public record
Attachment: BLM SESA - request for extension of comment period.doc

Comment Submitted:

Solar Millennium AG has been developing parabolic trough solar power plants since the 1980s, including Europe's first parabolic trough plants – two 50 MW plants in Spain that are have achieved operation and one additional 50 MW plant that is in commissioning. We are active worldwide with a focus in Spain, China, North Africa, and the Southwestern United States, with a specific focus in California.

Solar Millennium appreciates the opportunity to review and comment on the BLM's proposed Solar Energy Study Areas released on June 29, 2009. We agree it is important for renewable energy planning and efforts to move forward expeditiously to ensure success of President Obama's renewable energy and climate change goals. However, we are concerned that the current 30 day comment period will not allow Solar Millennium sufficient time to fully consider the impacts of the proposed areas and provide useful comments to the BLM. Therefore, Solar Millennium respectfully requests an extension of the comment period by at least 45 days.

Thank you for your attention to this request.

Sincerely,

Rachel McMahon
Director, Government Affairs - Project Development

July 10, 2009

SENT VIA ELECTRONIC MAIL and ON-LINE COMMENT FORM

Linda Resseguie
Bureau of Land Management
Washington, D.C.
Linda_Resseguie@blm.gov

Request for Additional Time to Comment on Solar Energy Study Areas

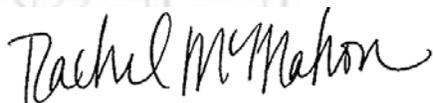
Dear Ms. Resseguie –

Solar Millennium AG has been developing parabolic trough solar power plants since the 1980s, including Europe's first parabolic trough plants – two 50 MW plants in Spain that are have achieved operation and one additional 50 MW plant that is in commissioning. We are active worldwide with a focus in Spain, China, North Africa, and the Southwestern United States, with a specific focus in California.

Solar Millennium appreciates the opportunity to review and comment on the BLM's proposed Solar Energy Study Areas released on June 29, 2009. We agree it is important for renewable energy planning and efforts to move forward expeditiously to ensure success of President Obama's renewable energy and climate change goals. However, we are concerned that the current 30 day comment period will not allow Solar Millennium sufficient time to fully consider the impacts of the proposed areas and provide useful comments to the BLM. Therefore, Solar Millennium respectfully requests an extension of the comment period by at least 45 days.

Thank you for your attention to this request.

Sincerely,



Rachel McMahon
Director, Government Affairs – Project Development

cc: Mike Pool, Acting Director, BLM
Steve Black, Counselor to the Secretary
Ashley Conrad-Saydah, Renewable Energy Project Manager, CA BLM

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60018.

Comment Date: July 10, 2009 15:29:30PM

Solar Energy Development PEIS

Comment ID: SolarM60018

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

On your map for California, why is the proposed route for the LADWP's "Green Path North" shown as an existing designated energy transmission corridor? It is not so. In fact there are two nature preserves, an Area of Critical Environmental Concern, and five wildlife linkages along that route.

This misleading map makes solar and wind projects in the vicinity of the false corridor look more economically feasible and environmentally sound than they really are.

Thank you for your comment, daisy swadesh.

The comment tracking number that has been assigned to your comment is SolarM60019.

Comment Date: July 10, 2009 16:32:25PM
Solar Energy Development PEIS
Comment ID: SolarM60019

First Name: daisy
Middle Initial:
Last Name: swadesh
Organization:
Address: 1001 walnut dr.
Address 2:
Address 3:
City: farmington
State: NM
Zip: 87401
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

A central question for solar energy production is how to have the least negative impact on the environment. The most sensible place to put solar collectors is on roof tops of houses in the suburbs of cities, roofs that are otherwise unoccupied space.

Accurate measurement of the amount of energy produced might be complicated, but this would be more than offset by the residents using the energy their own system produces first, in the process reducing energy loss in transmission over distances.

It would also save the enormous amount of land occupied by conventional commercial solar collectors.

Of course this would not entail BLM land, but it would save BLM land for more environmentally sound uses.

Thank you for your comment, james minyard.

The comment tracking number that has been assigned to your comment is SolarM60020.

Comment Date: July 10, 2009 22:56:56PM
Solar Energy Development PEIS
Comment ID: SolarM60020

First Name: james
Middle Initial: e
Last Name: minyard
Organization: F.O.G.R.
Address: 6878 GRAND AVE.
Address 2:
Address 3:
City: yucca valley
State: CA
Zip: 92284
Country: USA
Email: jim2kim2@verizon.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

dont take the last riding ara!!!
the soler and wind thing is a good. but thear is a lot of derest out thear.
jim m

Thank you for your comment, David Cole.

The comment tracking number that has been assigned to your comment is SolarM60021.

Comment Date: July 11, 2009 09:45:34AM
Solar Energy Development PEIS
Comment ID: SolarM60021

First Name: David
Middle Initial: B
Last Name: Cole
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

While I understand the need to develop and advance alternative energy projects, I believe we need to balance the socio-economic and economic needs of the community as well. One of the areas in question, near Giant Rock, is just an example. Thousands of residents, recreationalists, and tourists enjoy this particular area of the desert. It has historical significance, not only for lost Indian cultures, but for our contemporary generations as well.

I am using Giant Rock and the Landers area as an example, but implore you to look at the impact you have on the families that enjoy all of these areas before you act.

Regards

Thank you for your comment, Scott Hartman.

The comment tracking number that has been assigned to your comment is SolarM60022.

Comment Date: July 11, 2009 14:32:54PM
Solar Energy Development PEIS
Comment ID: SolarM60022

First Name: Scott
Middle Initial: A
Last Name: Hartman
Organization:
Address: 621 N Dearborn St
Address 2:
Address 3:
City: Redlands
State: CA
Zip: 92374
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Giant rock is a great place to play and ride. I grew up there and even saw the inside of the rock before it was filled in a number of years ago. We had parties there, rode there, camped and had all kinds of fun. My family now ride bikes, buggies and jeeps out there all the time as my inlaws live just right up the road. It would be a travesty if it were closed to the public and taken over by industry.

Thank you for your comment, Richard Wohlers.

The comment tracking number that has been assigned to your comment is SolarM60023.

Comment Date: July 11, 2009 18:50:06PM
Solar Energy Development PEIS
Comment ID: SolarM60023

First Name: Richard
Middle Initial: F
Last Name: Wohlers
Organization: Friends of Johnson Valley
Address: 13382 Waco Ln
Address 2:
Address 3:
City: Apple Valley
State: CA
Zip: 92308
Country: USA
Email: rfwohlers@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

No to the solar development.

I think it is time that solar and wind power generation must not be developed on public lands. Public lands for the majority of users are diminishing due to the increasing amount of wilderness areas.

Thank you for your comment, Andrew McDaniel.

The comment tracking number that has been assigned to your comment is SolarM60024.

Comment Date: July 11, 2009 19:54:22PM
Solar Energy Development PEIS
Comment ID: SolarM60024

First Name: Andrew
Middle Initial:
Last Name: McDaniel
Organization: District 37
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please do not close down another OHV area, obtain land that is not open to OHV and is not being used for anything. I do like the fact you are utilizing alternative energy but do it in a way that does not effect others recreation.

Thank You for your time

Thank you for your comment, Anna Fernandez.

The comment tracking number that has been assigned to your comment is SolarM60025.

Comment Date: July 11, 2009 19:57:23PM
Solar Energy Development PEIS
Comment ID: SolarM60025

First Name: Anna
Middle Initial: M
Last Name: Fernandez
Organization: District 37
Address: 33181 Windtree Ave
Address 2:
Address 3:
City: Wildomar
State: CA
Zip: 92595
Country: USA
Email: miekfernandez@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To whom it may concern:

Why is it when a new energy project, what ever it is, is needed, areas belonging to off-road use seems to be the only place the project should go? Ms Feinstein has locked up the state of California with a gazillion acres of wilderness, why can't you target those areas? I'm sure the critters won't mind. I'm beginning to feel a little discriminated against. Or maybe it's just a subtle way of doing away with our sport all together. You wouldn't be doing that, would you? Look, leave the open areas alone, this is a big state, find another place. The greenies should love you, go to the wilderness, atleast it will keep the people from messing with the equipment since we're not allowed in those areas.

Anna Fernandez

Thank you for your comment, Chris Schutt.

The comment tracking number that has been assigned to your comment is SolarM60026.

Comment Date: July 11, 2009 20:18:59PM
Solar Energy Development PEIS
Comment ID: SolarM60026

First Name: Chris
Middle Initial:
Last Name: Schutt
Organization:
Address: 450 E. Live Oak Ave. #32
Address 2:
Address 3:
City: Arcadia
State: CA
Zip: 91006
Country: USA
Email: lab_227@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please take your solar projects elsewhere. This area is important to many, and has alot of history that will be negatively impacted should this plan be implemented.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60027.

Comment Date: July 12, 2009 03:04:36AM

Solar Energy Development PEIS

Comment ID: SolarM60027

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address: [Withheld by requestor]

Address 2:

Address 3:

City: [Withheld by requestor]

State: [Withheld by requestor]

Zip: [Withheld by requestor]

Country: [Withheld by requestor]

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

To whom it may concern,

I strongly dislike the proposed plan of solar development in this area due to the destruction of historical objects in the area. This is including, but not limited to Giant Rock.

Thank you for your comment, Steve Parker.

The comment tracking number that has been assigned to your comment is SolarM60028.

Comment Date: July 12, 2009 10:35:28AM
Solar Energy Development PEIS
Comment ID: SolarM60028

First Name: Steve
Middle Initial: M
Last Name: Parker
Organization:
Address: 6210 Airway Ave
Address 2:
Address 3:
City: Yucca Valley
State: CA
Zip: 92284
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I highly oppose having any wind/solar plants located anywhere near or at the Landers/Giant Rock/Johnson Valley areas EVER! These places must never change their current designation of use. Do not take away public lands that currently have designated public uses. Do not run us out of our OWN backyards. These places also have high historic values as well. Besides, these areas are bordering residential communities. Keep these proposed power plants at least 100 miles away from anyone's backyard. I'm all for alternative power, but it needs to be far enough away where it does not visually impact the residing public, nor take away our current rights to enjoy our local backyards as they are currently designated.

Signed,
Steve Parker

Thank you for your comment, Daniel gomez.

The comment tracking number that has been assigned to your comment is SolarM60029.

Comment Date: July 12, 2009 12:01:44PM
Solar Energy Development PEIS
Comment ID: SolarM60029

First Name: Daniel
Middle Initial: l
Last Name: gomez
Organization: gold coast cruisers
Address: 1587 Sequan Ct.
Address 2:
Address 3:
City: Camarillo
State: CA
Zip: 93015
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please reconsider the impact of constructing a solar system here at Giant Rock. I am sure there are other areas that this can be done with minimal impact on local tourism and access to off road areas.

Thank you for your comment, DJ HARMON.

The comment tracking number that has been assigned to your comment is SolarM60030.

Comment Date: July 12, 2009 12:10:49PM
Solar Energy Development PEIS
Comment ID: SolarM60030

First Name: DJ
Middle Initial:
Last Name: HARMON
Organization: PIRATE4X4
Address:
Address 2:
Address 3:
City: PALM SPRINGS
State: CA
Zip: 92264
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

As much as I agree with alternative power. It would be unfortunate to see Giant Rock closed to the public. Giant Rock has a rich history dating back to Native Indians using it for a shelter. There must be a way to keep it open to the public.

DJ Harmon

Thank you for your comment, Chris Stover.

The comment tracking number that has been assigned to your comment is SolarM60031.

Comment Date: July 12, 2009 12:31:25PM
Solar Energy Development PEIS
Comment ID: SolarM60031

First Name: Chris
Middle Initial:
Last Name: Stover
Organization:
Address: 1328 12th St.
Address 2:
Address 3:
City: Los Osos
State: CA
Zip: 93402
Country: USA
Email: stovertileanddesign@charter.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am all for alternative energy, but I do not believe in it hendering us from public lands and visiting sites that have such a long history. Please consider this when thinking of the area of "Giant Rock". While I have not had the opportunity to go visit it yet with my family, I have heard and read quite a lot about it, and hope to visit it soon. It would be a shame if this area was cut off to the public due to alternative energy.

Thank you for your time,
Chris Stover

Thank you for your comment, william schultz.

The comment tracking number that has been assigned to your comment is SolarM60032.

Comment Date: July 12, 2009 12:41:36PM
Solar Energy Development PEIS
Comment ID: SolarM60032

First Name: william
Middle Initial:
Last Name: schultz
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would like to ask that this PEIS consider using another area besides Giant Rock.

This is a historical site that I wish to visit with my family in the future, it has historical significance for us and American Indians, and there are other alternatives that could satisfy your requirements.

Thank you.

Thank you for your comment, Robert Usnick.

The comment tracking number that has been assigned to your comment is SolarM60033.

Comment Date: July 12, 2009 14:34:11PM
Solar Energy Development PEIS
Comment ID: SolarM60033

First Name: Robert
Middle Initial: S
Last Name: Usnick
Organization:
Address: 247 Buhman Dr
Address 2:
Address 3:
City: Fayetteville
State: NC
Zip: 28314
Country: USA
Email: r_usnick@msn.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

There has to be a way to push forward with alternate energy production without taking away public land. There is much left anymore.

Thank you for your comment, Shawn Ceeko.

The comment tracking number that has been assigned to your comment is SolarM60034.

Comment Date: July 12, 2009 14:35:16PM
Solar Energy Development PEIS
Comment ID: SolarM60034

First Name: Shawn
Middle Initial:
Last Name: Ceeko
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please keep public lands public and open to the public. I understand the need to seek out alternative methods for power, and this may require the use of public lands, but lets not forget that this other source of power is for the public and is gained from public lands. Please do not bar the average person, hikers, bikers, campers, OHV enthusiast from accessing the public lands by taking them away for the "greater good of all".

These people are the "greater good" and its our land. Yes I know big business has piles of money and will make piles of money off of these people so lets not forget that you should want to take care of those who take care of you. Keep public lands public.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60035.

Comment Date: July 12, 2009 14:42:14PM
Solar Energy Development PEIS
Comment ID: SolarM60035

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization: USMC
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

To whom it may concern,

While the expanded use of Solar Energy can help with the soaring costs of traditional fuels, it doesn't mean that we should be putting sets of panels all over the various areas of the southwest. There should not be any panels emplaced in an area that is known or deemed to be of historical significance. Through the use of proper planning and intelligent site selection, solar panels can be very beneficial. Solar panels erected without any consideration to the historical value of an area or the traditional use of an area just creaes an eyesore. Thank you for your time.

Sincerely,



Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60036.

Comment Date: July 12, 2009 15:10:59PM
Solar Energy Development PEIS
Comment ID: SolarM60036

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

The Giant Rock, Landers and Jhonson Valley areas are important recreation destinations for all of southernCalifornia.
Please Keep energy production facilities out of these areas.

Thank You



Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60037.

Comment Date: July 12, 2009 15:23:42PM

Solar Energy Development PEIS

Comment ID: SolarM60037

First Name: [Withheld by requestor]

Middle Initial: [Withheld by requestor]

Last Name: [Withheld by requestor]

Organization: Pirate4x4

Address:

Address 2:

Address 3:

City:

State: [Withheld by requestor]

Zip:

Country: [Withheld by requestor]

Email: [Withheld by requestor]

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

Giant rock is a great place to play and ride, so please dont close it down.

Thank you for your comment, Stephen Forsman.

The comment tracking number that has been assigned to your comment is SolarM60038.

Comment Date: July 13, 2009 13:05:16PM

Solar Energy Development PEIS

Comment ID: SolarM60038

First Name: Stephen

Middle Initial: C

Last Name: Forsman

Organization:

Address: 13410 58th Dr NE

Address 2:

Address 3:

City: Marysville

State: WA

Zip: 98271

Country: USA

Email: stepfor@hotmail.com

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

Why does the government keep closing land used by recreational users. There are fewer places to play and you making those even fewer. This leads to overuse of any areas left over and also leads to less people being able to recreate as there are no longer available destinations to visit.

Thank you for your comment, Thomas Naylor.

The comment tracking number that has been assigned to your comment is SolarM60039.

Comment Date: July 13, 2009 13:15:00PM
Solar Energy Development PEIS
Comment ID: SolarM60039

First Name: Thomas
Middle Initial: A
Last Name: Naylor
Organization:
Address: PO BOX 1411
Address 2:
Address 3:
City: Fairplay
State: CO
Zip: 80440
Country: USA
Email: bbigtn@wispertel.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please do not take over the Giant Rock area for some solar project. Find somewhere in the middle of nowhere that people don't use, which should not be that hard. Thanks, Tom N

Thank you for your comment, Paul Immoos.

The comment tracking number that has been assigned to your comment is SolarM60040.

Comment Date: July 13, 2009 13:17:30PM
Solar Energy Development PEIS
Comment ID: SolarM60040

First Name: Paul
Middle Initial:
Last Name: Immoos
Organization:
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip:
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please don't grab and close this land. There is alot of history here and it also is an enjoyable place for many recreationalists. There are currently too many land closures going on around the country, it would be a shame to see another.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60041.

Comment Date: July 13, 2009 13:22:25PM

Solar Energy Development PEIS

Comment ID: SolarM60041

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

I am in the power industry and understand the push for alternative means for power. I do not understand the need to target areas where Families recreate. There have to be better options than taking what little land is left for public use. Outdoor activities locations are disappearing at an alarming rate and I think by using BLM land to build new facilities only makes the situation worse.
Surely there are more oppurtunities in other areas where you wont directly affect people.

Thank you for your comment, Nicholas Cooper.

The comment tracking number that has been assigned to your comment is SolarM60042.

Comment Date: July 13, 2009 13:23:03PM
Solar Energy Development PEIS
Comment ID: SolarM60042

First Name: Nicholas
Middle Initial: R
Last Name: Cooper
Organization:
Address: 225 T Short Ln
Address 2:
Address 3:
City: Cookeville
State: TN
Zip: 38501
Country: USA
Email: eat.sleep.wheel@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I firmly believe that closing and confiscating public recreational lands is a step in the wrong direction. Yes, I am from Tennessee but I hope to explore the southwest in the near future and all the recreational opportunity it has to offer. Please find other areas that are not a known recreational area for development.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60043.

Comment Date: July 13, 2009 13:39:10PM
Solar Energy Development PEIS
Comment ID: SolarM60043

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

Near Giant Rock and all the land between spy mt. and goat mt. many off roader and camper use Giant Rock and are able to access Johnson Valley OHV area easily. By closing down this area you closing access to thousands of people yearly. I understand the need for new and clean energy, but isn't there another area that could be used just as efficiently? Thank you for taking the time out to read this.

Thank you for your comment, Joshua Kordasiewicz.

The comment tracking number that has been assigned to your comment is SolarM60044.

Comment Date: July 13, 2009 13:46:31PM
Solar Energy Development PEIS
Comment ID: SolarM60044

First Name: Joshua
Middle Initial:
Last Name: Kordasiewicz
Organization:
Address: 4718 Aragon Drive
Address 2:
Address 3:
City: San Diego
State: CA
Zip: 92115
Country: USA
Email: j.kordasiewicz@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I have reviewed the maps and information presented in the study. It appears to me a vast amount of public land stands to be taken over for use in producing solar energies. As a member of the Off Highway Vehicle user group this concerns me. I would hate to lose more of our ever dwindling public land that is available to use for recreation. It's also not a simple matter of designating land elsewhere as the areas in California are unique and cannot be replaced. Preservation of these areas as they stand now should be of the utmost importance.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60045.

Comment Date: July 13, 2009 13:51:35PM
Solar Energy Development PEIS
Comment ID: SolarM60045

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

DO NOT close this popular recreational spot for another giant solar farm.

put the solar on BUILDINGS where the roofs are doing NOTHING. DO NOT use our public lands for this agenda.

Thank you for your comment, Richard Klein.

The comment tracking number that has been assigned to your comment is SolarM60046.

Comment Date: July 13, 2009 14:12:53PM
Solar Energy Development PEIS
Comment ID: SolarM60046

First Name: Richard
Middle Initial: C
Last Name: Klein
Organization: W.E.ROCK
Address: 920 Hillcrest
Address 2:
Address 3:
City: Placerville
State: CA
Zip: 95667
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

As a user of of open lands in Southern Calif. I take exception to everyone trying to grab up what land is left to us, the general public. Recreation is an important staple of life for many american's, stop screwing with our recreational areas....

Thank you,

Thank you for your comment, Brian Rector.

The comment tracking number that has been assigned to your comment is SolarM60047.

Comment Date: July 13, 2009 14:15:22PM
Solar Energy Development PEIS
Comment ID: SolarM60047

First Name: Brian
Middle Initial:
Last Name: Rector
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please leave the public lands public

Thank you for your comment, Dion Davis.

The comment tracking number that has been assigned to your comment is SolarM60048.

Comment Date: July 13, 2009 14:21:54PM
Solar Energy Development PEIS
Comment ID: SolarM60048

First Name: Dion
Middle Initial: F
Last Name: Davis
Organization:
Address: 5629 W. Ave. X
Address 2:
Address 3:
City: Acton
State: CA
Zip: 93510
Country: USA
Email: dfdavis@sjm.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

As an enthusiast of the California desert and the Johnson Valley and surrounding areas in particular, I am against the solar power generation project. It will ruin some unique landmarks, such as Giant Rock. These areas are used by many people for many different activities. I am interested in large-scale solar power from an engineering perspective, but surely there needs to be more thought given to site planning.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60049.

Comment Date: July 13, 2009 14:28:29PM
Solar Energy Development PEIS
Comment ID: SolarM60049

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I urge the BLM and DOE to take into account the previous uses of the lands they are about to hand over to these private companies.
Much of the public uses these lands for recreation, and simply closing access to these lands for the use by private energy companies is an atrocious act.
These lands belong to the public, and should be available to the public to use.

Thank you for your comment, Robert Frederiksen.

The comment tracking number that has been assigned to your comment is SolarM60050.

Comment Date: July 13, 2009 14:31:14PM

Solar Energy Development PEIS

Comment ID: SolarM60050

First Name: Robert

Middle Initial: E

Last Name: Frederiksen

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

I believe we are all in agrrement that alternative energy sources are needed, however not at the cost of loosing public lands.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60051.

Comment Date: July 13, 2009 14:41:45PM
Solar Energy Development PEIS
Comment ID: SolarM60051

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

Please do not take anymore OHV land from us. Especially in the Johnson Valley area. It is hands down some of the best land in the country for OHV use. Please consider looking elsewhere for this project. Thank you.



Thank you for your comment, George Conklin.

The comment tracking number that has been assigned to your comment is SolarM60052.

Comment Date: July 13, 2009 14:47:27PM
Solar Energy Development PEIS
Comment ID: SolarM60052

First Name: George
Middle Initial:
Last Name: Conklin
Organization:
Address: 9516 Pilots Ln.
Address 2:
Address 3:
City: Santee
State: CA
Zip: 92071
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is our favorite area for camping hiking and four wheeling. we enjoy coming out here to get away from the city life and relax for the weekend. Many outthers do this as well, this is a get away place for many of Us. I'm sure There are outther places that are not nearly as popular as this one for The project.

Thank You

Jon Conklin

Thank you for your comment, Sue Loehrer.

The comment tracking number that has been assigned to your comment is SolarM60053.

Comment Date: July 13, 2009 14:51:45PM
Solar Energy Development PEIS
Comment ID: SolarM60053

First Name: Sue
Middle Initial:
Last Name: Loehrer
Organization:
Address:
Address 2:
Address 3:
City:
State: TX
Zip: 77098
Country: USA
Email: smldc@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Although I do not live in the area, I am always concerned when there is an attempt to close land to the public for uses such as this. I applaud the effort for a 'greener energy', but not at the expense of land that is actually used by families.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60054.

Comment Date: July 13, 2009 16:01:51PM
Solar Energy Development PEIS
Comment ID: SolarM60054

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

Pick a place that's already closed to build.

This is one of the few places we have available for recreation.

Thank you for your comment, Adam Wiegmann.

The comment tracking number that has been assigned to your comment is SolarM60055.

Comment Date: July 13, 2009 16:30:54PM
Solar Energy Development PEIS
Comment ID: SolarM60055

First Name: Adam
Middle Initial:
Last Name: Wiegmann
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

To Whom it may concern:

It has come to my attention that development around the area called Giant Rock is threatening access to the area for outdoor life and adventure. This has me very concerned and disappointed that an area as beautiful and historic as this faces development, and thus closure to the public. The area around Giant Rock and other areas surrounding it, such as Johnson Valley, have been recreating locations for thousands of people for many years. Hampering the ability of those to recreate in these areas is not the American way.

The area also has shown significant historical presence with the spiritual believes of the Native Americans, and current religious beliefs. Furthermore it is also the home to the worlds largest free standing boulder.

In conclusion, please reconsider Giant Rock as being prime real estate "in the middle of nowhere" as it really is not since people do recreate there and call it their vacation spot.

Thank you for your comment, Jonathan Sage.

The comment tracking number that has been assigned to your comment is SolarM60056.

Comment Date: July 13, 2009 16:41:07PM
Solar Energy Development PEIS
Comment ID: SolarM60056

First Name: Jonathan
Middle Initial:
Last Name: Sage
Organization:
Address: PO Box 1434
Address 2:
Address 3:
City: Langley
State: WA
Zip: 98260
Country: USA
Email: jsage@northwestpr.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am interested in more information regarding the permitting and application process for building a CST Power Plant capable of producing 46 MW of electricity.

Thank you for your comment, Jake Wright.

The comment tracking number that has been assigned to your comment is SolarM60057.

Comment Date: July 13, 2009 16:42:01PM
Solar Energy Development PEIS
Comment ID: SolarM60057

First Name: Jake
Middle Initial: M
Last Name: Wright
Organization:
Address: PO Box 1436
Address 2:
Address 3:
City: Helendale
State: CA
Zip: 92342
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Giant Rock has some amazing history... and its a place I would like to be able to share with my children in the future.

Thank you for your comment, Robert Williams.

The comment tracking number that has been assigned to your comment is SolarM60058.

Comment Date: July 13, 2009 16:55:05PM

Solar Energy Development PEIS

Comment ID: SolarM60058

First Name: Robert

Middle Initial:

Last Name: Williams

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

Please keep our land open for PUBLIC ACCESS.

Thank you for your comment, Kevin Krueger.

The comment tracking number that has been assigned to your comment is SolarM60059.

Comment Date: July 14, 2009 02:26:05AM
Solar Energy Development PEIS
Comment ID: SolarM60059

First Name: Kevin
Middle Initial:
Last Name: Krueger
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Although I understand the need for working on alternative energy sources I don't see why they cannot find a way to co-exist with the people that have come to love and enjoy this great peace of land. I've visited Giant Rock only once on vacation but was saddened to hear that I may never get another chance to go again and enjoy it.

Thank you for your comment, Gaylord Robb.

The comment tracking number that has been assigned to your comment is SolarM60060.

Comment Date: July 14, 2009 09:45:24AM
Solar Energy Development PEIS
Comment ID: SolarM60060

First Name: Gaylord
Middle Initial: I
Last Name: Robb
Organization: Paiute Indian Tribe of Utah
Address: 440 North Paiute Drive
Address 2:
Address 3:
City: Cedar City
State: UT
Zip: 84721
Country: USA
Email: gaylord.robbs@ihs.gov
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

In review of your PEIS, an area which seems to me should be included in the study area is North of Milford, UT. The area is currently having some 500 wind energy towers/generators installed with related infrastructure. Why can't this infrastructure serve a dual purpose and accommodate solar panels between the wind towers?

Has that been looked at? The towers are spaced 0.8 miles apart leaving lots of room for solar panels.

Thank you for your comment, Rhone Resch.

The comment tracking number that has been assigned to your comment is SolarM60061.

Comment Date: July 14, 2009 10:37:55AM
Solar Energy Development PEIS
Comment ID: SolarM60061

First Name: Rhone
Middle Initial:
Last Name: Resch
Organization: Solar Energy Industries Association
Address: 575 7th Street NW
Address 2:
Address 3:
City: Washington
State: DC
Zip: 20004
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: SEIA comment extension.pdf

Comment Submitted:



Linda Resseguie
Department of the Interior
Bureau of Land Management
1849 C Street NW
Washington, DC 20240

July 14, 2009

RE: Solar Energy Study Areas and the Programmatic Environmental Impact Statement for
Solar Energy Development

Dear Ms. Resseguie:

The Solar Energy Industries Association commends the Department of Interior's work to-date on the Programmatic Environmental Impact Statement for Solar Development, and has a keen interest in the recently-announced Solar Energy Study Areas.

SEIA represents over 900 member companies, many of which are or plan to pursue projects within the six-state region of the PEIS. Considerable effort will go into crafting comments that represent the views of the solar industry. Therefore, SEIA respectfully requests that the deadline for comments on the Solar Energy Study Areas be extended 45 days beyond the original deadline to September 13, 2009.

If granted, the additional time will allow SEIA to garner consensus among industry participants and provide the Bureau of Land Management with reasoned input as it considers the scope and location of these Solar Energy Study Areas. The solar industry is eager to see the PEIS completed in a timely fashion. However, evaluating the announced study areas is an important interim step and is worth the additional time and analysis at this juncture.

Thank you for your consideration.

A handwritten signature in blue ink, appearing to read "Rhone A. Resch". The signature is fluid and cursive, written over a light blue horizontal line.

Rhone A. Resch
President & CEO

Thank you for your comment, Dan Taylor.

The comment tracking number that has been assigned to your comment is SolarM60062.

Comment Date: July 14, 2009 15:26:22PM
Solar Energy Development PEIS
Comment ID: SolarM60062

First Name: Dan
Middle Initial:
Last Name: Taylor
Organization: Audubon California
Address: 765 University Avenue
Address 2:
Address 3:
City: Sacramento
State: CA
Zip: 95825
Country: USA
Email: dtaylor@audubon.org
Privacy Preference: Don't withhold name or address from public record
Attachment: Dan Taylor Comment.pdf

Comment Submitted:



July 14, 2009

The Honorable Kenneth L. Salazar
Secretary
Department of Interior
1849 C Street, NW
Washington, D.C. 20240

The Honorable Steven Chu
Secretary
Department of Energy
1000 Independence Ave., SW
Washington, D.C. 20585

Re: Request for extension of time for public comment period for Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development, 74 Fed. Reg. 31307 (June 30, 2009)

Dear Secretary Salazar and Secretary Chu:

National Audubon Society, a non-profit organization representing more than one million members and supporters nationally, respectfully requests a 45-day extension of the comment period for *Scoping Comments for a Programmatic Environmental Impact Statement to Develop and Implement Agency Specific Programs for Solar Energy Development*, 74 Fed. Reg. 31307 (June 30, 2009).

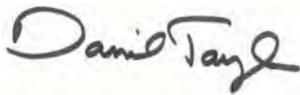
On June 30, 2009, the Department of Energy and the Bureau of Land Management (“agencies”) announced the availability of “Solar Energy Study Area” maps, which highlight priority areas for utility-scale solar energy development in Arizona, California, Colorado, New Mexico, Nevada, and Utah. The maps are expected to supplement the BLM’s preparation of a draft Solar Programmatic Environmental Impact Statement (“Solar PEIS”). In conjunction with the issuance of the maps, the agencies reopened the public comment period for 30 days.

The Solar PEIS will facilitate the identification and selection of lands appropriate for solar energy development. The designation of 24 specific tracts of public land as Solar Energy Study areas at this early stage in the environmental review process provides a tremendous opportunity for Defenders and other interested stakeholders to submit detailed environmental analysis and recommendations on which areas should be designated as Solar Energy Zones and which lands should be excluded. Audubon is keenly interested in working with the agencies to assure that strong policies are in place to minimize negative environmental impacts and protect our public lands and wildlife for future generations.

The 24 study areas total 676,048 acres of land and a thoughtful analysis of the significant impacts of a project of this size and scope will require considerable time and effort. In addition to the specified study areas, the maps include an unspecified amount of BLM lands being considered for Solar Development in the PEIS. These areas were not included in the original PEIS scoping notice, and interested parties have not had any prior opportunity to comment on the environmental impacts, including impacts on wildlife species and habitats, that will result if utility scale solar projects are placed on these lands. The July 30, 2009 deadline for comments is wholly inadequate to properly analyze both the proposed study areas and the BLM lands under consideration. Granting our 45-day extension request will allow Audubon, as well as all interested stakeholders, a more sensible time frame to develop useful and substantive comments for the agencies to consider.

We appreciate the agencies' serious consideration of our request and look forward to your response. Please notify me of your decision.

Respectfully submitted,

A handwritten signature in black ink that reads "Dan Taylor". The signature is written in a cursive style with a large, stylized "D" and "T".

*Dan Taylor
Director of Public Policy
Audubon California
765 University Avenue
Sacramento, CA 95825
916.649.7600
916.719.2666 (mobile)
dtaylor@audubon.org*

Thank you for your comment, Peter Griffith.

The comment tracking number that has been assigned to your comment is SolarM60063.

Comment Date: July 14, 2009 15:30:04PM
Solar Energy Development PEIS
Comment ID: SolarM60063

First Name: Peter
Middle Initial: E
Last Name: Griffith
Organization: self
Address: 43408 Dodaro Dr.
Address 2:
Address 3:
City: Temecula
State: CA
Zip: 92592
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am writing to express my OPPOSITION to the taking of public recreation lands for any use that precludes further public access.

Wind energy development near Giant Rock will dramatically alter the landscape, and destroy the main source of commerce in the region: Public recreational access to the desert.

As a responsible user of these lands, I implore you to REJECT and proposed use for public BLM lands that would remove this critically needed access.

Thank you for taking the time to read this.

Sincerely,

Peter Griffith
Temecula, CA

Thank you for your comment, Donna Plutschuck.

The comment tracking number that has been assigned to your comment is SolarM60064.

Comment Date: July 14, 2009 16:46:19PM

Solar Energy Development PEIS

Comment ID: SolarM60064

First Name: Donna

Middle Initial: M

Last Name: Plutschuck

Organization: private citizen

Address: 439 S. Quay St.

Address 2:

Address 3:

City: Lakewood

State: CO

Zip: 80226

Country: USA

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

Finally! The BLM & the US Government have to help in whatever way possible with developing renewable energy. Not only does it put people to work, it maintains Americans' standard of living while reducing greenhouse gases. Please, install solar and wind power.

Thank you for your comment, Kevin Dynes.

The comment tracking number that has been assigned to your comment is SolarM60065.

Comment Date: July 14, 2009 19:04:13PM
Solar Energy Development PEIS
Comment ID: SolarM60065

First Name: Kevin
Middle Initial:
Last Name: Dynes
Organization:
Address: 1310 HArdrack Ln
Address 2:
Address 3:
City: Billings
State: MT
Zip: 59105
Country: USA
Email: a1979tallguy@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

As an user of Johnson Valley OHV and the surrounding areas, I am saddened to hear of this land grab by alternative energy companies. I support alternative energy but not at the cost of local and non-local,like myself, off highway users. Public lands should remain public with access to all users.

Please reconsider this plan and keep the trails open.

Thank you for your comment, Rose Anderson.

The comment tracking number that has been assigned to your comment is SolarM60066.

Comment Date: July 14, 2009 19:05:38PM
Solar Energy Development PEIS
Comment ID: SolarM60066

First Name: Rose
Middle Initial: M
Last Name: Anderson
Organization:
Address: PO Box 3887
Address 2:
Address 3:
City: Apple Valley
State: CA
Zip: 92307
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

As an off-road enthusiast who lives fairly close to the area in question, I URGE you to look elsewhere. These public lands are being taken away from us at an alarmingly fast rate. We need to preserve these areas so that our children, and our childrens children can use this area as we have for many more generations to come. Please dont let our youth down.
Thank you,
Rose Anderson

Thank you for your comment, sam coleman.

The comment tracking number that has been assigned to your comment is SolarM60067.

Comment Date: July 14, 2009 19:19:02PM
Solar Energy Development PEIS
Comment ID: SolarM60067

First Name: sam
Middle Initial:
Last Name: coleman
Organization: the offroad recreation community
Address: 51 judson rd
Address 2:
Address 3:
City: montgomery
State: NY
Zip: 12549
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I agree with research, development and use of alternative power, but it should not infringe on our use of these public lands.

Thank you for your comment, Chris Demartini.

The comment tracking number that has been assigned to your comment is SolarM60068.

Comment Date: July 14, 2009 19:24:37PM

Solar Energy Development PEIS

Comment ID: SolarM60068

First Name: Chris

Middle Initial:

Last Name: Demartini

Organization:

Address: 261a faller dr

Address 2:

Address 3:

City: New Milford

State: NJ

Zip: 07646

Country: USA

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

I do not support taking away people's rights to recreate on public land in the interest of alternative energy.

Thank you for your comment, Shaun Bootsma.

The comment tracking number that has been assigned to your comment is SolarM60069.

Comment Date: July 14, 2009 19:28:49PM
Solar Energy Development PEIS
Comment ID: SolarM60069

First Name: Shaun
Middle Initial:
Last Name: Bootsma
Organization:
Address: 97 Rainsville Rd
Address 2:
Address 3:
City: Petaluma
State: CA
Zip: 94952
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please do not let the solar companies use this land known as Giant Rock.

Its a small area that many people use as a recreational area and closing them out of yet another area is a blow to the local economy.

There are other areas that are just a suited for a solar farm other than any of the areas where people are allowed to have fun.

Again, Please do not allow them to build the solar farm on or around the Giant Rock rec. area.

Thank you.

Thank you for your comment, Mike Armstrong.

The comment tracking number that has been assigned to your comment is SolarM60070.

Comment Date: July 14, 2009 19:28:51PM
Solar Energy Development PEIS
Comment ID: SolarM60070

First Name: Mike
Middle Initial:
Last Name: Armstrong
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would be very disappointed to lose access to Giant Rock because of this development. I understand the need for alternative energy and support it, I would just rather not have it in an area already in such valuable use to the public in the form of recreation. Please consider an alternate place for this project.

Thank you for your comment, Ruth Hersey.

The comment tracking number that has been assigned to your comment is SolarM60071.

Comment Date: July 14, 2009 20:08:06PM
Solar Energy Development PEIS
Comment ID: SolarM60071

First Name: Ruth
Middle Initial:
Last Name: Hersey
Organization:
Address:
Address 2:
Address 3:
City:
State: [Withheld by requestor]
Zip:
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

So is this a project where the BLM (& Fed Gov't) will be leasing the land out? Or is the BLM (& the Fed Gov't) paying for these projects?
If the latter, then it is a bad idea. With the current technology the project can not pay for itself, & is nothing but a money drain that taxpayers should not have to foot.
No BLM (or Fed Gov't) money should be used to fund this project. Either the technology works & private enterprise succeeds, or they don't.
Either way the BLM should not be in the "energy" business.

Thank you for your comment, Donald Gerber.

The comment tracking number that has been assigned to your comment is SolarM60072.

Comment Date: July 14, 2009 22:03:27PM
Solar Energy Development PEIS
Comment ID: SolarM60072

First Name: Donald
Middle Initial: T
Last Name: Gerber
Organization: Rock Brawlers 4wd Club
Address: 1821 Whispering Bells Rd.
Address 2:
Address 3:
City: San Jacinto
State: CA
Zip: 92582
Country: USA
Email: earlkann@msn.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I have been reviewing the information available on the Solar Energy Development Programmatic Environmental Impact Statement that is available on the website and feel the need to include my comment. I am personally concerned with the inclusion of thousands of acres near a tremendous historical landmark know as Giant Rock and all the land between Spy Mt. and Goat Mt.

Giant Rock and the surrounding area has a rich history dating back to the Native Americans who used the landmark as a meeting spot. Today, many campers and off highway users frequent Giant Rock often using it as a convenient access to the nearby Johnson Valley OHV area.

For more history on Giant Rock I encourage you to visit <http://www.lucernevalley.net/giantrock/> where you will find a brief but concise history of the area.

In closing, I hope that you will consider the impacts that a solar energy project would have on this amazing natural asset.

Thank you,

Donald Gerber
Rock Brawlers 4wd club Southern California
Public Relations / Land Use Specialist

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60073.

Comment Date: July 14, 2009 22:22:53PM

Solar Energy Development PEIS

Comment ID: SolarM60073

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

Do not do this. It's just more "feel good change", costs a lot does nothing.

Thank you for your comment, Eric Dodson.

The comment tracking number that has been assigned to your comment is SolarM60074.

Comment Date: July 14, 2009 22:29:41PM
Solar Energy Development PEIS
Comment ID: SolarM60074

First Name: Eric
Middle Initial:
Last Name: Dodson
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I oppose this action to set up solar panels. Giant Rock is home to many of our wheeling friends and I would hate to see it go. Recreation is a great tool to relieve my stress in this economy and you would be diminishing it by overtaking Giant Rock.

Sincerely

Thank you for your comment, Bob Gaston.

The comment tracking number that has been assigned to your comment is SolarM60075.

Comment Date: July 14, 2009 22:41:15PM
Solar Energy Development PEIS
Comment ID: SolarM60075

First Name: Bob
Middle Initial:
Last Name: Gaston
Organization:
Address: 2900 Rd 110
Address 2:
Address 3:
City: Hopland
State: CA
Zip: 95449
Country: USA
Email: bobgstn@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

When will this end? Soon there will be no available lands in the state to camp or recreate!
With state budget cuts and lands being appropriated for other uses, we as respectful ,considerate advocates of land use for vehicle recreation are having our hobby dismantled!
this too is not good for the economy and wish these points to be brought to the attention of those making these decisions.-

Thank you for your comment, Ryan Shand.

The comment tracking number that has been assigned to your comment is SolarM60076.

Comment Date: July 14, 2009 22:48:53PM
Solar Energy Development PEIS
Comment ID: SolarM60076

First Name: Ryan
Middle Initial:
Last Name: Shand
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please continue to allow access to the Giant Rock and surrounding areas for OHV use. I support the need for alternative energy sources but I also value the need to allow continued access to the Johnson Valley OHV area. Can't there be both? Why not set up a "right of way" road?

Don't underestimate the distances people travel to go off roading. I personally live on the east coast and have on more than one occasion traveled to the east coast in my Jeep for just that reason. Take away the destination and the trip never happens.

Thanks for your consideration.

Thank you for your comment, doug bigelow.

The comment tracking number that has been assigned to your comment is SolarM60077.

Comment Date: July 15, 2009 09:21:58AM
Solar Energy Development PEIS
Comment ID: SolarM60077

First Name: doug
Middle Initial: c
Last Name: bigelow
Organization:
Address: 8715 Hornets nest road
Address 2:
Address 3:
City: emmitsburg
State: MD
Zip: 21727
Country: USA
Email: info@bigelowmotorsports.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I currently make the trip to Giant Rock near Landers yearly to recreate and enjoy the history of the area. It would be a shame to significantly impact the publics right to enjoy "public" lands such as these in the name of alternative energy. I'm sure there are other areas of less important significance that the study could use.

Doug Bigelow
Vice President
Legacy Settlement Services

Thank you for your comment, Cam Simonds.

The comment tracking number that has been assigned to your comment is SolarM60078.

Comment Date: July 15, 2009 10:10:53AM
Solar Energy Development PEIS
Comment ID: SolarM60078

First Name: Cam
Middle Initial:
Last Name: Simonds
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

As an avid 4 wheel recreationist, it troubles me to see attacks on public land access. Although I have never recreated in the Giant Rock area, I do plan to travel to your state within the next few years solely for the purpose of off-road recreation. I believe that access should be preserved to this existing area for camping and recreation.

Please explore alternate sites for energy projects that do not adversely affect other interest groups. Your consideration is greatly appreciated.

Thank you for your comment, Steve Hutch.

The comment tracking number that has been assigned to your comment is SolarM60079.

Comment Date: July 15, 2009 10:28:50AM

Solar Energy Development PEIS

Comment ID: SolarM60079

First Name: Steve

Middle Initial:

Last Name: Hutch

Organization:

Address:

Address 2:

Address 3:

City:

State: CA

Zip: 92672

Country: USA

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment:

Comment Submitted:

Great plase to go if you have not been there, you are missing out

Thank you for your comment, Jeff Smith.

The comment tracking number that has been assigned to your comment is SolarM60080.

Comment Date: July 15, 2009 11:40:10AM
Solar Energy Development PEIS
Comment ID: SolarM60080

First Name: Jeff
Middle Initial:
Last Name: Smith
Organization:
Address:
Address 2:
Address 3:
City:
State: [Withheld by requestor]
Zip:
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

My thought is that we develop our natural resource(oil,gas&nuclear) before we subsidize renewables. The amount we can generate from renewables is minuscule to that of other sources. Not to mention the job loss in developing renewables is nearly 3 to 1 vs developing our natural resources.

A great example is the solar panels put atop the museum of science and natural history in Denver. It was considered by the Administrators to put solar panels on their building but after discovering the return on investment took 114 years and the panels life was 25 years it logically was shelved. Then appears the government who is willing to take taxpayer money to fund renewable energy. Not with logic but with taxpayer money to appease the greenies. What a waste and if that kind of investment continues the taxpayers will run out of money. As a business decision and that's how it has to be looked at it's a no brainer.

Thank you for your comment, Daniel Barcroft.

The comment tracking number that has been assigned to your comment is SolarM60081.

Comment Date: July 15, 2009 12:33:31PM
Solar Energy Development PEIS
Comment ID: SolarM60081

First Name: Daniel
Middle Initial:
Last Name: Barcroft
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Please do not allow a solar and/or wind power plant in the Giant Rock area. As someone who enjoys outdoor activities from backpacking, rock climbing, and camping to offroading and desert racing I would like to see this historic recreation land stay open to the public and not fenced in.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60082.

Comment Date: July 15, 2009 12:39:17PM
Solar Energy Development PEIS
Comment ID: SolarM60082

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization: FOJV
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I feel that there are plenty of areas in the high desert that this project could be constructed. The Giant Rock area is important to many people. It has history leading back to Native Americans. I'm sure an adjacent area could be found in the high desert area that would not impact the local residents.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60083.

Comment Date: July 15, 2009 12:40:38PM

Solar Energy Development PEIS

Comment ID: SolarM60083

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

This plan to take away land is not satisfactory. Please come up with a better location.

Thank you for your comment, JACK JOYCE.

The comment tracking number that has been assigned to your comment is SolarM60084.

Comment Date: July 15, 2009 13:02:10PM
Solar Energy Development PEIS
Comment ID: SolarM60084

First Name: JACK
Middle Initial:
Last Name: JOYCE
Organization: Norcon, Inc. a CH2M Hill Co.
Address: 4600 Debarr
Address 2:
Address 3:
City: Anchorage, Ak
State: AK
Zip: 99515
Country: USA
Email: jack.joyce@norcon.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I'm a mechanical PM for Norcon Inc. a CH2M Hill Co.a EPC firm we are looking to be added to your bidders list for the Solar Initiative Fund.
Engineering
Procurement
Construction

Respectfully,

JACK JOYCE

Norcon Inc. a CH2M Hill Co.

719-433-3190 Cell

907-275-6376 Desk

907-275-6302 Fax

jack.joyce@norcon.com
www.norcon.com

Thank you for your comment, Jessica Downing.

The comment tracking number that has been assigned to your comment is SolarM60085.

Comment Date: July 15, 2009 14:00:13PM
Solar Energy Development PEIS
Comment ID: SolarM60085

First Name: Jessica
Middle Initial:
Last Name: Downing
Organization:
Address:
Address 2:
Address 3:
City:
State: CA
Zip: 92344
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

There are plenty of other nearby areas that aren't as historic and well-loved as Giant Rock. I'm a big supporter of alternative energy, but not when it comes to taking away a popular and unique area like Giant Rock. The loss outweighs the benefit in this spot, please find another location.

Thank you for your comment, Jeremy Kuss.

The comment tracking number that has been assigned to your comment is SolarM60086.

Comment Date: July 15, 2009 14:57:11PM
Solar Energy Development PEIS
Comment ID: SolarM60086

First Name: Jeremy
Middle Initial:
Last Name: Kuss
Organization:
Address:
Address 2:
Address 3:
City:
State: ON
Zip:
Country: Canada
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

It truly is tragic to see public lands being taken away from the public. I am 2000 miles away but hoped to travel and enjoy these lands. Please don't take away from millions for the profit of a few!!!! Public should stay public!!

Thank you for your comment, Bryan Jackson.

The comment tracking number that has been assigned to your comment is SolarM60087.

Comment Date: July 15, 2009 16:20:56PM
Solar Energy Development PEIS
Comment ID: SolarM60087

First Name: Bryan
Middle Initial:
Last Name: Jackson
Organization:
Address:
Address 2:
Address 3:
City:
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I am strongly in favor of using non-environmentally sensitive public lands for development of large scale solar power development. It is critical to our country's future. I like to idea of 'pre-apprved' areas. Good work and make it happen.

Thanks.

Thank you for your comment, Ken Little.

The comment tracking number that has been assigned to your comment is SolarM60088.

Comment Date: July 15, 2009 17:06:51PM
Solar Energy Development PEIS
Comment ID: SolarM60088

First Name: Ken
Middle Initial: S
Last Name: Little
Organization: N/A
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I really hope they do not choose to use the area surrounding Giant Rock to build this solar farm. The area is rich with history and used by many to recreate. This recreation and the people who come to the area just for Giant Rock brings revenue to many of the surrounding towns. I like the idea of harnessing our natural elements to create energy but I feel there are much better / less used areas to do this in.

Ken Little

Thank you for your comment, Randy Jump.

The comment tracking number that has been assigned to your comment is SolarM60089.

Comment Date: July 15, 2009 17:10:41PM
Solar Energy Development PEIS
Comment ID: SolarM60089

First Name: Randy
Middle Initial: L
Last Name: Jump
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Solar chimney projects would take much land but provide much power at lower cost with low environmental impact. I support such projects above others.

Thank you for your comment, William Ratliff.

The comment tracking number that has been assigned to your comment is SolarM60090.

Comment Date: July 15, 2009 17:44:03PM
Solar Energy Development PEIS
Comment ID: SolarM60090

First Name: William
Middle Initial: R
Last Name: Ratliff
Organization:
Address: 470 old glenns cr.rd.
Address 2:
Address 3:
City: frankfort
State: KY
Zip: 40601
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Don't close land to public use.Please

Thank you for your comment, Michael Zenoit.

The comment tracking number that has been assigned to your comment is SolarM60091.

Comment Date: July 15, 2009 18:05:04PM
Solar Energy Development PEIS
Comment ID: SolarM60091

First Name: Michael
Middle Initial:
Last Name: Zenoit
Organization:
Address: 1371 Willow St
Address 2:
Address 3:
City: Denver
State: CO
Zip: 80220
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I feel it is vital the various branches of the US government be looking for ways to help our country transition into a more self-reliant position in regards to energy consumption and thus lessening our dependency on foreign energy sources. I commend the BLM for looking at options such as these and ABSOLUTELY support this venture!

If handled with prudence, this project should have very minimal (if any) determinable impact on the localized environment and thus should be boldly pursued.

Thank you for your comment, Ren Navez.

The comment tracking number that has been assigned to your comment is SolarM60092.

Comment Date: July 15, 2009 19:35:59PM
Solar Energy Development PEIS
Comment ID: SolarM60092

First Name: Ren
Middle Initial:
Last Name: Navez
Organization:
Address:
Address 2:
Address 3:
City:
State: CA
Zip:
Country: USA
Email: renavez@verizon.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The scoping comment for the PEIS should have a 90 day review period. Please extend the comment deadline.
2. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:
 - * Degradation of water resources from concentrated solar power
 - * Impacts to visual resources
 - * Impacts to flora and fauna
 - * Impacts to Federal/State Threatened and Endangered Species
 - * Impacts to cultural sites
 - * Impacts to Native American Values
 - * Impacts to Private Property Values
 - * Limiting access to public lands
3. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.
4. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Thank you for your consideration,

Sincerely,
Ren Navez

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60093.

Comment Date: July 16, 2009 17:08:02PM

Solar Energy Development PEIS

Comment ID: SolarM60093

First Name: [Withheld by requestor]

Middle Initial:

Last Name: [Withheld by requestor]

Organization:

Address: [Withheld by requestor]

Address 2:

Address 3:

City: [Withheld by requestor]

State: [Withheld by requestor]

Zip: [Withheld by requestor]

Country: [Withheld by requestor]

Email:

Privacy Preference: Withhold name and address from public record

Attachment:

Comment Submitted:

Using Giant Rock would be a great disservice to the land. Giant Rock provides a great deal of history that must remain. It is a great place to be out in nature.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60094.

Comment Date: July 16, 2009 18:49:31PM
Solar Energy Development PEIS
Comment ID: SolarM60094

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I wish the Agencies to withhold my name or street address from public view or from disclosure under the Freedom of Information Act. I do wish to express my extreme opposition to the closing of giant rock and surrounding areas, for the use of solar and wind power projects. I would also like to express my great opposition to land grabbing by energy companies, and the closing of our public lands without any mention in the media. Closing public lands, selling public lands, this is not the America we have worked so hard to achieve... Why dont we put the solar pannels on top of government buildings, military bases etc.? This area has a lot of history, and it is unacceptable to toss it away beautiful land like this for the profit of energy companies.. They have a profit margin great enough to sustain their own infrastructure... If they want land to build, they can buy private land like the rest of us have to, not grab public land for their own profit...

Thank you for your comment, Ileene Anderson.

The comment tracking number that has been assigned to your comment is SolarM60095.

Comment Date: July 16, 2009 20:01:26PM
Solar Energy Development PEIS
Comment ID: SolarM60095

First Name: Ileene
Middle Initial:
Last Name: Anderson
Organization: Center for Biological Diversity
Address: PMB 447
Address 2:
Address 3:
City: Los Angeles
State: CA
Zip: 90046
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

July 16, 2009

Kenneth L. Salazar
Secretary
Department of Interior
1849 C Street, NW
Washington, D.C. 20240

Steven Chu
Secretary
Department of Energy
1000 Independence Ave., SW
Washington, D.C. 20585

Re: Request for extension of time for public comment period for Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development, 74 Fed. Reg. 31307 (June 30, 2009)

Dear Secretary Salazar and Secretary Chu:

The Center for Biological Diversity (Center) is a non-profit public interest conservation organization dedicated to the protection of native species and their habitats through science, policy and environmental law. Because of the enormity of the region covered by the proposed Programmatic Environmental Impact Statement to Develop and Implement Agency Specific Programs for Solar Energy Development, 74 Fed. Reg. 31307 (June 30, 2009) (solar PEIS) and our desire to submit well documented scoping comments to facilitate the appropriate siting of solar energy zones, we requests a 45-day extension of the comment period.

The release of the notice and the "Solar Energy Study Area" maps, which highlight priority areas for utility-scale solar energy development in Arizona, California, Colorado, New Mexico, Nevada, and Utah, reopened the 30 day scoping comment period. The Center previously submitted comments on the PEIS, but with the change in focus to identification of renewable energy areas, we would like the opportunity to submit much more detailed place based comments that will minimize impacts and protect the unique and precious resources of our western deserts.

Extending the comment period for scoping an additional 45 days would allow us to submit more comprehensive data, which will facilitate rapid crafting the draft PEIS for public review. Thank you in advance for your consideration of this request and we look forward to your response.

Best regards,
Ileene Anderson
Biologist/Public Lands Desert Director

Thank you for your comment, Wendy Pulling.

The comment tracking number that has been assigned to your comment is SolarM60096.

Comment Date: July 16, 2009 20:12:53PM
Solar Energy Development PEIS
Comment ID: SolarM60096

First Name: Wendy
Middle Initial:
Last Name: Pulling
Organization: Pacific Gas and Electric Company
Address: 77 Beale Street, Room 2463
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94105
Country: USA
Email: WRP8@pge.com
Privacy Preference: Don't withhold name or address from public record
Attachment: PGE PEIS extension.pdf

Comment Submitted:



**Pacific Gas and
Electric Company®**

Wendy Pulling
Director
Environmental Policy

Mail Code B24A
77 Beale Street, Room 2463
San Francisco, CA 94105

415.973.8898
Fax: 415.973.0230

July 16, 2009

Linda Resseguie
Bureau of Land Management
Washington Office

Re: Request for a 45-day Extension to Comment Period

Dear Ms. Resseguie:

Pacific Gas & Electric Company (PG&E) appreciates the opportunity, as part of the Bureau of Land Management's (BLM) PEIS process, to provide comments to develop an agency-specific program to facilitate environmentally responsible utility-scale solar energy development in western states. As a supplier of energy to approximately five percent of Americans and more than 40 percent of Californians, PG&E has a commitment to clean, reliable, and renewable sources of energy.

PG&E also maintains a firm commitment to environmental stewardship and to addressing issues of climate change. PG&E plans to double its existing commitments to buy renewable solar thermal power by adding 1,000 megawatts over the next five years. The additional solar thermal energy will be enough to power more than 750,000 homes. PG&E has also entered into commitments with developers of utility scale solar photovoltaic technology. PG&E, itself, intends to develop and operate solar power resources in the desert southwest utilizing a range of solar power technologies. Much of this solar power will be developed in the Mohave Desert and on lands administered by BLM

PG&E is pleased to see that the Bureau is undertaking a comprehensive look at the environmental impacts of large-scale solar development, and agrees solar energy development is fundamental to the nation's energy security and economy. **In light of the critical nature of the PEIS' analysis, PG&E formally requests a 45-day extension to the comment period for review of the Administration's plans for its solar program.** Identifying appropriate locations for utility-scale solar development in sensitive desert ecosystems is an extremely important, highly complex undertaking—one that requires coordination among stakeholders and thoughtful examination of data resources. While we understand the urgency of moving this process forward, we also believe the magnitude of the task warrants the additional time to develop a sound strategy to protect fragile desert ecosystems and to facilitate productive solar energy development.

PG&E thanks you for considering this request and we look forward to continuing our participation in the PEIS process.

Sincerely,

Thank you for your comment, Jennifer Kalt.

The comment tracking number that has been assigned to your comment is SolarM60097.

Comment Date: July 19, 2009 15:28:09PM
Solar Energy Development PEIS
Comment ID: SolarM60097

First Name: Jennifer
Middle Initial:
Last Name: Kalt
Organization: Northcoast Environmental Center
Address: 1465 G Street
Address 2:
Address 3:
City: Arcata
State: CA
Zip: 95521
Country: USA
Email: jkalt@asis.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This comment period should be extended. 30 days is not long enough to adequately review and comment on such large proposals. A 90-day review period would be more appropriate to the scale of the proposal.

Thank you for your comment, Helen OShea.

The comment tracking number that has been assigned to your comment is SolarM60098.

Comment Date: July 21, 2009 11:35:10AM
Solar Energy Development PEIS
Comment ID: SolarM60098

First Name: Helen
Middle Initial:
Last Name: OShea
Organization: Natural Resources Defense Council
Address: 111 Sutter Street
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94104
Country: USA
Email: hoshea@nrdc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: NRDC Solar PEIS Extension Request.doc

Comment Submitted:



NATURAL RESOURCES DEFENSE COUNCIL

July 21, 2009

Via Solar PEIS comment form and electronic mail

Linda Resseguie
Bureau of Land Management
Washington D.C.
Linda_Resseguie@blm.gov

Request for Additional Time to Comment on Solar Energy Study Areas

Dear Ms. Resseguie:

The Natural Resources Defense Council (NRDC), a non-profit environmental organization with over 650,000 members nationwide, respectfully requests a 45 day extension of the comment period for *Scoping Comments for a Programmatic Environmental Impact Statement to Develop and Implement Agency Specific Programs for Solar Energy Development*, 74 Fed. Reg. 31307 (June 30, 2009).

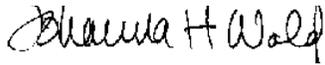
NRDC has worked to protect wildlands and natural values on public lands and to promote pursuit of cost-effective energy efficiency and sustainable energy development for many years. NRDC is very supportive of the Bureau of Land Management's focus on potential study zones for the solar programmatic environmental impact statement (PEIS) and appreciates the opportunity, as part of this process, to identify solutions to renewable energy siting issues that can meet the Administration's climate goals while safeguarding the nation's valuable natural and cultural resources.

The designation of 24 specific tracts of public land as Solar Energy Study Areas at this early stage in the environmental review process provides a tremendous opportunity for NRDC and other interested stakeholders to submit detailed environmental analysis and recommendations on which areas should be designated as Solar Energy Zones and which lands should be excluded. Affording us the requested additional time at the beginning of this process will benefit all concerned in the long run and will further the Administration's climate change, natural resource protection and renewable energy goals.

In closing, NRDC fully recognizes the urgent need to move forward to find appropriate areas for solar development. At the same time, we know that we must take the time necessary to plan carefully and comprehensively and to select the right places that are both protective of ecosystems, landscapes, and species and are practical for solar energy development.

Thank you in advance for consideration of this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Johanna H Wald".

Johanna Wald
Senior Attorney

A handwritten signature in black ink, appearing to read "Helen O'Shea".

Helen O'Shea
Policy Associate

cc: Mike Pool, Acting Director, BLM
Steve Black, Counselor to the Secretary
Ashley Conrad-Saydah, Renewable Energy Project Manager, CA BLM

Thank you for your comment, Kyle Dreyer.

The comment tracking number that has been assigned to your comment is SolarM60099.

Comment Date: July 21, 2009 13:37:05PM
Solar Energy Development PEIS
Comment ID: SolarM60099

First Name: Kyle
Middle Initial: A
Last Name: Dreyer
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would like you to reconsider using the land near Giant Rock for your solar projects. People who enjoy outdoor motorsports are losing places every year. I am completely for alternative energy sources, just not on historic land important to OHV enthusiasts.

Thank you for your comment, Shawn Baker.

The comment tracking number that has been assigned to your comment is SolarM60100.

Comment Date: July 21, 2009 18:29:06PM
Solar Energy Development PEIS
Comment ID: SolarM60100

First Name: Shawn
Middle Initial: W
Last Name: Baker
Organization:
Address: 2268 Mission Trail Road
Address 2:
Address 3:
City: Kalispell
State: MT
Zip: 59901
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am disappointed to hear that the DOI and BLM are considering closing many thousands of acres of public land near Giant Rock.

I am in support of clean wind and solar power projects--but not in the dwindling areas where taxpaying citizens recreate.

There are literally millions of acres of Federal land that are off-limits to the general public, please consider this project for one of those areas.

Thank you for your comment, billy weiss.

The comment tracking number that has been assigned to your comment is SolarM60101.

Comment Date: July 22, 2009 00:38:44AM
Solar Energy Development PEIS
Comment ID: SolarM60101

First Name: billy
Middle Initial: g
Last Name: weiss
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would like to say that Giant Rock is not the greatest place for solar and/or wind fields as it has too much history and is still used very much by responsible campers and vacationers. This a historical landmark that should be preserved for generations to come.

Thank you for your comment, Linda Josheph.

The comment tracking number that has been assigned to your comment is SolarM60102.

Comment Date: July 22, 2009 10:30:08AM

Solar Energy Development PEIS

Comment ID: SolarM60102

First Name: Linda

Middle Initial:

Last Name: Josheph

Organization: Chair, Saguache County Board of County Commissione

Address: PO Box 655

Address 2:

Address 3:

City: Saguache

State: CO

Zip: 81149

Country: USA

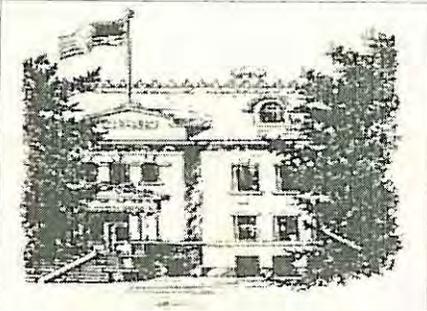
Email:

Privacy Preference: Don't withhold name or address from public record

Attachment: BLMsolarcommentltr.pdf

Comment Submitted:

Please see attached.



SAGUACHE COUNTY GOVERNMENT

501 Fourth Street

P. O. Box 655

Saguache, Colorado 81149

Phone: (719) 655-2231 • Fax: (719) 655-2635

www.saguachecounty.net

July 21, 2009

Bureau of Land management , Colorado State Office
Division of Energy, Lands, and Minerals (CO-920)
2850 Youngfield Street, Lakewood, Colorado 80215

To Whom It May Concern:

The Saguache County Board of County Commissioners appreciates this opportunity to participate with comments in the DOE and BLM EIS process for Solar Energy Development. Located in the San Luis Valley of southern Colorado, our region is rich in solar resource, and a focal point of solar industry interest. The De Tilla Gulch Solar Energy Study area, indicated in the map by Argonne National Laboratory, is within our County.

We understand that the BLM's "multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations", and share in that mission. With over 70% of the land in Saguache County owned by various public lands agencies, we have cultivated participatory and collaborative relations, in mutually important land use issues, with local and regional public lands managers. We are pleased to offer the following comments, for your attention.

The state-of-the-art in solar energy generation advances at a rapid pace. Yet, the large scale fields now being planned, are new to all of us. Little is known of the potential impacts of the infrastructure and processing of solar energy at this scope. It is essential that adequate baseline information be available, and monitoring reviews be included in arrangements between the BLM and industry, to assure early detection and mitigation of currently unforeseen impacts.

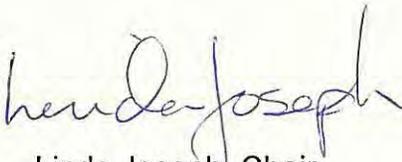
Saguache County Land Use Dept. and Planning Commissions, and many interested citizens we represent have devoted much time to become informed and strive to stay current with the practices, technologies and impacts of solar energy generation. We

request that Saguache County be designated a Cooperating Agency in environmental assessments of any area in consideration for solar development on BLM lands within our County. Leveraging our information and resources, enhances our capacity to fulfill our mutual missions of public service. We would encourage this practice throughout your solar energy study areas.

Thanks again for receiving and responding to our comments.

Sincerely,

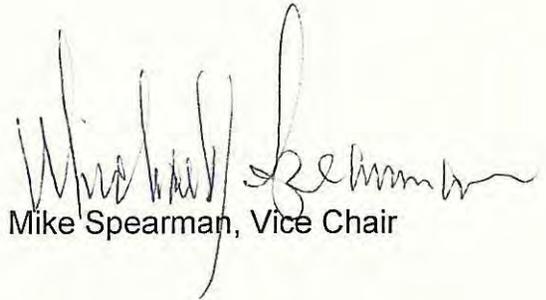
Saguache County Board of County Commissioners



Linda Joseph, Chair



Sam Pace, Vice Chair



Mike Spearman, Vice Chair

Cc:

Dan Dallas

Andrew Archleta

Ken Salazar

John Salazar

Mark Udall

Michael Bennett

Thank you for your comment, Patrick Jackson.

The comment tracking number that has been assigned to your comment is SolarM60103.

Comment Date: July 22, 2009 20:49:09PM
Solar Energy Development PEIS
Comment ID: SolarM60103

First Name: Patrick
Middle Initial: C
Last Name: Jackson
Organization:
Address: 600 N. Darwood Avenue
Address 2:
Address 3:
City: San Dimas
State: CA
Zip: 91773
Country: USA
Email: ochsjack@earthlink.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

1. The notice entitled "Notice of Proposed Withdrawal and Opportunity for Public Meeting; Arizona, California, Colorado, Nevada, New Mexico, and Utah" appearing in the June 30, 2009, Federal Register states, in pertinent part, "The Secretary of the Interior proposes to withdraw approximately 676,048 acres of public land from settlement, sale, location, or entry under the general land laws, including the mining laws, on behalf of the Bureau of Land Management (BLM) to protect and preserve solar energy study areas for future solar energy development. This notice segregates the lands for up to 2 years from surface entry and mining while various studies and analyses are made to support a final decision on the withdrawal application."
2. The Notice states the applicant is the Bureau of Land Management.
3. The Notice indicates the 676,048 acres of public lands are located in the States of Arizona, California, Colorado, Nevada, New Mexico, and Utah within 24 specific tracts of public lands designated as Solar Energy Zones (SEZs).
4. If approved by the Secretary of the Interior, the withdrawal will restrict surface entry of the SEZs for up to two years.
5. Some of the Solar Energy Zones completely encircle and/or landlock private lands.
6. Some of the Solar Energy Zones include Revised Statute 2477 (R.S. 2477) rights-of-way that provide access to private lands.
7. R.S. 2477 was self-executing. Ratification or approval by the federal government is not required to perfect an R.S. 2477 right-of-way. (Sierra Club v. Hodel (10th Cir. 1988) 848 F.2d 1068, 1083-84.)
8. The Bureau of Land Management has the authority to determine the validity of R.S. 2477 rights-of-way for its own purposes but does not have the authority to make binding determinations on the validity of R.S. 2477 rights-of-way for other purposes (SUWA v. BLM.) Other purposes include access to private lands.
9. The Bureau of Land Management does not have the authority to deprive private property owners access their lands.
10. "The DOI recognizes that there is '[n]o formal process for either asserting or recognizing R.S. 2477 rights-of-way currently is provided in law, regulations, or DOI policy,' which creates a 'continuing cloud' on right-of-way claims. Accordingly, DOI asserts that '[c]ourts must ultimately determine [sic] the validity of such claims.' (Department of Interior, Report to Congress on R.S. 2477 (June 1993), pp. 6 & 25.)" (County of San Bernardino v. United States, C-06-1179 VAP (C.D. Cal).)
11. The Bureau of Land Management's application for the removal of approximately 676,048 acres of public lands from surface entry should be denied until the BLM identifies and validates R.S. 2477 rights-of-way that provide access to private lands.

Thank you for your comment, Julie Fitch.

The comment tracking number that has been assigned to your comment is SolarM60104.

Comment Date: July 23, 2009 18:47:17PM
Solar Energy Development PEIS
Comment ID: SolarM60104

First Name: Julie
Middle Initial: A
Last Name: Fitch
Organization: CA Public Utilities Commission
Address: 505 Van Ness Ave
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94102
Country: USA
Email: bcb@cpuc.ca.gov
Privacy Preference: Don't withhold name or address from public record
Attachment: SolarPEISscoping72409.pdf

Comment Submitted:

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



July 24, 2009

Ms. Linda Resseguie, Project Manager, BLM
Solar Energy Development Programmatic EIS Scoping
Argonne National Laboratory EVS/900
9700 S Cass Ave.
Argonne, IL. 60439

Re: California Public Utilities Commission (CPUC) Comments on the Notice of Availability of Solar Energy Study Area Maps and Additional Public Scoping for the Programmatic Environmental Impact Statement (PEIS) to Develop and Implement Agency Specific Programs for Solar Energy Development; BLM Approval for Processing Existing and Future Solar Applications and Related Notice of Proposed Withdrawal and Opportunity for Public Meeting; Arizona, California, Colorado, Nevada, New Mexico, and Utah

Dear Ms. Resseguie:

Thank you for the opportunity to comment on the second Solar PEIS scoping notice. The notice announced the 24 Solar Energy Study Areas to be analyzed in the Solar PEIS for the six western states, of which four are included in California. As you are aware, we provided scoping comments on the May 29, 2008 notice and are now presently a cooperating agency on the Solar PEIS as well as a representative on the California Interagency Working Group for the Solar PEIS since 2008. In addition, the CPUC has been an active member of the Renewable Energy Transmission Initiative (RETI) process for over 2 years.

The CPUC is very supportive of the Solar PEIS and looks forward to a robust analysis. Commissioner Chong's May 11, 2009 testimony before the Subcommittee on Energy and Mineral Resources indicated that California has set one of the most ambitious greenhouse gas and renewables goals in the country. California investor-owned utilities are already mandated to provide 20% of their electricity from renewable energy sources by 2010. There is a goal of 33% by 2020 as part of a strategy for achieving California's goal of reducing statewide greenhouse gas emissions to 1990 levels by the year 2020 as part of the State's 2006 Global Warming Solutions Act.

With that background, we would like to provide the following additional specific scoping comments for your consideration in preparing the Solar PEIS:

Proposed Action

In the May 2008 Scoping Notice, the proposed action indicated that agencies would develop and implement agency-specific programs that would facilitate environmentally-responsible utility-scale

solar energy development. This would be done by establishing environmental policies and mitigation strategies related to solar energy development in the six western states with the most prospective solar energy resources suitable for development over the next 20 years. Also, BLM would determine if additional transmission corridors on BLM lands would be necessary to facilitate solar development. Based on the June 2009 notice identifying the Solar Energy Study Areas, it is not clear as to whether the proposed action is as originally described in 2008 or whether it has changed or will be revised based on this second notice. The CPUC would appreciate clarification on whether the Study Areas will be the “proposed action” or the existing solar applications plus the Study Areas.

Project Description – Criteria for Solar Study Area Identification

There are four Solar Energy Study Areas identified in California. The PEIS should clearly define the criteria used in selecting these particular areas and not others, particularly where there are existing solar applications. Consideration should be given in the PEIS to whether these areas identified are the most appropriate areas to consider for solar zones or whether there others that should be identified in the PEIS.

RETI Competitive Renewable Energy Zone (CREZ) Locations as related to Solar Energy Study Areas

The May 2008 notice indicated that the PEIS will consider ongoing transmission planning efforts including the RETI process. It is not clear how some CREZ locations were considered for Solar Energy Study Areas and why some were not considered in the June 2009 notice. CREZ areas where there are also solar applications, including Baker, Mt. Pass, and Lucerne Valley, were not included in the Solar Study Areas. In our previous July 15, 2008 scoping letter, we had requested that the results of RETI be considered in the Solar PEIS. We suggest that all of the RETI CREZ areas be studied, or in the alternative, the rationale or criteria for eliminating certain RETI CREZ areas from consideration be explained in the Solar PEIS.

Clarification on Maps issued with June 30, 2009 Notice

The Notice issued maps prepared by Argonne that show the Solar Energy Study Areas. The maps and their legends also show light blue areas as “BLM lands being analyzed for solar development in the PEIS as of 6/5/09.” The PEIS should clarify the meaning of these light blue areas.

Categories of Lands Excluded from Solar Consideration

The original 2008 notice listed excluded lands as any in the National Landscape Conservation System, Areas of Critical Environmental Concern (ACECs) or special management areas. The 2009 notice provides additional/different list of lands not included in the 2008 notice including: threatened and endangered species designated critical habitat; backcountry byways; areas of known tribal concern; areas of known high cultural site density; areas designated for right of way avoidance or exclusion in BLM land use plans such as ACECs; areas of important visual resources; special recreation management areas; areas to maintain wilderness characteristics; wildlife corridors; and areas where BLM has a commitment to take certain actions with respect to sensitive species habitat. We suggest that the PEIS should clarify the areas to be excluded from solar consideration based on the two notices. This is a factor for suitability for designating Solar Energy Study Areas.

Alternatives to Proposed Action

NEPA regulations (Section 1502.14) require agencies to rigorously explore and objectively evaluate all reasonable alternatives. In addition to the No Action Alternative, the 2008 notice included two alternatives: the Facilitated Development and Limited Development Alternatives. The Facilitated Development Alternative would create a reasonably foreseeable development scenario to define the potential for future utility scale solar energy development activities over a 20 year study period. Further, it would identify suitable lands, lands with restrictive stipulations, and lands not available for solar. The Limited Development alternative would evaluate the impacts of previously proposed solar energy development projects which have complete plans of development and are awaiting approval.

The second 2009 June notice does not clarify or mention alternatives to the proposed action. There are now proposed Solar Energy Study Areas with overlapping existing applications and there are existing applications outside these areas.

We suggest that a reasonable range of alternatives to the proposed action need to be clearly identified in the PEIS. Currently, it is not clear whether the existing applications and Solar Study Areas constitute a Facilitated Development or a Maximum Development Alternative. We also suggest considering an alternative that consists entirely of existing applications.

Consideration of Project level NEPA and Programmatic Level Analysis

The June 2009 notice indicates that portions of funding from the American Recovery Reinvestment Act (ARRA) are being used to enhance the Solar PEIS by enabling in-depth environmental analysis of 24 specific tracts of land for the purpose of determining whether such areas should be designated as Solar Energy Zones (SEZs).⁹ It is not clear from this statement whether there is an intention, by the use of the term “in-depth,” to prepare a NEPA specific document or a programmatic document. A project-specific level would possibly allow an environmental assessment (EA) or a Categorical Exclusion for future projects, whereas a program level would require tiering to a project-specific NEPA document for future applications. Also, the four Solar Energy Study Areas in California overlap with the boundaries of existing solar applications. Without clarification, the result might be that BLM could be preparing a programmatic document at the same time that project applicants could be preparing project specific NEPA analysis. We seek clarification on how BLM will coordinate the project-specific analysis with the PEIS level of analysis in these overlap areas. Certainly, project level analysis could allow quicker permit processing by BLM for proposed projects.

Solar Energy Zone Characteristics

Since the Solar Energy Study Areas are being considered for Solar Energy Zones, we suggest discussion in the PEIS of how these zones will be used for solar development and the quantity of megawatts to be permitted or actually expected from each study area. This question is crucial if the solar PEIS is to result in a more rational, environmentally-sensitive build-out of utility-scale solar generation and critical transmission lines. In the case of California’s Study Areas, the PEIS should, in consultation with the CPUC, the California Energy Commission, publicly-owned utilities, and other stakeholders, consider the total amount of solar generation that California may require to meet its 2020 renewable energy targets and the appropriate contribution of solar generation on federal lands to meet those targets. If such considerations are not taken into account, the value of the PEIS could be undermined by a misalignment of generation and transmission development, inefficient use of public lands, and/or inaccurate analysis of cumulative impacts.

Consideration of Cultural Information for Solar Energy Study Areas

The May 2008 notice indicated that BLM would coordinate with tribal governments and provide strategies for the protection of recognized traditional uses in the PEIS and plan amendment process. We would urge the BLM to initiate tribal consultation on the Solar Study Areas as soon as possible to identify any cultural conflicts. A July 7, 2009 comment letter was received at the California Energy Commission on the RETI Phase 2A Draft Report from the Native American Land Conservancy (NALC) regarding the Iron Mountain Solar Energy Study Area which is also a RETI Competitive Renewable Energy Zone (CREZ 37). NALC indicates that the *“Iron Mountain Competitive Renewable Energy Zone would have a significant impact on the OWMP (Old Woman Mountain Preserve) that could not be mitigated especially in terms of cultural resources in and around the Preserve....Our preliminary suggestion is that the CEC only concentrate on already disturbed areas for solar projects. No projects should be considered if they are in proximity to an area of critical biological and cultural resources.”*

Consideration of the Proposed Mojave Desert National Monument

The RETI Draft Phase 2A Report released in June 2009 indicates that several of the CREZs could be impacted by the proposed Mojave Desert National Monument that is being supported by Senator Feinstein. We suggest that the Solar PEIS address the proposed Monument in terms of how it may impact the size and/or location of at least two Solar Energy Study Areas – Pisgah and Iron Mountain.

Notice of Proposed Withdrawal – Differences in Comment Periods with Solar Study Area Notice and the Opportunity for Public Meetings

The June 30, 2009 notice also included a notice of proposed withdrawal and opportunity for public meetings in Arizona, California, Colorado, Nevada, New Mexico, and Utah, for 676,048 acres of public lands from settlement, sale, location, or entry under the general land laws, including the mining laws, on behalf of BLM to protect and preserve solar energy study areas for future solar energy development. The Notice requires that comments and requests for public meetings be received by September 28, 2009.

Since this withdrawal of lands is directly related to the related notice on Solar Energy Study Areas, it is not clear why the notice on study areas requires comments by July 30th and this notice requires comments by September 28th. Since the activities of these notices are directly related to each other, we would suggest that the scoping periods be the same, i.e. close on September 28th. It would seem that the PEIS would be better informed if comments were received in the same time period from both interrelated notices. Also, it is not clear why there is an opportunity for public meetings on the withdrawal and not for the Solar Energy Study Areas. We would like to recommend that this is an opportunity to have a combined set of public meetings for both noticed actions.

Consider Comments on the RETI Phase 2A Draft Report

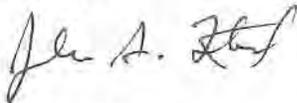
Recently, there were numerous comments submitted on the RETI Phase 2A Draft Report which are in some cases applicable to the Solar Energy Study Areas, including the cultural comment letter noted above in this letter. We recommend that BLM and their consultant review these comments, since the Solar Study Areas and some of the RETI CREZs are in the same locations.

Cumulative Considerations in the Solar PEIS

NEPA regulations (Section 1508.25(a) (2)) require consideration of cumulative actions, which when viewed with other proposed actions, have cumulatively significant impacts and should therefore be discussed in the same impact statement. Cumulative impact is defined by NEPA regulation Section 1508.7, which indicates the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Because of these rules, we suggest that the Solar PEIS should consider the cumulative impacts of the Solar Study Areas with the solar applications, along with geothermal and wind development that is underway, as well as the potential identified in the Wind PEIS and the Geothermal PEIS and any other proposed leasing activities.

Thank you for the opportunity to submit these comments. We look forward to continuing to work with BLM on the Solar PEIS document preparation as a cooperating agency and as a member of the interagency Working Group. If you have any questions, please call Billie Blanchard, our interagency group representative, at 415-703-2068 or email at bcbl@cpuc.ca.gov.

Sincerely,



Julie A. Fitch
Director, Energy Division

Cc: Ken Lewis, Deputy Executive Director, Energy Division
Chloe Lukins, Supervisor Energy Division
Anne Gillette, Energy Division
Paul Douglas, Energy Division
Mignon Marks, California Energy Commission
Ashley Conrad-Saydah, BLM State Office

Thank you for your comment, Omer Holcomb.

The comment tracking number that has been assigned to your comment is SolarM60105.

Comment Date: July 24, 2009 12:03:46PM
Solar Energy Development PEIS
Comment ID: SolarM60105

First Name: Omer
Middle Initial: K
Last Name: Holcomb
Organization:
Address: 5613 Mt Hebron Rd
Address 2:
Address 3:
City: Boaz
State: AL
Zip: 35957
Country: USA
Email: abchobbies@charter.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am concerned about putting solar panels on the land in Otero County New Mexico just south of Alamogordo, New Mexico.

1. This is not a wasteland it is an extensive grass covered semi arid desert.
2. These grasslands are home to numerous colonies of burrowing owls. (I have seen them myself.)
3. Competition for water is intense already. Water to wash solar panels is extremely limited already without an increased demand.
4. The red sand deserts of mesquite covered dunes are located further south. The proposed area is a grassland. Someone did not do their homework.

Thank you for your comment, John Valenzuela.

The comment tracking number that has been assigned to your comment is SolarM60106.

Comment Date: July 24, 2009 15:14:36PM
Solar Energy Development PEIS
Comment ID: SolarM60106

First Name: John
Middle Initial:
Last Name: Valenzuela
Organization: San Fernando Band of Mission Indians
Address: P.O.Box 402597
Address 2:
Address 3:
City: Hesperia
State: CA
Zip: 92340
Country: USA
Email: tsen2u@live.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am John Valenzuela, Chairman of the San Fernando Band of Mission Indians/Seven feathers corporation. I am interested in all projects of concern in the mojave and antelope valley area sensitive areas to native americans. These projects fall within our historical area through which we are connected with DNA.

Thank you for your comment, Brendan Hughes.

The comment tracking number that has been assigned to your comment is SolarM60107.

Comment Date: July 25, 2009 16:24:10PM
Solar Energy Development PEIS
Comment ID: SolarM60107

First Name: Brendan
Middle Initial:
Last Name: Hughes
Organization:
Address: 61093 Prescott Trail
Address 2:
Address 3:
City: Joshua Tree
State: CA
Zip: 92252
Country: USA
Email: jesusthedude@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

4. Viable alternatives exist in at least two forms. First, using rooftop solar (photovoltaics) on homes and businesses in population centers reduces line loss and creates more jobs than centralized projects. Also, the West is full of abandoned agricultural lands that are close to utility lines. These previously disturbed, degraded lands are sometimes in large blocks suitable for large solar power projects.

Thank you for your consideration.

Thank you for your comment, Shaun Gonzales.

The comment tracking number that has been assigned to your comment is SolarM60108.

Comment Date: July 26, 2009 01:50:12AM
Solar Energy Development PEIS
Comment ID: SolarM60108

First Name: Shaun
Middle Initial:
Last Name: Gonzales
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

The development of Solar energy in the deserts of the southwest should pay close consideration to a number of conditions and processes that could be severely disturbed by the construction and operation of large energy projects, the transmission lines for the power produced, the impact of increased human presence, and the impact on less quantifiable qualities of the deserts, to include the value of pristine and uninterrupted vistas, and the need to preserve an expansive wilderness that has had an impact on American heritage and cultural values. To disrupt this land without considering the complexity of the ecosystems and the values placed on open wilderness by the American people would counteract the benefits of "green energy" and irreversibly shift the costs to the fragile desert ecosystems. The United States Government should ensure proper siting of renewable energy projects in the deserts, and must offset the impact of further development in this wilderness.

Specific steps include:

Proper Siting:

--Limiting the transfer of non-native species to the deserts from survey, construction, and site operations.

--Consideration of the potential impact of the construction and operation of energy development on critical habitat that may adjoin properties designated for development. This consideration should also extend to species that are threatened or endangered by virtue of their limited population or habitat, but have not yet officially been classified as an endangered species. Impacts include but are not limited to water run-off, advantages and disadvantages imposed on desert species by the structures of the energy site, and the resulting impact on ecosystem processes (bird perching opportunities, shade, concentrated water run off, thermals, etc), and how these structures may also provide advantages to non-native species.

--Siting energy development to avoid necessitating the construction of additional transmission lines which would expand the negative impacts of energy development on the habitat and undisturbed vistas.

--Siting energy development and transmission lines in proximity to population centers, thus reducing the negative impact of "green energy" development on the ecosystem and increasing the economic benefit by lowering infrastructure costs, construction costs, and costs of transportation for personnel and support of site operations

Offset:

--Consult with public and private organizations in desert population centers to study and deploy institutional means of harvesting solar energy within the population centers, to include installation of solar energy panels on rooftops of public and private buildings. Encouraging renewable energy development in population centers expands awareness of the benefits of renewable energy and would likely produce more jobs, while also limiting the need to develop costly infrastructure on public lands which hold many other values, to include recreation, wildlife conservation, and mineral wealth.

--Designating more desert lands as National Parks or wilderness, to include the "Catellus Lands" in the Mojave Desert along the Interstate 40 corridor in California. Preservation of the Catellus and adjoining lands between Joshua Tree National Park and the

Mojave National Preserve would conserve a wildlife corridor which is also home to critical Desert Tortoise habitat, and preserve the scenic vistas along National Trails Highway/Route 66, which carries significance for American history and heritage.

--Private energy developers and the United States Government should invest in further research into desert ecosystem processes and the impact of development, and also invest in non-profit organizations that research, preserve, and promote awareness of the history and heritage of the American southwest.

--Increase the staffing of BLM and National Park service personnel in the southwestern deserts to ensure proper adherence to land use rules (restrictions on new road development in wilderness areas, deterrence to illegal dumping, etc), and to monitor the impact of increased development and human presence on the lands.

Thank you for your comment, Christopher Lish.

The comment tracking number that has been assigned to your comment is SolarM60109.

Comment Date: July 27, 2009 10:30:00AM
Solar Energy Development PEIS
Comment ID: SolarM60109

First Name: Christopher
Middle Initial:
Last Name: Lish
Organization:
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Dear Ms. Resseguie,

Renewable energy, including solar power, will be an important part of America's clean, sustainable energy future. Along with state and private lands, our public lands have a role to play, but renewable resource development is not appropriate everywhere on the public lands, and development that does occur on the public lands should take place in a responsible manner.

"In permitting the sacrifice of anything that would be of the slightest value to future visitors to the convenience, bad taste, playfulness, carelessness, or wanton destructiveness of present visitors, we probably yield in each case the interest of uncounted millions to the selfishness of a few individuals."

-- Frederick Law Olmstead

The industrial nature of solar energy projects makes choosing the right places for development critical. Prioritizing development in the best places will both speed construction of good projects by limiting conflicts, as well as preventing damage to sensitive wildlands, wildlife and other resources.

"Our duty to the whole, including to the unborn generations, bids us to restrain an unprincipled present-day minority from wasting the heritage of these unborn generations. The movement for the conservation of wildlife and the larger movement for the conservation of all our natural resources are essentially democratic in spirit, purpose and method."

-- Theodore Roosevelt

I applaud the Bureau of Land Management's identification of Study Areas and urge the agency to work through the public process to designate them. I recommend that the Bureau of Land Management:

- * Adjust the boundaries of the Study Areas to exclude Citizens' Proposed Wilderness areas, crucial wildlife habitat and migration corridors, and other sensitive lands and resources;
- * Make clear what existing transmission capacity and other infrastructure is available to support these study areas; and
- * Ensure that there are multiple opportunities for the public to learn about and provide input during this process.

"Every man who appreciates the majesty and beauty of the wilderness and of wild life, should strike hands with the farsighted men who wish to preserve our material resources, in the effort to keep our forests and our game beasts, game-birds, and game-fish-indeed, all the living creatures of prairie and woodland and seashore-from wanton destruction. Above all, we should realize that the effort toward this end is essentially a democratic movement."

-- Theodore Roosevelt

Thank you for your consideration of my comments. Please do NOT add my name to your mailing list. I will learn about future developments on this issue from other sources.

Sincerely,
Christopher Lish

Thank you for your comment, Starlene Javier.

The comment tracking number that has been assigned to your comment is SolarM60110.

Comment Date: July 27, 2009 12:01:45PM
Solar Energy Development PEIS
Comment ID: SolarM60110

First Name: Starlene
Middle Initial: J
Last Name: Javier
Organization:
Address: 5132 Kelly Road
Address 2:
Address 3:
City: 29 Palms
State: CA
Zip: 922778074
Country: USA
Email: sjavier@sbcfire.org
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I have concerns for the environmental impact as well as the distruction of lands for our wildlife. I moved here twenty-one years ago to be able to enjoy the night skys as well as the sunsets and sunrises. Will this solar study impact us in this way. Will it destroy our views of the natural land, wildlife and the beautiful mountains? Will it be beneficial for us cost wise or will we end up paying for the study in the long run?

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60111.

Comment Date: July 27, 2009 19:13:27PM
Solar Energy Development PEIS
Comment ID: SolarM60111

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I support the choice of the solar study areas in Colorado. I live in Antonito and not too far from the study just south of Antonito. This location is ideal for the purpose intended and solar energy is vital to the future of our country. I hope that the government will help those of us in small rural towns to obtain affordable means of using alternative energy sources such as solar and wind power. I also think that wind power study areas should be established; and, the locations chosen for the solar study are also viable for wind power study.

Thank you for your comment, Anthony Marvel.

The comment tracking number that has been assigned to your comment is SolarM60112.

Comment Date: July 28, 2009 01:14:17AM
Solar Energy Development PEIS
Comment ID: SolarM60112

First Name: Anthony
Middle Initial: C
Last Name: Marvel
Organization:
Address: 5217 Simons Dr.
Address 2:
Address 3:
City: Reno
State: NV
Zip: 89523
Country: USA
Email: antmarvel@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom it May Concern: I understand the need to respect biodiversity and analyze the impacts of man-made projects. I am excited that the federal government has finally began to act with some form of urgency to address climate change. These projects will impact the ecosystem in which they are built. It is unavoidable. All man-made projects, especially of such a scale, have an impact. I agree the projects must be planned wisely. However, I hope they are not delayed or halted for such concerns. We must address the issue of global warming A.S.A.P. Let's build these projects smartly, but expediently. We will make mistakes as we attempt to address climate change, but we must begin to act now. We must act on a large scale with endeavors like these 7 solar projects. We have studied and studied. We have to start acting.

Thank you for your comment, Allan Wilkinson.

The comment tracking number that has been assigned to your comment is SolarM60113.

Comment Date: July 28, 2009 12:58:21PM
Solar Energy Development PEIS
Comment ID: SolarM60113

First Name: Allan
Middle Initial:
Last Name: Wilkinson
Organization:
Address:
Address 2:
Address 3:
City: Truth or Consequences
State: NM
Zip: 87901
Country: USA
Email: chollaburger@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

When making your evaluation please consider the advantage of combining Hot Rock Geothermal (HRG) with Concentrated Solar. Hot Rock Geothermal would provide energy during times of low solar input, Concentrated Solar would provide energy during the day allowing recovery time for the HRG. The Rio Grande Rift near Cutter-Engle would be an ideal area in which to develop such a facility.

Thank you for your comment, Michael Woolsey.

The comment tracking number that has been assigned to your comment is SolarM60114.

Comment Date: July 28, 2009 13:17:03PM
Solar Energy Development PEIS
Comment ID: SolarM60114

First Name: Michael
Middle Initial: P
Last Name: Woolsey
Organization: Comforce (government staffing agency)
Address: 9416 Candelaria, NE Unit D
Address 2:
Address 3:
City: Albuquerque
State: NM
Zip: 87112
Country: USA
Email: mikewoolsey@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Does this make sense? Yes, but only if this program of alternative energy growth, does in fact, create energy & save the taxpayer in the long run.

This could and would provide jobs, because you need manpower to construct these solar farms. However, if this is just politics and hot air, those jobs will disappear just as fast and then the govt. will be paying for unemployment benefits.

If we're going to do it, can we at least try to, "Get it right the first time?"

Thank you for your comment, matthew rhode.

The comment tracking number that has been assigned to your comment is SolarM60115.

Comment Date: July 28, 2009 14:10:32PM
Solar Energy Development PEIS
Comment ID: SolarM60115

First Name: matthew
Middle Initial:
Last Name: rhode
Organization: solterra designs
Address:
Address 2:
Address 3:
City:
State: CA
Zip: 94931
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

How will the public benefit from the use of solar power on public lands, other than the obvious environmental benefits of using a renewable resource to produce electricity?

Will the public benefit by receiving electricity at cheaper rates than fossil fuel electricity? Will a portion of the proceeds from the sale of the electricity be put into a public fund that would promote renewable energy education through the state's public schools?

Solar power is a welcome addition to the power mix, but since it will be on public lands it would be prudent for the public to benefit from the commercial use of their lands, either economically or educationally.

Thank you for your time and energy,

Matthew Rhode

Thank you for your comment, Jean Kaiwi.

The comment tracking number that has been assigned to your comment is SolarM60116.

Comment Date: July 28, 2009 14:33:01PM
Solar Energy Development PEIS
Comment ID: SolarM60116

First Name: Jean
Middle Initial:
Last Name: Kaiwi
Organization:
Address: 1781 Sunset Cliffs Blvd.
Address 2:
Address 3:
City: San Diego
State: CA
Zip: 92107
Country: USA
Email: jeankaiwi@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

This is another public giveaway of land to a private firm. Please reconsider this.

Thank you for your comment, Donna Tisdale.

The comment tracking number that has been assigned to your comment is SolarM60117.

Comment Date: July 28, 2009 17:50:17PM
Solar Energy Development PEIS
Comment ID: SolarM60117

First Name: Donna
Middle Initial:
Last Name: Tisdale
Organization: Backcountry Against Dumps
Address: PO Box 1275
Address 2:
Address 3:
City: Boulevard
State: CA
Zip: 91905
Country: USA
Email: donnatisdale@hughes.net
Privacy Preference: Don't withhold name or address from public record
Attachment: Bill Powers CEC- PV article 8-09.pdf

Comment Submitted:

First of all, why are folks who reside in Canada and Mexico allowed to comment on policies that impact American tax payers and our public lands?

Solar energy should be generated through the cheapest and least destructive means possible, closest to the point of use.

That means using commercial and residential roof top solar, first. It can be built without the need for massive and expensive new transmission lines, destruction or fragmentation of intact valuable habitat and recreation resources.

See attached August 09 Natural Gas & Electricity article from Bill Powers showing the cost of effectiveness of rooftop PV

Feed in Tariffs should be made available to pay fair market prices to all those who generate more renewable energy than they produce, including Joe Six-pack and his neighbors.

FITs will speed the installation of roof top solar and small wind turbines. They will also encourage folks to conserve energy so they have more to sell back to the grid. If and when they pull energy from the grid it would most likely be in off-peak hours.

If built at all, industrial scale solar should be built on already disturbed land adjacent to existing transmission. If it is supported by the impacted community.

Pre-commercial solar projects like Stirling Solar Energy Systems Two in Imperial Valley, CA, should not receive any incentives, tax breaks, tax credits, green tag credits, or funding from tax payers, especially when they are removing public lands from public access, and negatively impacting critical resources.

Energy efficiency and conservation should actually come first and those programs should not be controlled by the investor owned utilities. Let local governments and non-profits handle them. IOUs have allegedly abused these programs terribly in California, reportedly even using those funds for lobbying purposes. They have also collected profits while failing to meet goals and tasks.

California's Renewable Energy Transmission Initiative is a farce and should be scrapped.

That's it for now...
###

CEC Cancels Gas-Fed Peaker, Suggesting Rooftop Photovoltaic Equally Cost-Effective

Bill Powers

An emerging discussion in the climate-change debate is whether our renewable energy should come primarily from remote utility-scale wind and solar plants, connected to urban centers by a vast new network of transmission lines, or whether local renewable energy should play a much more prominent role. The rooftop solar photovoltaic (PV) array is among the most recognized forms of local renewable energy.

On June 17, the California Energy Commission (CEC) issued a landmark ruling that will undoubtedly figure prominently in this discussion. The CEC denied an application for a 100-megawatt natural gas-fired gas turbine power plant in part because rooftop solar PV could potentially achieve the same objectives for comparable cost.

CEC denied an application for a 100-megawatt natural gas-fired gas turbine power plant in part because rooftop solar PV could potentially achieve the same objectives for comparable cost.

This decision implies that any future applications for gas-fired generation in California, or any other type of generation including remote utility-scale renewable energy generation that

may require public land and new transmission to reach demand centers, will be measured against using urban PV to meet the power need.

The CEC decision said the following:

Photovoltaic arrays mounted on existing flat warehouse roofs or on top of vehicle shelters in parking lots do not consume any acreage. The warehouses and parking lots continue to perform those functions with the PV in place. (Ex. 616, p. 11.) . . . Mr. Powers (expert for intervenor) provided detailed analysis of the costs of such PV, concluding that there was little or no difference between the cost of energy provided by a project such as the CVEUP (gas turbine peaking plant) compared with the cost of energy provided by PV. (Ex. 616, pp. 13–14.) . . . PV does provide power at a time when demand is likely to be high—on hot, sunny days. Mr. Powers acknowledged on cross-examination that the solar peak does not match the demand peak, but testified that storage technologies exist which could be used to manage this. The essential points in Mr. Powers' testimony about the costs and practicality of PV were uncontroverted. (CEC Decision, pp. 29–30)

The CEC concluded that PV solar arrays on rooftops and over parking lots may be a viable alternative to the gas turbine project, and that if the gas turbine project proponent opted to file a new application, a much more detailed analysis of the PV alternative would be required. The use of the urban PV alternative as the litmus test that must be passed before a new gas turbine

Bill Powers, P.E. (bpowers@powersengineering.com), (619) 295-2072, is president of Powers Engineering in San Diego.

plant, or a new remote utility-scale wind or solar plant, can be approved should move the rooftop solar PV option onto center stage of the national renewable energy debate.

The CEC concluded that PV solar arrays on rooftops and over parking lots may be a viable alternative to the gas turbine project.

URBAN PV IS COST-EFFECTIVE ALTERNATIVE TO PEAKING GAS-FIRED POWER

The CEC identified the low-end leveled cost of energy (COE) for PV as \$114 a megawatt-hour in an August 2008 report that includes the comparative costs of different renewable energy technologies.¹ This \$114 a megawatt-hour is based on “thin-film” PV and conservative assumptions regarding the installed cost and the direct-current-to-alternating-current conversion factor. The thin-film PV technology upon which the CEC estimate is based is manufactured by First Solar. First Solar stated an expected COE of \$90 a megawatt-hour in its April 2008 comment letter to the CEC.

The thin-film PV capacity factor identified by the CEC and California’s investor-owned utilities is 18 percent. Capacity factor is a measure of the amount of power produced by a system compared to its maximum potential output. Maximum potential output would be achieved if the system produced its rated power output 24 hours a day, every day of the year. Operating continuously at maximum output is equal to a 100 percent capacity factor.

The CEC identified the COE of a 50-megawatt simple-cycle gas turbine as \$647 a megawatt-hour in its December 2007 report, *Comparative Cost of Electric Generation Technologies*. The turbines proposed for the gas turbine project were two turbines of approximately 50-megawatt capacity. The CEC assumed a 5 percent annual capacity factor for simple-cycle gas turbines in calculating the \$647-a-megawatt-hour figure. This level is consistent with the level of operation anticipated by the project applicant. The applicant stated that the expected capacity factor would be 5 percent.²

Adjusting the peaking gas turbine COE to reflect an 18 percent capacity factor, equivalent

to the annual capacity factor of thin-film PV, gives a simple cycle gas turbine COE of \$180 a megawatt-hour.

The local utility assigns PV without storage a capacity factor of 50 percent for peak demand reliability purposes.³ The reason for this is that PV system output peaks at midday, and the daily summertime demand peaks are typically around 3:00 p.m. or 4:00 p.m. State-of-the-art peaking gas turbines achieve only about 75 percent of their nameplate capacity at 100°F due to the relatively low density of ambient air at 100°F. Older peaking turbines achieve as little as 65 percent or less of nameplate capacity at 100°F.

If only 50 percent of the installed PV capacity is considered available for peaking reliability purposes per San Diego Gas & Electric’s (SDG&E’s) assumption, then 150 megawatts of PV without storage would have to be installed to assure 75 megawatts of state-of-the-art peaking gas turbine power reliability at 100°F. In other words, 50 percent more PV nameplate capacity must be installed to achieve the same reliable capacity achieved by the gas turbine at 100°F.

If the value of the peaking power available from the PV array is limited exclusively to its ability to provide peaking power (for the sake of argument), it is reasonable to multiply the leveled COE by 1.5 to reflect the relative output compared to a peaking gas turbine on a summer afternoon. Multiplying the base case PV COE range of \$90 a megawatt-hour (First Solar) to \$114 a megawatt-hour (CEC) by 1.5 gives a peaking power PV COE range of \$135 a megawatt-hour to \$171 a megawatt-hour.

There is little difference between the COE of a 150-megawatt thin-film PV . . . and 100 megawatts of state-of-the-art gas turbine capacity at the same conditions. This is without considering the . . . renewable energy credits . . . , the elimination of air emissions, or the lack of dependence on a secure supply of natural gas.

Thus, there is little difference between the COE of a 150-megawatt thin-film PV array to assure 75 megawatts of net reliable summer afternoon peaking power at 100°F and 100 megawatts of state-of-the-art gas turbine capacity at the same conditions. This is without considering the green economic benefits of renewable

energy credits generated by PV, the elimination of air emissions, or the lack of dependence on a secure supply of natural gas.

The addition of limited storage to each PV system ensures that the PV nameplate capacity is firm on-peak capacity. Commercial-scale demonstration projects are under way.⁴ The battery systems are fully controllable by the utility as peaking units. The addition of energy management and battery storage allows the PV system to supply the utility grid with its peak output through the late afternoon summertime demand peak. The batteries mean that a 75-megawatt PV array with limited storage can provide the same reliable output at 100°F as a 100-megawatt peaking gas turbine plant. Adding limited storage capacity is a cost-effective approach to assuring the entire PV capacity is available during peak demand periods.

On June 18, Southern California Edison (SCE), California's largest investor-owned utility, received approval from the California Public Utilities Commission to construct a 500-megawatt urban PV project on warehouse rooftops. SCE states in its March 2008 project application that it

can coordinate generation or storage technologies at the substation level to moderate the inherent weather-caused variability in solar PV production before such intermittency cascades into the higher voltage transmission system. Such coordination will reduce system costs. ([2008, March 27]. SCE application to CPUC for commercial PV program—Testimony, p. 17.)

SCE envisions large-scale storage as a viable and complementary element to its PV program. Maintaining rated power of the PV system through the afternoon peak load with energy storage would only be necessary on hot summer days.

ROOFTOP PV COULD PROVIDE RELIABLE POWER IN MANY PLACES NATIONWIDE

The U.S. solar energy approach to date has been almost completely focused on remote utility-scale solar energy resources and the transmission associated with such projects. This ap-

proach had merit in the 1980s when California became the world leader in solar power development using parabolic trough solar thermal technology at a time when solar PV cost \$12 to \$15 a watt (2008 dollars). However, the world has changed. Commercial PV installations now cost less than \$4 a watt.

“Land-Intensive” Argument No Longer Correct

The current national focus on utility-scale desert solar power in the Southwest presumes this solar resource is so much more cost-effective than the urban PV alternative that it justifies the transmission cost, environmental trade-offs, and controversy of such remote solar development. This may have been true in the 1980s. It is not true in 2009.

The least-cost solar resource in 2009 is in California's developed urban and suburban areas, and this resource is vast. Urban solar deployments would be compatible dual use of existing rooftops and parking lots, avoiding the often-cited dilemma that “solar power is very land-intensive, and siting a solar plant means that most if not all of the other uses of that land are precluded.”

It is true that some of the largest solar resources are to be found on public lands in the Southwest. However, these large solar resources are only useful to the extent that they are cost-effective in their own right and can be delivered efficiently to population centers. The cost of delivery via new transmission can be very high, without even addressing the environmental compromises necessary to construct the transmission lines or the utility-scale solar plants themselves.

No Line Loss nor Significant Additional Transmission

California's ongoing renewable energy transmission siting process, known as the Renewable Energy Transmission Initiative (RETI), indicates the least-cost solar solution to reaching California's target of 33 percent renewable energy by 2020 would consist predominantly of local distributed PV. Why? Because state-of-the-art PV is more cost-effective than solar thermal, and tens of thousands of megawatts of PV could be added at the local level with little or no upgrading to the existing transmission system re-

quired. RETI makes the following points about state-of-the-art PV:

There is considerable commercial interest in utility-scale “thin film” (PV) systems. This sensitivity tests an alternate thin film technology for solar with capital costs of about \$3,700/kWe (AC), roughly half that of tracking crystalline (PV). Notably, these (PV) capital costs are also lower than the large-scale solar thermal projects; therefore thin film solar is assumed to occur both at the distributed scale (20 MW) and also in large scale blocks (150 MW). (California Energy Commission. [2009, January 5]. RETI Phase 1B Final Report, pp. 5-27, 5-28.

PV can be deployed in urban and suburban areas in compatible dual-use applications that require no environmental trade-offs.

Unlike solar thermal technologies, PV can be deployed in urban and suburban areas in compatible dual-use applications that require no environmental trade-offs. Urban/suburban PV is more cost-effective than remote PV because it avoids the (1) high cost of new transmission lines and (2) high line losses, in the range of 15 percent, during peak demand periods.

Urban/suburban PV is more cost-effective than remote PV because it avoids the (1) high cost of new transmission lines and (2) high line losses.

Could Fulfill 75 Percent of California's Renewables Target

The RETI report goes on to say that distributed PV at a current state-of-the-art capital cost of \$3.70 a watt can provide two-thirds of what California needs going forward to reach 33 percent renewable energy by 2020:

The results of this sensitivity run are dramatic. More importantly, the cost-competitive in-state (distributed PV resources) increase by more than 20 times to about 45,000 GWh/yr. This figure is over two-

thirds of the net short requirement. The large majority of these (distributed) resources are 20 MW solar PV projects assumed to connect to the distribution system.

In February 2009, RETI reduced its estimate of the gap that must be filled to reach 33 percent by 2020, such that 45,000 gigawatt-hours a year (GWh/yr) from distributed PV could meet 75 percent of the need.

The November 2008 Los Angeles Department of Water & Power (LADWP) “Solar Los Angeles” strategic plan is a good real-world example of a renewable energy future that leads with distributed urban PV. The plan consists of 780 megawatts of urban PV and 500 megawatts of remote solar. This is two-thirds urban solar, one-third remote solar. With this urban/remote balance, little if any new transmission will be necessary for Los Angeles to go solar. LADWP is a public utility, and “Solar Los Angeles” reflects the intent of the city of Los Angeles to become a leader in smart and urban renewable energy development.

Little if any new transmission will be necessary for Los Angeles to go solar.

San Diego Gas & Electric's service territory offers another example of the large role urban PV could and should play in California's, and the nation's, renewable energy portfolio:

- There are approximately 4,500 megawatts of commercial rooftop and commercial parking lot PV potential in SDG&E territory.
- Peak load in SDG&E territory in 2008 was 4,348 megawatts, and the average load over the course of the year is approximately 2,500 megawatts.
- 4,500 megawatts of PV are equivalent to approximately 900 megawatts of continuous power generation over the course of a year.
- The San Diego area could generate approximately 40 percent of its year-round power demand from urban commercial rooftop and commercial parking lot PV alone.
- That is without considering approximately 2,500 megawatts of PV potential on residential rooftops in SDG&E territory.

- If the residential PV resource is fully developed in addition to the commercial PV resource, 60 percent of the San Diego area's year-round power demand could be met with urban PV.
- This large solar resource has no land-use requirements, as it is all compatible dual-use, and has no environmental impacts.

If the residential PV resource is fully developed in addition to the commercial PV resource, 60 percent of the San Diego area's year-round power demand could be met with urban PV.

Argument That Insufficient Manufacturing Capacity Exists Is False

RETI has attempted to minimize the distributed PV solution to California's renewable energy goal by stating that there is no way PV manufacturers could mobilize quickly enough to provide 2,000 to 3,000 megawatts of PV per year to realize the potential of the distributed PV alternative for California. This is not a valid concern. Spain, with about the same population as California and a less productive economy, added nearly 2,500 megawatts of PV in 2008.

More than 5,000 megawatts of PV were installed worldwide in 2008.⁵ Worldwide thin-film PV production capacity reached 3,600 megawatts a year in 2008. It is projected to reach 7,400 megawatts a year in 2010. Worldwide conventional polycrystalline silicon PV production capacity reached 13,300 megawatts a year in 2008. It is projected to reach 20,000 megawatts a year in 2010. The 2010 projections were made just as the economic slump began in late 2008. It is likely there will be some scale-back on the 2010 capacity projections due to the state of the world economy. However, there is a tremendous amount of available worldwide PV manufacturing capacity.

Worldwide PV manufacturing, either thin-film alone or thin-film and conventional polycrystalline silicon, could readily supply a 3,000-megawatts-a-year PV demand in California and a much higher PV demand for the United States as a whole. The *Wall Street Journal* recently reported that conventional solar panel prices have

fallen by \$2 a watt since 2008, due to too much solar manufacturing capacity chasing too few solar projects.

New Transmission Line Buildout Could be Minimized

Investor-owned utilities make far more profit on transmission lines than any other types of infrastructure they build. This reality is often lost in the debate over whether it is preferable to generate renewable energy remotely and transmit it to demand centers or generate it locally. For example, a 1,000-megawatt transmission line being proposed by a western utility ostensibly to transmit renewable energy, with an estimated cost of \$1.9 billion, will generate at least \$1.3 billion in profits (in current dollars) for the utility shareholders over the financial life of the project. A total of \$700 million of those profits will be credited to the company in the first eight-and-a-half years. Remote renewable energy generation requires transmission. Local renewable energy generation does not.

The nation has over 527,000 miles of existing high-voltage transmission.⁶ This transmission infrastructure serves a declining demand for electricity. U.S. electricity demand declined approximately 2 percent in 2008 and is expected to decline another 1 percent in 2009.⁷

Southern California, with an average electrical demand of approximately 14,000 megawatts, has approximately 20,000 megawatts of import capacity on existing transmission lines. Southern California can already import 100 percent of its average electrical load. There may be some need to upgrade older lines so they can continue to provide decades of reliable service. However, neither California nor the United States as a whole is experiencing a shortage of transmission capacity as a general matter.

The policy challenge is the difficult work of ramping down the existing flow of fossil power on existing lines and methodically replacing it with renewable energy generation. A reasonable proposal of this sort was presented to the California Energy Commission in early 2007 by a major solar thermal developer. Called the Mojave Solar Development Zone, it would preferentially locate solar thermal projects along the rights-of-way of major existing highways with

existing high-voltage transmission lines in the Mojave Desert. These highway corridors already have a combined 6,000 megawatts of existing transmission capacity.

In reality, the zone identified by the solar thermal developer is far larger than it needs to be to generate 6,000 megawatts, or even 10,000 megawatts of solar power. Solar thermal or PV can produce about 100 megawatts a square mile. One hundred square miles would produce about 10,000 megawatts. One-half mile solar rights-of-way on each side of the highway for only 100 miles would suffice to provide 10,000 megawatts of solar power.

This commonsense proposal predates the RETI process and apparently gained little or no traction within the RETI process itself. One likely reason is that the desert solar land rush had already begun, and restricting solar development to a limited Mojave Solar Development Zone would have inconvenienced developers with more remote and undeveloped properties in some phase of negotiation.

Another likely reason is that it made use of existing transmission and presumed that existing fossil transmission rights would be transferred to the solar projects. This is a reasonable presumption, but it is also a strategy the affected investor-owned utilities have steadfastly opposed. The California Energy Commission and the state of California missed an opportunity in 2007 to gain a measure of control of the desert land rush through some form of the Mojave Solar Development Zone and failed to act.

There is a better, more cost-effective, and less damaging solution that is being ignored or dismissed for reasons of political convenience.

The easiest pathway from a political standpoint—to give investor-owned utilities a mandate to overlay public lands and the United States with new transmission—would result in tremendous controversy and probable gridlock in moving forward on the development of renewable energy generation. The affected citizens and interest groups will oppose many of these projects for the right reasons—that there is a better, more cost-effective, and less damaging

solution that is being ignored or dismissed for reasons of political convenience.

It is understandable why an investor-owned utility would see renewable energy solutions through a transmission lens. However, that lens is costly, inefficient, and controversial. The fact that a solar strategy with heavy reliance on remote sites and attendant new transmission would be very costly is positive financial news to an investor-owned utility. Yet it is an unnecessary and largely avoidable financial burden on everyone else.

CONCLUSION

The CEC made the right decision when it identified urban PV as a potentially viable alternative to a conventional peaking gas turbine. The CEC, through the RETI process, had already identified state-of-the-art PV as more cost-effective than utility-scale solar thermal technology. The net effect of these developments is to place more focus on urban PV to carry a much bigger share of the nation's renewable energy load than had been previously contemplated by policymakers. 

NOTES

1. RETI Phase 1B draft report. (2008, August). PV cost comparison table, pp. 6–7. Retrieved July 2, 2009, from http://www.energy.ca.gov/reti/documents/2008-08-16_PHASE_1B_DRAFT_RESOURCE_REPORT.PDF.
2. CH2MHill. (2008, February). Response to Environmental Health Coalition Data Requests 1 to 35, p. 11.
3. SDG&E. (2006, August 4). Application A.06-08-010 for 500 kV Sunrise Powerlink transmission line, p. II-32: "This (PV) alternative proposes the installation of rooftop photovoltaic ("PV") technologies on houses, commercial facilities and industrial complexes within the San Diego area. Assuming 10% of the 3000 MW statewide target was achievable in the San Diego area, and—as described below—that 50% of this amount can be reliably assumed to be available during peak load hours, the maximum effective contribution of solar rooftop PV technology in reducing the need for conventional generating sources would be 150 MW."
4. CPUC A.06-08-010 Sunrise Powerlink Phase II proceeding hearing transcript at p. 3943, ln 10–16.
5. Schreiber, D. (2008, December 1–2). PV thin-film markets, manufacturers, margins. presentation at 1st Thin-Film Summit, San Francisco.
6. (2009, February 6). Hurdles (not financial ones) await electric grid update. *New York Times*. Retrieved July 2, 2009, from <http://www.nytimes.com/2009/02/07/science/earth/07grid.html>.
7. Energy Information Administration. (2009, May). *Short-term energy outlook—U.S. total electricity consumption, 1998–2010* (graph).

Thank you for your comment, idan salhov.

The comment tracking number that has been assigned to your comment is SolarM60118.

Comment Date: July 28, 2009 18:12:05PM
Solar Energy Development PEIS
Comment ID: SolarM60118

First Name: idan
Middle Initial:
Last Name: salhov
Organization: eye-makeup
Address: <http://eye-makeup.net>
Address 2:
Address 3:
City: beer sheva
State:
Zip:
Country: ISR
Email: idadans78@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

i found out your office is great thanks for everything great site keepup with the good job.

<http://eye-makeup.net>

Thank you for your comment, Eugene Howard.

The comment tracking number that has been assigned to your comment is SolarM60119.

Comment Date: July 29, 2009 17:58:19PM
Solar Energy Development PEIS
Comment ID: SolarM60119

First Name: Eugene
Middle Initial: D
Last Name: Howard
Organization: Self
Address: 4033 Kalamath Street
Address 2:
Address 3:
City: Denver
State: CO
Zip: 80211
Country: USA
Email: eugenedhoward@msn.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please do proceed with evaluating public lands for solar. We need to break our country's dependence on OIL and instead of DRILLING in sensitive areas that could spoil the land and doesn't move to solve the problem, install SOLAR PV, THERMAL and Wind on public lands that go to make our country a safer place and energy independent from the rest of the world. THIS is a GREAT USE of Public lands that belong to all Americans. Thank you for listening to me.

Thank you for your comment, James Clark.

The comment tracking number that has been assigned to your comment is SolarM60120.

Comment Date: July 29, 2009 18:56:28PM
Solar Energy Development PEIS
Comment ID: SolarM60120

First Name: James
Middle Initial:
Last Name: Clark
Organization:
Address: 780 S. Tenth St,
Address 2:
Address 3:
City: Globe
State: AZ
Zip: 85501
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Solar generating stations should be built any location on federal lands. This would include all areas that are currently designated as limited entry.

Thank you for your comment, Vince Martin.

The comment tracking number that has been assigned to your comment is SolarM60121.

Comment Date: July 30, 2009 01:10:08AM
Solar Energy Development PEIS
Comment ID: SolarM60121

First Name: Vince
Middle Initial:
Last Name: Martin
Organization: Friends of Johnson Valley
Address:
Address 2:
Address 3:
City: Covina
State: CA
Zip: 91724
Country: USA
Email: sammybuilder@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I strongly oppose the movement to acquire public land for solar and wind power projects in Johnson Valley. Your proposal to take thousands of acres near Giant Rock and all the land between Spy Mountain and Goat Mountain will result in a major loss of recreational areas that many off roaders and campers use to enjoy the beauty of the desert with their families. Please look at other sites other than recreational public land for this type of project.

Thank you for your comment, dan baker.

The comment tracking number that has been assigned to your comment is SolarM60122.

Comment Date: July 30, 2009 11:24:49AM
Solar Energy Development PEIS
Comment ID: SolarM60122

First Name: dan
Middle Initial:
Last Name: baker
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would like to see more money allocated to subsidizing distributed energy generation efforts on residential and commercial rooftops rather than studies and utility size installations.

In the Southwest we have millions of acres of 'unused' rooftops that could be used to generate power and not impact wilderness and BLM land at all. Local generation avoids issues with loss of transmission, and provides lots more small jobs for local economies rather than a few large contract jobs in remote areas.

Thank you for your comment, John Carter.

The comment tracking number that has been assigned to your comment is SolarM60123.

Comment Date: July 30, 2009 17:42:35PM
Solar Energy Development PEIS
Comment ID: SolarM60123

First Name: John
Middle Initial: B
Last Name: Carter
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am opposed to any large scale development that will further degrade what is left of our " great American western Landscape" heritage. It is not only the principle component of these types of developments that concerns me--It is the ancillary aspects--- as in power transmission lines strung through virgin valleys and mountain ranges. It is also the population growth around these projects which brings more problems and pollution that is another concern. We need to harvest the energy that this society already waste before taking on any further energy development.

Thank you for your comment, Ron Morrison.

The comment tracking number that has been assigned to your comment is SolarM60124.

Comment Date: August 1, 2009 02:22:02AM
Solar Energy Development PEIS
Comment ID: SolarM60124

First Name: Ron
Middle Initial: A
Last Name: Morrison
Organization: self
Address: 2405 No Stevens St
Address 2:
Address 3:
City: Tacoma
State: WA
Zip: 98406
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I note that there does not appear to be any proposals for solar energy production plants in the Eastern part of Wash. State. Has the BLM considered any of its lands for utility size solar energy production that it owns in Wash. State? If not, why not?

e-mail: ronmorrison406@hotmail.com

Thank you for your comment, Ron Morrison.

The comment tracking number that has been assigned to your comment is SolarM60125.

Comment Date: August 1, 2009 02:22:02AM
Solar Energy Development PEIS
Comment ID: SolarM60125

First Name: Ron
Middle Initial: A
Last Name: Morrison
Organization: self
Address: 2405 No Stevens St
Address 2:
Address 3:
City: Tacoma
State: WA
Zip: 98406
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I note that there does not appear to be any proposals for solar energy production plants in the Eastern part of Wash. State. Has the BLM considered any of its lands for utility size solar energy production that it owns in Wash. State? If not, why not?

e-mail: ronmorrison406@hotmail.com

Thank you for your comment, Robert Hoffman.

The comment tracking number that has been assigned to your comment is SolarM60126.

Comment Date: August 1, 2009 11:58:55AM
Solar Energy Development PEIS
Comment ID: SolarM60126

First Name: Robert
Middle Initial: V
Last Name: Hoffman
Organization: Quail Unlimited
Address: 605 College Pl.
Address 2:
Address 3:
City: Las Cruces
State: NM
Zip: 88005
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

These projects will impact a significant amount of wildlife habitat. In this part of the world with its scarcity of rainfall, the effects on wildlife will be magnified. Therefore I strongly urge planners to listen to the biologists and spare the best areas of native habitat. In particular the Mason Draw is very good desert grassland and a rich area of wildlife habitat and this site should be abandoned unequivocally. Moreover the southern portion of the Red Sand area is also good grassland and this area should be altered to avoid impacts to the grassland portion. The Aden Hills area is mostly creosote and poor habitat area and could be developed. Also the need for copious water makes all of these sites questionable. Water needs should be a large factor in siting decisions. While many people from other parts of the country might think of this region as "just desert", in fact it is an incredible area of wildlife diversity which has its own unparalleled beauty. But it is also a very fragile environment due to its aridity. Any development for power should absolutely minimize impacts on these qualities.

Thank you for your comment, Rick Aguirre.

The comment tracking number that has been assigned to your comment is SolarM60127.

Comment Date: August 5, 2009 04:21:06AM
Solar Energy Development PEIS
Comment ID: SolarM60127

First Name: Rick
Middle Initial:
Last Name: Aguirre
Organization:
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Why go out to the deserts and build Solar Power. Why not have more incentives to place Solar Panels, etc on roof tops on inner city houses, parts of parks, commercial and public buildings, parking area and structures. There are many areas within inner city to generate electricity. Have an army to place all types of Solar Production inner city. You may not ruin our deserts and have to build more power lines. High cost factor.

Thank you for your comment, Charles Roney.

The comment tracking number that has been assigned to your comment is SolarM60128.

Comment Date: August 5, 2009 15:00:23PM
Solar Energy Development PEIS
Comment ID: SolarM60128

First Name: Charles
Middle Initial: E
Last Name: Roney
Organization:
Address:
Address 2:
Address 3:
City:
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Where do I go to get the criteria that is used to determine if property should be involved in these studies? IE: who decides which properties to study? Are the lands visited, or just picked off a map? Who sets the value to be charged for this land? (As I see it, all the land involved is placed in the trust of the BLM to be administered to for us, the U.S. public.) How is it determined how close these projects come to existing occupied private property? (If one of these projects is approved, the land involved will be within fifty feet of my front porch. I did not work all my life and pay into this system so I could wake up every morning and look at miles of foreign looking structures. These projects should be a minimum of two and a half miles from any existing occupied structure; I retired to this area for the solitude and pristine views

Thank you for your comment, chat sohbct.

The comment tracking number that has been assigned to your comment is SolarM60129.

Comment Date: August 5, 2009 15:22:49PM
Solar Energy Development PEIS
Comment ID: SolarM60129

First Name: chat
Middle Initial:
Last Name: sohbct
Organization:
Address:
Address 2:
Address 3:
City:
State: TX
Zip:
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

We love our president and Obama support t
We believe President Obama will be the world more beautiful, so no matter what the president supported OBAMAya
How to ask the U.S. situation now if you are going much better than the former according to the need to do what you know very
well and is treated accordingly.
Thank you President Obama

Thank you for your comment, Edwin Figuerres.

The comment tracking number that has been assigned to your comment is SolarM60130.

Comment Date: August 6, 2009 12:23:38PM
Solar Energy Development PEIS
Comment ID: SolarM60130

First Name: Edwin
Middle Initial: C
Last Name: Figuerres
Organization: megabiofuels
Address: 755 San Francisco Ave
Address 2:
Address 3:
City: Pomona
State: CA
Zip: 91767
Country: USA
Email: megabiofuels@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Hon.Mr.James Caswel-Director BLM
greetings! i am aware that the Scoping Period is extended to Sept 09.PLEASE PROVIDE ME THE WEB on HOW TO FILE AN APPLICATION FOR SOLAR PROJECT ON BLM LANDS- ONLINE? Is there an application fee? With respect to the Scoping meeting-PLEASE INCLUDE/CONDUCT A MEETING HERE IN POMONA CA, which is accessible to those living in the nearby cities- Chino, Diamond Bar, Claremont, Ontario. Please do not conduct the same meeting in the same venue HERE IN CA- GIVE A CHANCE TO OTHERS PLEASE- TO ALLOW GREATEST PARTICIPATION FROM THE CALIFORNIA RESIDENTS. LET ME KNOW, THE CONSTRAINTS IF THE VENUE IS THE PROBLEM - SO THAT WE CAN WORK TOGETHER.I CAN HELP YOU LOCATE A PLACE HERE IN POMONA FOR A BIGGER MEETING PLACE- LET ME KNOW ASAP .THANKS A LOT.

Thank you for your comment, I. Miley Gonzalez.

The comment tracking number that has been assigned to your comment is SolarM60131.

Comment Date: August 6, 2009 15:33:59PM
Solar Energy Development PEIS
Comment ID: SolarM60131

First Name: I. Miley
Middle Initial:
Last Name: Gonzalez
Organization: New Mexico Department of Agriculture
Address: MSC 3189
Address 2:
Address 3:
City: Las Cruces
State: NM
Zip: 880038005
Country: USA
Email: lowen@nmda.nmsu.edu
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar Study Area Comments 8-03-09.pdf

Comment Submitted:



New Mexico Department of Agriculture
Office of the Director/Secretary
MSC 3189
New Mexico State University
P.O. Box 30005
Las Cruces, NM 88003-8005
Phone: (575) 646-3007

August 3, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue
EVS/900
Argonne, IL 60439

To Whom It May Concern:

This letter is in response to the June 29, 2009, notice in the Federal Register soliciting comments with respect to solar energy study areas on Bureau of Land Management (BLM) administered lands. New Mexico Department of Agriculture (NMDA) understands the need for and supports the development of renewable energy sources to provide for current and future energy demands.

Proposed solar study areas in New Mexico encompass over 120,000 acres of BLM-administered lands. NMDA is concerned with the impact that removing these lands from multiple-use status will have on livestock production operations currently permitted to graze in these areas. Our analysis identifies 13 grazing allotments with land in the proposed solar energy study areas. While the degree to which solar energy projects may affect each allotment will vary greatly depending on the location of facilities and affected area in each allotment, NMDA encourages BLM to consult and coordinate with all permittees potentially affected by this proposal so impacts to their operations can be identified and analyzed.

NMDA is also concerned with the amount of water required for certain types of solar energy collection facilities. Parabolic trough and central tower systems typically use steam to generate electricity. These steam powered generators can require large amounts of water for cooling purposes. This increased demand for a limited water supply could have adverse effects on local water users, both agricultural and municipal.

Utility scale solar energy collection facilities typically result in the removal of vegetation over large areas. The loss of vegetation can significantly increase the rate of soil loss to wind and water erosion. Any plans for a solar energy facility should include measures to mitigate erosion.

Solar Energy PEIS

August 3, 2009

Page 2

Surface disturbance also creates an opportunity for noxious and invasive plant species to become established and spread to adjacent areas, which could negatively impact resource conditions for the state overall as well as individual grazing allotment permittees. A weed control program would need to be developed and incorporated into planning for facilities and roads. Considering the loss of native vegetation from a watershed health perspective, a net decrease in overall watershed health may occur as a result of solar energy development. This could be mitigated by the inclusion of funding for vegetation management projects in nearby areas that restore degraded lands such a BLM's Restore New Mexico program.

Thank you for the opportunity to comment on this important matter.

Sincerely,

A handwritten signature in black ink, reading "I. Miley Gonzalez". The signature is written in a cursive, flowing style with a long, sweeping tail on the "y".

I. Miley Gonzalez, Ph.D.
Director/Secretary

IMG/jm/lo

Thank you for your comment, Joe Ross.

The comment tracking number that has been assigned to your comment is SolarM60132.

Comment Date: August 11, 2009 16:14:07PM
Solar Energy Development PEIS
Comment ID: SolarM60132

First Name: Joe
Middle Initial: V
Last Name: Ross
Organization: self
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

11 August 2009

Hello,

By Secretarial Order (No. 3285), Secretary of the Interior Salazar created an "Energy and Climate Change Task Force" (to be headed up by Deputy Secretary David Hayes). It will be important that the PEIS effort be synched up and consistent with that group's function (as delineated in the Order). I would encourage the EIS to clearly explain the parallel efforts and how they are correlated. Further, I would hope that the Dept. of the Interior soon announce the members, meetings and minutes associated with this Task Force. I would encourage the Department to create a website for open, transparent public communications in this regard.

Another issue has "surfaced" that I would like to pass along to you for analysis in the EIS. That is the potential effects of solar development on albedo radiation (light reflected off the earth's surface). Heat would also be associated with this radiation. The widespread development of solar energy could have potentially adverse impacts on albedo radiation and associated warming and climate change.

I presume that the PEIS will also clearly model for insolation (incident solar radiation) at the priority and other areas proposed for development. This should present a quantification of solar energy available per unit area (as kilowatt-hours per square foot per day or as megajules per square meter per year). With a handle on the magnitude of insolation values, you should also provide estimates of the gross energy potential for areas.

Thank you again for your consideration.

Best regards,
Joseph Ross
29 Palms, CA

Thank you for your comment, Ken Piel.

The comment tracking number that has been assigned to your comment is SolarM60133.

Comment Date: August 12, 2009 15:40:47PM
Solar Energy Development PEIS
Comment ID: SolarM60133

First Name: Ken
Middle Initial:
Last Name: Piel
Organization: Wondervalley92277.com
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Solar energy should not be placed anywhere around the Wonder Valley area.

This area is Land Patent area and we rely on wells for our water.

The Bureau of Land Management (BLM) created The Small Tract Act of 1938. The Small Tract Act was about the only method of making federal land available for private ownership. These homesteads were not meant to be working farms, but vacation homes for city dwellers.

San Bernardino County was enthusiastic about "getting lands on the tax rolls", and was not concerned about infrastructure (roads, water, power, schools) to support such development. Wonder Valleys CSA (County Service Area) dirt roads are not part of the county maintained road system so the property owners pay for maintenance.

Wonder Valley is a unique place in this overcrowded world. It's a beautiful valley in an unincorporated rural desert area just east of Twentynine Palms

Thank you for your comment, Shayne Kimball.

The comment tracking number that has been assigned to your comment is SolarM60134.

Comment Date: August 12, 2009 19:45:17PM
Solar Energy Development PEIS
Comment ID: SolarM60134

First Name: Shayne
Middle Initial: B
Last Name: Kimball
Organization:
Address: P.O. Box 283
Address 2:
Address 3:
City: Adrian
State: OR
Zip: 97901
Country: USA
Email: thunderchief@live.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

You should seriously look into Malheur County Oregon. We have a community college that is working on getting a program together that will certify people in the alternative energy sector. Plus, we live in the suniest spot in the state and have large power lines out on "BIM" not far from the local towns. Seriously you at least look into it. Thanks.

Thank you for your comment, Raymond Marshall.

The comment tracking number that has been assigned to your comment is SolarM60135.

Comment Date: August 12, 2009 23:59:05PM
Solar Energy Development PEIS
Comment ID: SolarM60135

First Name: Raymond
Middle Initial:
Last Name: Marshall
Organization:
Address: 16 Cambridge Way
Address 2:
Address 3:
City: Piedmont
State: CA
Zip: 94611
Country: USA
Email: rmarshall@sbcglobal.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Hello,

I am submitting a link to an article titled "A Framework For Energy Independence Via Solar Hosting Farms" that was published today by U.C. Berkeley's Boalt Hall School of Law. The article appears on Boalt Hall's Ecology Law Currents website. Here's the link - <http://elq.typepad.com/currents/2009/08/currents36-10-marshall-2009-0726.html#more>.

Cheers

Raymond Marshall

Thank you for your comment, Raymond Marshall.

The comment tracking number that has been assigned to your comment is SolarM60136.

Comment Date: August 13, 2009 00:06:56AM
Solar Energy Development PEIS
Comment ID: SolarM60136

First Name: Raymond
Middle Initial:
Last Name: Marshall
Organization:
Address: 16 Cambridge Way
Address 2:
Address 3:
City: Piedmont
State: CA
Zip: 94611
Country: USA
Email: rmarshall@sbcglobal.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Hello,

I am submitting a link to an article titled "A Framework For Energy Independence Via Solar Hosting Farms" that was published today by U.C. Berkeley's Boalt Hall School of Law. The article appears on Boalt Hall's Ecology Law Currents website. Here's the link - <http://elq.typepad.com/currents/2009/08/currents36-10-marshall-2009-0726.html#more>.

Cheers

Raymond Marshall

Thank you for your comment, elizabeth pryor.

The comment tracking number that has been assigned to your comment is SolarM60137.

Comment Date: August 16, 2009 23:28:49PM
Solar Energy Development PEIS
Comment ID: SolarM60137

First Name: elizabeth
Middle Initial: a
Last Name: pryor
Organization: eureka springs
Address: 18806 e loredo lane
Address 2:
Address 3:
City: rio verde
State: AZ
Zip: 85263
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The future of our country depends on many things, nature and technology, why cant humans learn that cutting costs in the beginings,always haunts us in the end. Leave the blm land in and around the aravaipa canyon alone, alot of history is in that area,sad to see what might get dug up, maybe an ole curse that better be left sleeping with the dogs.

Thank you for your comment, Pam Richmond.

The comment tracking number that has been assigned to your comment is SolarM60138.

Comment Date: August 17, 2009 17:11:31PM
Solar Energy Development PEIS
Comment ID: SolarM60138

First Name: Pam
Middle Initial:
Last Name: Richmond
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Test - ignore

Thank you for your comment, Linda Harper.

The comment tracking number that has been assigned to your comment is SolarM60139.

Comment Date: August 18, 2009 18:35:04PM
Solar Energy Development PEIS
Comment ID: SolarM60139

First Name: Linda
Middle Initial:
Last Name: Harper
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

NO to the solar project proposed for the Newberry Springs area.
It will be an excessive user of underground water for perpetual cleaning of equip.
It will disturb the wildlife and ground flora and fauna contributing to blow sand problems.
Newberry Springs should remain mixed use residential with LOW WATER consumption.

Thank you for your comment, Patricia McQueary.

The comment tracking number that has been assigned to your comment is SolarM60140.

Comment Date: August 19, 2009 15:44:27PM
Solar Energy Development PEIS
Comment ID: SolarM60140

First Name: Patricia
Middle Initial: L
Last Name: McQueary
Organization: USACE
Address: 321 N Mall Drive
Address 2:
Address 3:
City: Saint George
State: UT
Zip: 84790
Country: USA
Email: patricia.l.mcqueary@usace.army.mil
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The U.S. Army Corps of Engineers, Sacramento District, Saint George Office, would like to participate as a cooperating agency. The Saint George office will be issuing a Clean Water Act Section 404 permit on drainages that flow across state boundaries. Please include us in future mailings about this project.
Thank You.

Thank you for your comment, Nancy Dittman.

The comment tracking number that has been assigned to your comment is SolarM60141.

Comment Date: August 20, 2009 12:53:52PM
Solar Energy Development PEIS
Comment ID: SolarM60141

First Name: Nancy
Middle Initial: K
Last Name: Dittman
Organization:
Address: 27315 Highview Ave.
Address 2:
Address 3:
City: Barstow
State: CA
Zip: 92311
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I live on a hill in Barstow and I have noticed a thick haze over the desert all of 2009. It is my understanding that such a haze(smog) can significantly cut down on solar gain. Also, I have heard that solar plants use huge quantities of water to keep the mirrors clean. If this drought continues, water could be the most precious resource, even more expensive than energy. I hope these two factors are being considered as to the fiscal feasibility of building the plant.

Thank you for your comment, Eric Fehr.

The comment tracking number that has been assigned to your comment is SolarM60142.

Comment Date: August 22, 2009 13:47:07PM
Solar Energy Development PEIS
Comment ID: SolarM60142

First Name: Eric
Middle Initial:
Last Name: Fehr
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

How will the Solar Energy Development sites affect my access to public lands for things like climbing, mountain biking, motorcycling and backcountry skiing?

Thank you for your comment, Jill Flaningam Miller.

The comment tracking number that has been assigned to your comment is SolarM60143.

Comment Date: August 23, 2009 19:40:55PM
Solar Energy Development PEIS
Comment ID: SolarM60143

First Name: Jill
Middle Initial:
Last Name: Flaningam Miller
Organization:
Address: P.O. Box 2657
Address 2:
Address 3:
City: Wrightwood
State: CA
Zip: 92397
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Please DO NOT lease these lands for development of solar energy until a more thorough environmental impact assessment is done. These lands are of GREAT environmental importance, containing significant stands of flora such as the ironwood and creosote and bordering national park land. These desert areas are highly evolved, perfectly tuned systems that cannot withstand development. While development of renewable energy is a wise use of our public resources, it would be much better done on already developed lands or pre-existing structures, such as the tops of city buildings. We must spare the Mojave! What is good for the desert is good for humans!

Thank you for your comment, Matthew Miller.

The comment tracking number that has been assigned to your comment is SolarM60144.

Comment Date: August 23, 2009 20:31:35PM
Solar Energy Development PEIS
Comment ID: SolarM60144

First Name: Matthew
Middle Initial: P
Last Name: Miller
Organization:
Address: P.O. Box 2657
Address 2:
Address 3:
City: Wrightwood
State: CA
Zip: 92397
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The federal government is in a process of weatherization of low income homes with recovery act money. A similar thing can be done with this project. Solar panels can be put on homes and buildings, creating power in an already existing infrastructure. Putting these plants anywhere will cause as much, if not more, harm than good. Do not use these lands for these projects.

Thank you for your comment, Tim McKimmie.

The comment tracking number that has been assigned to your comment is SolarM60145.

Comment Date: August 24, 2009 15:57:27PM
Solar Energy Development PEIS
Comment ID: SolarM60145

First Name: Tim
Middle Initial:
Last Name: McKimmie
Organization:
Address: 1105 Circle Dr.
Address 2:
Address 3:
City: Las Cruces
State: NM
Zip: 88005
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

New transmission lines and new corridors could damage wildlife corridors, viewsheds, property values, and cause erosion and destroy the wilderness quality of many public lands. Please use existing corridors whenever possible.

Thank you for your comment, Paul Smith.

The comment tracking number that has been assigned to your comment is SolarM60146.

Comment Date: August 25, 2009 19:25:39PM
Solar Energy Development PEIS
Comment ID: SolarM60146

First Name: Paul
Middle Initial: F
Last Name: Smith
Organization: 29 Palms Innkeepers
Address: Paul Smith, President
Address 2:
Address 3:
City: Twentynine Palms
State: CA
Zip: 92277
Country: USA
Email: paulgpac@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Iron Mountain: This use would seriously interfere with the Cadiz aquifer which impacts wildlife north and adjacent to Joshua Tree National Park. Ward Valley is Indian sacred land and tortoise habitat.
East Riverside tract: Serious impact to water and wildlife in wilderness area of National Park. I predict significant biological impacts to Park.
Both are adverse to tourism of our area.

Thank you for your comment, Michael Flynn.

The comment tracking number that has been assigned to your comment is SolarM60147.

Comment Date: August 27, 2009 15:33:24PM
Solar Energy Development PEIS
Comment ID: SolarM60147

First Name: Michael
Middle Initial:
Last Name: Flynn
Organization: None
Address: PO box 4449
Address 2:
Address 3:
City: Kingman
State: AZ
Zip: 86402
Country: USA
Email: miki-finaz1@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Water must be the primary influence for decisions made on solar plants in desert areas like Mohave county. It should be the make or break criteria.

Several private interests are attempting to green wash some dubious projects in our area as they chase the Federal dollars that will be temporarily offered for these projects. They have used their influence to get the local officials to break the zoning laws using a redefinition to bypass planning and zoning requirements and allow spot re-zoning.

We use the old glacial ice melt that is in underground aquifers and for all intents and purposes it is a finite resource, regardless of which opinion you buy from the geologists. I don't see the United States building desalination plants and pumping water to Kingman if we exhaust this resource.

To avoid regulations these interests are trying to ram through legislation that will subvert our growth plans so they can build these plants. Thus, they are willing to rape one resource for another: water for oil independence.

I don't mind solar energy, build the plant, but don't use water cooling. These plants will consume thousands of ACRE feet of water a year and our water table is already in depletion. The area is also in a long term drought. Facts you can get from local experts as well as USGS.

To avoid being sued and to cater to entrenched interests the politicians are trying to placate the public with a few jobs that the plants will create and side step the regulations.

I have personally talked to the people involved in building these solar plants and they refuse to consider dry cooling or hybrid cooling. The reason they gave me was it would cost more.

On the public front the solar companies have hired slick professional people to run their "public" meetings to appease government requirements. I have been to most of the meetings and these carpet baggers keep changing the information so that they can find the "sweet spot" that will give them the nomenclature to "sell" this bad idea and hoodwink the less informed.

Now, if they are wrong and the water is depleted there is no viable alternative. So the sand will cover over everything here as people move away because of dwindling water resources. Once the water is gone, it is gone and there is no turning back.

Since the local politicians have sold out, we need to get the government to step in and protect the long term interests of the citizens.

Thank you for your comment, Richard Orr.

The comment tracking number that has been assigned to your comment is SolarM60148.

Comment Date: August 30, 2009 21:57:56PM
Solar Energy Development PEIS
Comment ID: SolarM60148

First Name: Richard
Middle Initial:
Last Name: Orr
Organization: Sustainable Grazing Coalition
Address: P.O. Box 145
Address 2:
Address 3:
City: Caliente
State: NV
Zip: 890080145
Country: USA
Email: bbwheatgrass@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Several of the areas in Nevada identified on the initial potential siting maps are in active Grazing allotments. Several of those allotments constitute the winter grazing areas for the effected permittees. Any land areas taken out of access by the permitted livestock due to solar collector construction could potentially effect far more than just the AUM's lost to surface occupation of the solar site. If a significant loss of winter AUM's occurs, it could make the entire operation insolvent due to winter versus summer use areas being out of balance for feed with the only (impractical) alternative being the overly costly process of buying feed to offset the loss of winter forage. It is important that no permits are negatively effected in this manner. In a county as small and economically depressed as Lincoln County, Nevada losing even one business greatly effects the entire county population base and economic solvency.

In addition, several of the valley's in Nevada contain coarse silty and silty textured soils which are very susceptible to wind erosion when they receive even a low level of traffic or disturbance. The erosion alone will significantly effect plant growth and production and could also settle on solar collection equipment requiring regular cleaning for maximum efficiency, which leads to more traffic, which leads to an increased erosion level and further need for cleaning.

Thank you for your comment, Claire Barker.

The comment tracking number that has been assigned to your comment is SolarM60149.

Comment Date: August 31, 2009 12:30:29PM
Solar Energy Development PEIS
Comment ID: SolarM60149

First Name: Claire
Middle Initial:
Last Name: Barker
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Hello-

I would appreciate it if our public lands were protected from development of any kind.

Solar development-while "greener" in SOME ways, on a utility scale basis: disrupts the landscape, denies access, develops access where none was and changes the shade/sun/water cycle so critical to many of the areas being "scoped". Thousands of solar panels precede the problem of removal of obsolete panels-which are toxic-and presently non-recyclable.

I fear greatly the setting of "precedence" through "NEED" under the guise of green energy. Denying known problems of environmental/socio-economic damage to communities affected and warping industrial sized solar development potential to fit a gas/coal model.

Solar is most effective close to its source of consumption. Utility scale or personal panel placement. ALL of Colorado (Western United States) has great solar potential and tracts of industrial land, private land and public right of ways perfect for locale community use-specific development.

Hurrying to seek a path of least resistance, under the pressure of federal and state scrutiny, will make it more difficult or impossible in the future, to mitigate applications for development of any and every kind on our gorgeous public lands.

Utility scale solar energy development-presently is tied into transmission line development.

Connecting large tracts of land, over miles of more land to reach each other. Toxic views, migratory and native bird threats, extension of development in even more "open space" beyond the immediate utility solar plant, and only token legal attention to environmental/socio-economic impacts of the communities and ecosystems involved.

The economic benefit to communities affected-specifically individuals who's property value plunges and community business economics-dependent on non-industrialized ambiance-are not well regulated or methodically re-imbursed for losses incurred secondary to solar and transmission development. Much falls under "eminent domain."

All industry-solar included-require some water-if only to wash panels free of dust-which is plentiful in many of the scoped regions. Other technologies to provide storage capability of energy-utilize the equivalent in water consumption to present agri-business-BUT-utilizes it 12 months out of the year-instead of just three.

Unregulated or legal changes in regulations of water use-make sunny, arid climates very vulnerable to continuing water issues that devastate the local eco-systems. The agricultural industry is already struggling with this issue, another "layer" of industrial usage permits would be paradoxical under the guise of "green".

At present-I acknowledge that the energy industry/energy consumer is at a crossroads-under the time limit of legal change in Colorado-to increase "green energy consumption and development by 10%.

We are also at a crossroads where moving too fast and in the "path of least resistance and cost" will cost our future generations dearly. We KNOW this-even though the technology is new-the pitfalls are predictable.

Let us NOT repeat history-please.

Uphold public lands for public enjoyment, open space, environmental sanctity and eco-system balancing. The issue is already difficult enough without adding another layer of potential problems.

Sincerely, Claire Barker

Thank you for your comment, Donald Barker.

The comment tracking number that has been assigned to your comment is SolarM60150.

Comment Date: September 1, 2009 11:02:06AM
Solar Energy Development PEIS
Comment ID: SolarM60150

First Name: Donald
Middle Initial: W
Last Name: Barker
Organization:
Address: 4952 N. RD. 112
Address 2:
Address 3:
City:
State: CO
Zip: 81146
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

1. Public Lands Should Remain Public Lands and not developed!
2. Water is a real problem In the arid west. The water in the west is over appropriated right now. to change water from Agriculture to Industrial changes the amount of time used and more water will be utilized than it is now.
3. To cover the present Range Sites will change the ecosystem and effect the ecosystems surrounding these sites! This will not be a positive thing.
4. Solar energy should be placed close to where it will be utilized, not transported 200 miles away to be used by big cities. The panals should be place close to the area to utilize the energy better.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60151.

Comment Date: September 1, 2009 15:14:44PM
Solar Energy Development PEIS
Comment ID: SolarM60151

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

As a younger resident of the San Luis Valley, I am deeply concerned about what the 22,000 acres of solar farm will do to both the land itself and the water of the Valley. By pumping water out of the aquifer 12 months out of the year, there are going to be huge ecological impacts, including drainage of naturally occurring wetlands, increased concentration of salts and harmful substances in the water, and less plant life due to reduced sunlight on those 22,000 acres and to less water. I realize that solar energy is being required by the government. However, I feel that less concentration of solar panels, new technology that allows for the cooling and cleaning of the panels in another way besides water usage, and the forfeiting of the La Veta powerline would all be economical ways to compromise between solar and environmental sanctity.

Thank you for your comment, susan nash.

The comment tracking number that has been assigned to your comment is SolarM60152.

Comment Date: September 1, 2009 15:45:14PM
Solar Energy Development PEIS
Comment ID: SolarM60152

First Name: susan
Middle Initial:
Last Name: nash
Organization:
Address: po box 4036
Address 2:
Address 3:
City: idyllwild
State: CA
Zip: 92549
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

I am very disturbed to find that waking up to Catastrophic Climate Change is also waking up to Catastrophic Corporate Greed, which may do little to slow down climate change. Please follow the law and protect the environment.

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Thank you for your consideration,

Sincerely,
Susan L. Nash

Thank you for your comment, Tim Allyn.

The comment tracking number that has been assigned to your comment is SolarM60153.

Comment Date: September 1, 2009 16:44:39PM
Solar Energy Development PEIS
Comment ID: SolarM60153

First Name: Tim
Middle Initial:
Last Name: Allyn
Organization: Sustainability Is Designed
Address: 620 North McCadden Place
Address 2:
Address 3:
City: Los Angeles
State: CA
Zip: 90004
Country: USA
Email: t.allyn@ca.rr.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

DOI:

The nation's public lands are a treasure for us, and hopefully for generations to come. Their bounty is retained by their natural state. Turning our public lands into industrial zones for power, or destructive high impact recreation destroys what belongs not to just us, but future generations of people, animals, biota and natural process. We have ruined enough.

The proposed solar projects at Chuckawalla are industrial, and unnecessary. Our developed communities; urban, suburban and rural, have many millions of undeveloped or underdeveloped roof space, and un-covered paved spaces to meet our current and future demands for power. All solar must first be FULLY INCORPORATED into our developed lands.

In our push for cleaner energy, we work against our gains found in a cleaner, more efficient planet if we destroy the nature and natural systems we need to protect.

I oppose solar installations on public lands (unless they are on the roof of a ranger station, public bathroom etc.)

Regards,

Tim Allyn

Thank you for your comment, Barbara Renton.

The comment tracking number that has been assigned to your comment is SolarM60154.

Comment Date: September 1, 2009 16:59:56PM
Solar Energy Development PEIS
Comment ID: SolarM60154

First Name: Barbara
Middle Initial: M
Last Name: Renton
Organization: FHCA, MBPA
Address: 828 Delgada Ave
Address 2:
Address 3:
City: Yucca Valley
State: CA
Zip: 92284
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Roof-top solar panels are much preferable since how many millions are there here? On top of each roof no one can complain about obstruction of travel, views, or survival of Nature. You are sorely short-sighted if you don't realize this already.

Other massive land areas are golf courses and cemeteries, have you thought of using those?

Putting poison upon the ground to kill any plant or animal underneath each solar panel and destroying the water aquifer beneath it is NOT environmentally friendly, now is it?

Thank you for your comment, Orville Diss.

The comment tracking number that has been assigned to your comment is SolarM60155.

Comment Date: September 2, 2009 10:33:36AM
Solar Energy Development PEIS
Comment ID: SolarM60155

First Name: Orville
Middle Initial:
Last Name: Diss
Organization: Central Pump Co
Address: 0570 east hwy 112
Address 2:
Address 3:
City: Center
State: CO
Zip: 81125
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I would encourage use of the BLM land in the San Luis Valley in Colorado for Solar development. The SLV is one of the most depressed areas in the entire country. The entire economy of this valley is based on the price of potatoes. With increasing pressure from State and other entities to cut back on water consumption, this valley will literally dry up and blow away without some other economic base that doesn't require much water.

Thank you for your comment, RJ Cardin.

The comment tracking number that has been assigned to your comment is SolarM60156.

Comment Date: September 2, 2009 17:35:36PM
Solar Energy Development PEIS
Comment ID: SolarM60156

First Name: RJ
Middle Initial:
Last Name: Cardin
Organization: Maricopa County Parks & Recreation
Address: 234 N. Central Ave.
Address 2:
Address 3:
City: Phoenix
State: AZ
Zip: 85004
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Thank you for the opportunity to comment on this project.

- It is not very clear how this project to study 24 sites is related to the dozens of solar right-of-way applications covering hundreds of thousands of acres around the West. We recently received a mailing for public scoping meetings concerning such an application for some 4000 acres just east of our Buckeye Hills Regional Park and adjacent to the northwest end of Sonoran Desert National Monument. Would all unused applications be terminated once this EIS is completed?

- Solar projects promise to help in the fight against global warming and pollution while weaning the US off its dependence on foreign oil. Such a noble goal can be reached without needlessly damaging large swaths of the natural environment. There are thousands of acres of abandoned or marginal agricultural land in Arizona and other states that would be ideal for solar project development. Just a couple of miles to the north of the Gillespie site is a large area of marginal agricultural land where a company has already announced a solar project. Two other projects are also proposed on used land in the Harquahala Valley and west of Gila Bend, where the sun shines just as brightly. This questions the need to use public land for private projects that can be built elsewhere.

- Any solar project on BLM land should be limited to land damaged by mining or other operations.

Although none of the three Arizona sites are adjacent to county parks, we feel an obligation to comment on the Gillespie site, the only one in Maricopa County, because of its potential impact on open space and quality of life for residents.

- The Gillespie site is adjacent to or straddles (for 5 miles) a significant portion of Agua Caliente Road. This road is entirely within undeveloped Sonoran Desert on BLM land between Hyder and Arlington. It covers a variety of land formations including isolated volcanic buttes and rugged mountains, passes next to at least one "narrows" type of canyon, and crosses vast stretches of open desert with vistas of distant valleys and mountains. It is the latter type of landscape that would be impacted by the Gillespie site; it would compromise the integrity and variety of the road's landscape.

- The remote, unpaved Agua Caliente Road is in a little-known, scenic area of the state. It has the potential to be a draw for tourists looking for a trip back in time and for classic Sonoran Desert vistas, especially as other parts of the state's deserts are compromised by urban and rural sprawl, mining, and other development. Only the marketing is missing. Unlike the network of rough roads in other protected areas (such as Sonoran Desert National Monument), this is a maintained and through road, ideal for tourists. This road deserves to be designated a Back Country Byway. Again, the Gillespie site would compromise the total experience.

- Contiguous natural open space would be fragmented, as the Gillespie site is not in or adjacent to developed areas. The long, narrow shape of the site would affect a large area that is out of proportion to the acreage of the site.

- The Gillespie site is approximately four miles north of Signal Peak Wilderness. Views from the Wilderness, which covers higher

terrain, would be affected.

- The impact of power lines serving the site should be considered, especially in light of at least one local power company's decision to remove all vegetation beneath and adjacent to their lines north of Phoenix in the name of safety and reliable power as required by the Energy Policy Act of 2005.

Thank you for your comment, Robert Reeve.

The comment tracking number that has been assigned to your comment is SolarM60157.

Comment Date: September 4, 2009 12:03:26PM
Solar Energy Development PEIS
Comment ID: SolarM60157

First Name: Robert
Middle Initial: C
Last Name: Reeve
Organization:
Address: 3111 Monte Rosa Ave.
Address 2:
Address 3:
City: Las Vegas
State: NV
Zip: 89120
Country: USA
Email: bobreeve1@aol.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Two comments and one question.

1. The maps used, at least to this point, are too vague to be useful.
2. If additional projects are being considered for the same basin/area they should ALL be noted on the maps

Question: My client owns 150 acres adjacent to the proposed Amargosa Valley site. How will the temperature in the immediate area be affected by this project? If the temperature rises so as to make it uncomfortable in the evening they lose the use of the land and this might be a form of 'taking'. Thank you, Bob Reeve

Thank you for your comment, Ray Pessa.

The comment tracking number that has been assigned to your comment is SolarM60158.

Comment Date: September 4, 2009 13:44:38PM
Solar Energy Development PEIS
Comment ID: SolarM60158

First Name: Ray
Middle Initial: L
Last Name: Pessa
Organization: FOGR (Friends of Giant Rock)
Address: 58725 Natoma Tr.
Address 2:
Address 3:
City: Yucca Valley
State: CA
Zip: 92284
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Solar energy may be an excellent way to supplement the need for power. Some of the areas being studied however could have an adverse effect on local residents. Vast solar fields are not appropriate in rural desert communities. I am particularly concerned with the Southern California communities of Flamingo Heights, Landers, Johnson Valley and Lucerne Valley. There is no existing transmission line along the Hwy 247 route which means even more disruption on private and public lands and community. One application near Landers would destroy the prestige of the historical Giant Rock and its importance to native American culture. I also object to the potential national monument considered by Senator Feinstein that would block solar and wind projects along route 66 where only commuters and not residents would be affected by these projects. Please take these issues into consideration when evaluating your study area.

Ray Pessa 58725 Natoma Tr. Yucca Valley, Ca 760-365-7449

Thank you for your comment, William Lansville.

The comment tracking number that has been assigned to your comment is SolarM60159.

Comment Date: September 4, 2009 18:11:09PM
Solar Energy Development PEIS
Comment ID: SolarM60159

First Name: William
Middle Initial: A
Last Name: Lansville
Organization:
Address: 531 Kathleen Dr.
Address 2:
Address 3:
City: Barstow
State: CA
Zip: 92311
Country: USA
Email: wlansville@aol.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Consider one solar panel on each roof of every building in the USA. Each panel to be connected to the grid. That becomes a solar energy source for someone, somewhere and in total becomes a starting point that immediately reduces the need for foreign energy. Additionally one small wind generator on the roof of each building and along interstate highways becomes another low cost source when considering the collective impact of a little contributing to the whole.

Thank you for your comment, Kay Turner.

The comment tracking number that has been assigned to your comment is SolarM60160.

Comment Date: September 4, 2009 20:05:54PM
Solar Energy Development PEIS
Comment ID: SolarM60160

First Name: Kay
Middle Initial:
Last Name: Turner
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

It is a shame we are giving our properties to companys to destroy our beautiful dessert. Who will not take any precautions not to use up our most precious resources. The properties you hold title to, belong to the people of this state, it should not be allowed to be destroyed by solar companies.

Thank you for your comment, diane cameron.

The comment tracking number that has been assigned to your comment is SolarM60161.

Comment Date: September 5, 2009 09:40:19AM
Solar Energy Development PEIS
Comment ID: SolarM60161

First Name: diane
Middle Initial:
Last Name: cameron
Organization:
Address: 27405 clydesdale ave
Address 2:
Address 3:
City: congress
State: AZ
Zip: 85332
Country: USA
Email: ddcmrn@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

at this point in time it would be irresponsible not to develop some kind of solar power in Arizona.. We have the resource . we should take advantage of it.

I would like to see some kind of project in the smaller communities to prove to the doubters that is efficient and the way to go. I dont believe nuclear power is the answer just because of the waste..(which we cant properly dispose of as yet)

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60162.

Comment Date: September 5, 2009 13:05:33PM
Solar Energy Development PEIS
Comment ID: SolarM60162

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I support the use of solar, I suggest a program that supports many technologies within the current energy fields relating to solar. Firstly, By supporting / funding many uses- thermal, passive, direct (PV) or other we shall be able to see after several years which application actually stands up against all factors like cost, return and environmental impact's (overall). Secondly, the use of systems also provides a service record, output performance and actual field testing along with other unforeseen implications resulting from its surroundings. Thirdly, accept a public offering of ideas, concepts and alternatives of sort, in the energy production couplings. The competition has an approved area for public comment - very similar to this possibility.

Thank you

Thank you for your comment, Gay Austin.

The comment tracking number that has been assigned to your comment is SolarM60163.

Comment Date: September 6, 2009 21:53:42PM
Solar Energy Development PEIS
Comment ID: SolarM60163

First Name: Gay
Middle Initial:
Last Name: Austin
Organization: Colorado Native Plant Society
Address: 600 North Iowa
Address 2:
Address 3:
City: Gunnison
State: CO
Zip: 81230
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Dear Personnel,

I am writing to you about my concern regarding the Solar Energy Development project proposed on BLM lands across the West. I am concerned that this project may damage or destroy threatened, endangered, or sensitive plant and/or rare lichen populations. Are plant surveys, plant BA's, and plant BE's going to be conducted by qualified Botanists for the project area? Gay Austin

Thank you for your comment, Jason Hashmi.

The comment tracking number that has been assigned to your comment is SolarM60164.

Comment Date: September 7, 2009 15:04:08PM
Solar Energy Development PEIS
Comment ID: SolarM60164

First Name: Jason
Middle Initial:
Last Name: Hashmi
Organization:
Address: 1788 Grevelia St.
Address 2:
Address 3:
City: South Pasadena
State: CA
Zip: 91030
Country: USA
Email: jnhashmi@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Thank you for your consideration,

Sincerely,
Jason Hashmi
1788 Grevelia Street
South Pasadena, CA 91030

Thank you for your comment, Kenneth Albright.

The comment tracking number that has been assigned to your comment is SolarM60165.

Comment Date: September 8, 2009 10:47:20AM
Solar Energy Development PEIS
Comment ID: SolarM60165

First Name: Kenneth
Middle Initial: A
Last Name: Albright
Organization: Southern Nevada Water Authority
Address: 100 City Parkway, Suite 700
Address 2:
Address 3:
City: Las Vegas
State: NV
Zip: 89106
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: 9-8-09 SNWA scoping comment letter.pdf

Comment Submitted:

Please see attached comment letter



SOUTHERN NEVADA WATER AUTHORITY

100 City Parkway, Suite 700 • Las Vegas, NV 89106
MAILING ADDRESS: P.O. Box 99956 • Las Vegas, NV 89193-9956
(702) 862-3400 • snwa.com

September 8, 2009

Ms. Linda Resseguie, Project Manager
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue - EVS/900
Argonne, IL 60439

Dear Ms. Resseguie:

**SUBJECT: SOLAR ENERGY DEVELOPMENT PROGRAMMATIC ENVIRONMENTAL
IMPACT STATEMENT PUBLIC SCOPING COMMENTS**

The Southern Nevada Water Authority (SNWA) appreciates the opportunity to provide scoping comments on the Programmatic Environmental Impact Statement (PEIS) to evaluate solar energy development. SNWA is responsible for management and development of water resources for southern Nevada, and has existing and future interests within the Dry Lake Valley North and Delamar Valley solar energy study areas in Nevada which should be addressed in the PEIS.

SNWA has applied to the Bureau of Land Management (BLM) for rights-of-way to construct the Clark, Lincoln, and White Pine Counties Groundwater Development (GWD) Project, and an Environmental Impact Statement is currently in preparation. The GWD Project consists of pipelines, power lines, and associated facilities for which rights-of-way have currently been requested, and future groundwater production wells, collector pipelines, and distribution power lines for which rights-of-way will be requested in the future. The potential compatibility of solar energy development with groundwater production wells, pipelines, and power lines should be addressed in the PEIS. Specifically:

- The Lincoln County Conservation, Recreation, and Development Act of 2004 designated a utility corridor which extends through the currently identified solar study areas. Under this legislation, the Department of Interior is directed to grant rights-of-way to SNWA for a water conveyance project (the GWD Project).
- The GWD Project pipeline and power line alignments cross the Dry Lake Valley North and Delamar Valley solar energy study areas.
- The Dry Lake Valley North and Delamar Valley study areas also encompass areas which have been identified by SNWA for siting of future groundwater production wells as part of the GWD Project.

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

Linda Resseguie
September 8, 2009
Page 2

SNWA has rights-of-way from the BLM for groundwater monitoring and testing wells that are located adjacent to the Dry Lake Valley North and Delamar Valley solar energy study areas. These facilities are part of ongoing regional groundwater monitoring, and are visited at least quarterly to collect data. Access to these facilities uses existing access roads through the solar energy study areas. Any potential solar energy development in these areas would need to allow for continued access to these well facilities.

The PEIS should also address the quantity and source of water that would be required for solar energy development in Nevada. SNWA holds permitted groundwater rights in Delamar and Dry Lake Valleys. The Office of the State Engineer of the State of Nevada Ruling #5875 identified perennial yields, committed consumptive uses, and available quantities of groundwater for future growth and development in those basins.

SNWA holds livestock grazing permits within the Dry Lake Valley North solar energy study area (Wilson Creek grazing allotment). Range improvements may be needed in these areas in the future to maintain and improve ongoing grazing operations. The potential impacts of designation and use of solar energy development areas on grazing allotments, range improvements, and grazing operations should be addressed in the PEIS. This should include potential loss of grazing opportunities, both short term from construction disturbance and the time necessary for restoration in a desert environment, and permanent from the footprint of structures and access roads.

SNWA requests to be added to the mailing list for the PEIS and to receive a CD copy of the document when available. Please send the materials to the attention of Chiaki Brown. We appreciate the opportunity to provide these scoping comments. If you have any questions regarding these comments or need additional information, please contact Lisa Luptowitz, Senior Environmental Planner, at (702) 862-3789.

Sincerely,



Kenneth A. Albright, P.E.
Director, Groundwater Resources

KAA:LL:df

c: Lisa Luptowitz, Senior Environmental Planner

Thank you for your comment, David Phaneuf.

The comment tracking number that has been assigned to your comment is SolarM60166.

Comment Date: September 8, 2009 11:33:51AM
Solar Energy Development PEIS
Comment ID: SolarM60166

First Name: David
Middle Initial:
Last Name: Phaneuf
Organization:
Address:
Address 2:
Address 3:
City:
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I am asking if you have any information as to the project being developed by a company Redco, out of Utah? I would like to know where they are in project stage?

Any information would be appreciated.

Thank you,
David

Thank you for your comment, Jeffrey Twine.

The comment tracking number that has been assigned to your comment is SolarM60167.

Comment Date: September 8, 2009 14:16:44PM
Solar Energy Development PEIS
Comment ID: SolarM60167

First Name: Jeffrey
Middle Initial: M
Last Name: Twine
Organization: Synerjy
Address: 325 Riverside Drive #64
Address 2:
Address 3:
City: New York
State: NY
Zip: 10025
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I fully support the Solar Energy Study Areas, but, rather than making specific comments on it I'm submitting an abstract of a renewable energy plan that I've devised.

This plan is somewhat more ambitious and comprehensive. The text is attached:

Renewable Energy Parks System

Much of the land to the west and south of the Rocky Mountains (over 400,000 square miles) is too dry for agriculture. Even where there is sufficient rainfall farmers are being paid not to farm over 35 million acres (about 55,000 square miles) and many other farmers are just barely eking out a living. There are at least 500,000 square miles of underutilized land in the land to the west of the Mississippi alone, and much more in Alaska and the eastern states. It would be a win-win situation if we used energy parks to make these open spaces more productive, lessen our dangerous dependence on imported fuels, reduce the amount of climate-altering carbon dioxide we spew into the atmosphere and create jobs at the same time.

We need to achieve economies of scale to make renewable cost competitive with fossil-fuel electricity or fuels. This can be achieved, in part, by the creation of large-scale energy parks that would produce electricity or fuels (and perhaps both at the same site) from wind power, solar electric technologies and biomass. The potential is enormous: If just 1/10 of the above-mentioned underutilized land was used for energy parks (50,000 square miles) we could produce about 600,000 Megawatts of electricity from just wind power and considerably more if large arrays of photovoltaic cells were interspersed between the wind turbines.

Alternatively, if biomass appropriate to the region was grown between the turbines on within solar-thermal-electric plants, we could use the electricity to help produce transportation fuels. These open-space energy parks, together with a real commitment to energy conservation, would allow us come much closer to energy independence. All eyes are now on the USA; we need to take the lead in renewable energy, and this would be a great example for other countries to follow.

State or federal energy parks might work best as a joint public/private enterprise – the land being bought or leased by the government and the energy production facilities built and operated by private entrepreneurs such as wind farm developers. Corporate sponsorship would be helpful. All parties, including state or federal governments, could share in any resultant profits.

The ideal situation would be one in which the energy parks are sited in under-utilized land fairly close to a city—to minimize transmission costs. It must be pointed out however, that most of the energy transmission infrastructure is in dire need of replacement or upgrading. It would be wise to take renewable energy—and renewable energy parks—into account when this upgrade or replacement is done.

A long-term objective would be the development of a national or state energy park system similar to the current system of national and state parks which are designed to protect the environment.

Thank you for your comment, jim lefevre.

The comment tracking number that has been assigned to your comment is SolarM60168.

Comment Date: September 8, 2009 21:15:24PM
Solar Energy Development PEIS
Comment ID: SolarM60168

First Name: jim
Middle Initial:
Last Name: lefevre
Organization: none
Address: hc34 box 16
Address 2:
Address 3:
City: calinte
State: NV
Zip: 89008
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

we the people of the united states have an obligation to do as much as we can.that meaning to go solar or wind power. ower childrens lives depend on what we do know. that we get of the oil wagon. the futcher of america depends on our changing the way we do things.every body has to do there part. that means our goverment.! the upper class! knowbody should be excluded. we all have to do our part. more solar. more wind. thanks for your time.

Thank you for your comment, Norma Roman.

The comment tracking number that has been assigned to your comment is SolarM60169.

Comment Date: September 8, 2009 23:32:43PM
Solar Energy Development PEIS
Comment ID: SolarM60169

First Name: Norma
Middle Initial:
Last Name: Roman
Organization:
Address: 44-446 Biskra St.
Address 2:
Address 3:
City: Indio
State: CA
Zip: 92201
Country: USA
Email: normarina@hotmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Thank you for your consideration,

Sincerely,
Norma Roman

Thank you for your comment, Karen Meyers.

The comment tracking number that has been assigned to your comment is SolarM60170.

Comment Date: September 9, 2009 00:24:24AM
Solar Energy Development PEIS
Comment ID: SolarM60170

First Name: Karen
Middle Initial:
Last Name: Meyers
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

We would like to comment on the small area marked with light blue, east of 29 Palms, & between Joshua Tree Nat Park & the Marine Corps Base. This is where we live. It is an area called Wonder Valley. We are very much against solar or wind power development here because of the impact on our way of life. We moved here 28 yrs ago to be in the wide open spaces, & we cherish our beautiful views of the surrounding mountains. Also at stake are the desert tortoises & lots of other wildlife that live in this area. There are many areas without homes that would be acceptable for these large-scale developments. Our property is surrounded by BLM land, so this is particularly important to us. We have a beautiful 4-bedroom 2-bath home + guest house (with our own well), & are retired now. We have a reverse mortgage on our home, & could not move without incurring great financial hardships. We do not want our peaceful desert life ruined by large structures, activity & pollution. Please deny the applications for solar &/or wind development in this area. The water useage alone would be a reason for denial of these projects in this area. There are other areas that would be much better suited for wind/solar projects. Please take all this into consideration -- there are about 4,000 residents in Wonder Valley who would be adversely affected. Thank you for your time.

Thank you for your comment, Genne Nelson.

The comment tracking number that has been assigned to your comment is SolarM60171.

Comment Date: September 9, 2009 07:26:37AM
Solar Energy Development PEIS
Comment ID: SolarM60171

First Name: Genne
Middle Initial: M
Last Name: Nelson
Organization:
Address: P.O. Box 258
Address 2:
Address 3:
City: Amargosa Valley
State: NE
Zip: 89020
Country: USA
Email: gennenel@veawb.coop
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Comments on Programmatic Environmental Impact Statement
to Evaluate Solar Energy Development on Public Lands

I commend the U.S. Bureau of Land Management for extending the comment period on the development of a Programmatic Environmental Impact Statement for Solar Energy Development on public lands after the maps of proposed study areas were released. It is easier to comment on potential site impacts when you actually know where the sites are located. I also commend the agency for taking a programmatic approach which will streamline processing of future solar development by defining general policies and mitigation strategies. Commonalities in the areas considered for solar development in the desert Southwest make this approach possible, but site-specific review for environmental differences will always be needed. Standard policies and environmental requirements also provide the solar developers with information that can facilitate their early planning stage and economic evaluation of projects.

I am also glad the BLM recognizes the importance of public land to people who live in communities surrounded by public land. Solar energy will provide benefits to millions of American. But development of utility-scale solar energy projects has the potential to have dramatic effects on not only the environment, but on the people who live near them. Rural communities that live within large tracts of public land should not bear a disproportionate burden of impacts to their quality of life for the benefit of people hundreds of miles away. Mitigation measures should protect critical components like air quality, water resources and visual resources of residents who live in the wide-open spaces.

My comments will be divided between those environmental issues that are common to the desert Southwest, and those specific to the propose site in Nevada identified as Amargosa Valley which is where I live.

Comments Relevant to the Desert Southwest

Water

Part of the reason the desert Southwest is favorable for solar energy development is the fact that it is a desert. Rainfall is slight, cloudy days are few and sunny days abundant. Consequently water resources are limited. Congress passed the Energy Independence and Security Act of 2007 which required that "...the Secretary of Energy shall transmit to Congress a report on the results of a study on methods to reduce the amount of water consumed by concentrating solar power systems." [1] The fact that congress commissioned the Department of Energy (DOE) to study water conservation measures suggests Washington recognizes the need to address water issues in the desert Southwest where solar resources are optimal.

The DOE studied four types of concentrating solar power technologies: parabolic troughs, linear Fresnel, power towers, and dish/engine. Of these, only parabolic-trough technology is currently in commercial use in this country. All but dish/engine technology use a conventional steam generation process that requires cooling in order to function. Conventional technology uses water to cool the systems. For those locations that have surface water resources, water can be circulated once through the plant and returned to the natural source. This elevates the temperature of the water with potentially significant environmental impacts, including increased evaporative loss. Recycled cooling, which would be necessary in locations like the Great Basin that lack surface water resources, essentially loses all the water resource to evaporation. Considering that the report indicates water-cooled concentrating solar plants use 500 to 650 gal/MWh, this would be a major impact on desert water supplies.

The results of the DOE report show dry cooling technology would consume about 10% of the water required for a wet-cooling system. That water savings would result in a loss of power output through loss of efficiency and an increased cost for the

dry-cooling system that would translate into a 2-10% increase in power generation costs. The actual amount would depend on the specific environmental conditions of the plant location. Certainly solar power generators would choose to use the more cost-effective plant designs. However, every energy source carries a price. If the American people want renewable energy, then they must be willing to pay for a new technology that doesn't create other major environmental impacts. If water resources are not protected, and groundwater basins decline, the future of solar-generated power would be in peril. Furthermore, if a goal of the BLM is best use of resources, then requiring dry-cooling technology in the desert Southwest will preserve water for a larger number of solar-energy plants.

I believe the only responsible approach to solar energy in the desert Southwest is dry cooling. Certainly wet cooling should be prohibited, and hybrid wet/dry cooling only considered under special circumstances, such as waste-water recycling. Since water supplies in the desert are precious, I recommend that the BLM require that monitoring sites be selected both near and far field to solar facility water resources (wells for ground-water sources, flumes or other stream flow measurements for surface water). Plant usage should also be metered. This would provide early warning if water resources are more negatively impacted than design projections. Monitoring information should be made available to the public.

Air Quality

Due largely to the limited rainfall in the desert Southwest, the environment is strongly impacted by wind erosion. Construction and development in cities like Las Vegas, Phoenix, Tucson, Albuquerque and others create significant dust problems if controls are not implemented. Significant grading and leveling of the site is required during construction of solar facilities. Those solar technologies that use oils for heat transfer have a flammability potential that causes them to eliminate all vegetation from the solar collection facility. This disruption of the natural desert floor insures the availability of dust to wind erosion.

Wind storms are common in the desert and can cause significant to total loss of visibility which is major hazard to motorized traffic. The greater the amount of disturbed land present, the more significant the dust hazards become. Since plant designs call for large blocks of land (on the order of square miles) for the solar collection array, this can create a major wind erosion problem. All solar projects should incorporate verifiable dust control technology into their plant design. Installation of downwind air quality monitor stations should be required to insure compliance.

Dark Sky

I remember almost thirty years ago when I was attending school in Tucson that light pollution was already an issue for the National Laboratory at Kitt Peak located sixty miles away. Growth in the desert has continued and protection of the dark sky has become an important issue in recent years. The cloudless desert nights give some of the best amateur astronomic views in the country, if not encroached upon by development. Solar facilities that use mirrors need to keep them clean to optimize solar power generation. But cleaning must be done at night, which can significantly impact rural dark skies. Minimization of light pollution should be required of solar facilities in rural residential areas and in close proximity to designated land reserves like state and national parks, wildlife refuges, and wilderness areas.

Residential Impacts

A solar-energy plant is an industrial operation. BLM should not approve development of these facilities in close proximity to private property owners out of consideration of their safety and quality of life. Reasonable buffer zones should be part of the defined mitigation for plant sites in proximity to existing communities.

The impacts of housing facility workers in remote locations should be considered and plans provided before permits are granted for plant construction. Impacts of developing infrastructure for these operations must also be considered, especially when in close proximity to existing rural communities. Development of land for private housing may adversely affect ground-water supplies beyond the sustainability of desert hydrologic systems. The shorter-term impacts of a large work force of construction workers should also be considered.

Like any other industrial facility, solar plants are designed for an expected functional life. Decommissioning of the facility at some future time is part of the original plan. It has long been the policy of governing agencies to require reclamation bonds for mining operations across the west. This practice should also hold true for solar-energy generation plants. Significant changes will be made during site development and future restoration of the site should be guaranteed by posting financial assurance. Along the same line, consideration should be given to the experience and track record of the solar-energy provider that insure honest commitment to power development over speculator interests.

Comments Relevant to Amargosa Valley, Nevada

Water

One hydrologic factor that should be considered as part of the EIS process specific to Amargosa Valley is the legacy contamination of ground water located beneath the Nevada Test Site. An agreement was reached between the State of Nevada Division of Environmental Protection (NDEP) and the U.S. Department of Energy (DOE) in 1996 defining a process by which underground contamination would be predicted and a system of monitoring well installed to insure compliance (under authority of the Federal Facility Agreement and Consent Order). [2] The state determined that radionuclide (RN) contamination of ground-water resources that exceeded safe drinking water standards should not leave the boundaries of the Nevada Test Site. Since that time, the Environmental Management Program of the DOE Nevada Site Office has conducted data collection and modeling for the Underground Test Areas (UGTA) subproject. Five underground test areas are located within the Nevada Test Site. The Corrective Action Units (CAUs) are studied and modeled independently and are at different stages in development. The location of the site for which this PEIS is being conducted is down-gradient of the Pahute Mesa Test Area.

The first iteration of transport modeling for the Pahute Mesa CAU was completed in 2007 [3 and 4]. Part of the findings of this

study found “The Phase I transport model predicted potential migration of RNs exceeding the contaminant boundary standard off Pahute Mesa within the 1,000-year time frame. The dominant flow path for predicted transport was characterized by convergence of groundwater flow directly south of Pahute Mesa and thence along the western flank of the resurgent dome of the Timber Mountain caldera complex...” (p.9). [5] It was further noted that “Uncertainty in the flow model evaluated during the modeling also suggested alternate flow paths with somewhat less distant RN transport” (p.9). [5]

An open house was held in Beatty in February of this year to acquaint local residents with the results of the Phase I modeling, and the plans for Phase II drilling scheduled to start in 2009. In the meeting announcement the DOE noted “The Pahute Mesa Computer Model predicts migration of tritium and carbon-14 off the NTS within 50 years of the first nuclear detonation (1966) in the Western Pahute Mesa region”. [6] Phase II drilling to collect more data for model comparison and further refinement of the Phase I model commenced in May of this year and is ongoing at the present time. The first well drilled, ER-20-7 encountered tritium that exceeded safe drinking water standards, confirming model prediction of RNs at this location. [7] This first well is located less than a mile from the NTS boundary.

It will be several years before the second round of data collection will be completed and remodeled. However, one critical aspect of the modeling program makes it important for the work that the DOE is doing be considered in this EIS—the models they are running are steady state (p.50). [5] They are predicting the migration of radionuclides based on existing water usage—quantity and point of withdrawal-- in the area. Sites for solar applications on BLM land extend up the U.S. Hwy 95 corridor from Amargosa almost to Beatty. This is an area (excluding NVN-084359 and NVN-085653) that is largely undeveloped hydrologically except for U.S. Ecology and some scattered monitoring wells installed by the Bullfrog Mine operations of the 1980-90s.

In November of 2008 the Nevada State Engineer ruled that in light of evidence that “the ground-water basin was being depleted” in Amargosa Valley, any future requests to change the point of diversion of water rights closer to Devils Hole would be denied [8]. This decision is currently being contested, but if upheld, it is likely that new water supply wells will be developed across the upper Amargosa Valley farther from Devils Hole and beyond the twenty-five mile radius established by the Order. Most of the solar application sites are in this area (as is the PEIS site). This change in existing hydraulic withdrawal from the Amargosa basin will no longer be reflected in the DOE models of ground-water contamination. I feel it is important for the BLM to begin dialog with the DOE UGTA subproject (Mr. Bill Wilborn is the subproject manager) to discuss the potential changes in the hydrologic system that may be created by development of solar energy in the Amargosa Valley. The cumulative effects over time could change the rate and direction of contaminant flow and those results need to be considered early in the process. With models currently in place, even though they are in the process of modification, the potential impacts of changes in the basin could be reviewed in a preliminary manner.

I was a member of the Community Advisory Board for six years while the CAB evaluated the adequacy of the UGTA approach to defining contaminant migration. Among our findings was the fact that Beatty was the community at highest risk for contaminant migration due to the steeper hydraulic gradient between that town and Pahute Mesa. How would moving points of ground-water diversion into the upper Amargosa basin affect that risk? The DOE has a monumental task to define ground-water contaminant transport in a largely fracture-controlled flow system from a site larger than the state of Rhode Island. As a downstream resident of the NTS, my community has a vested interest in understanding, as one resident put it, “the nature of the beast.” The only source of domestic water is from the ground and insurance of the safety of that source is vital to the future of the local communities. Free-flowing springs in Oasis Valley and Ash Meadows are unique ecosystems in the Great Basin / Mojave Desert and they also deserve protection. It is in everyone’s interest to investigate the impact of changes in the ground-water system before solar plants begin operation up the length of the valley.

One other consideration—Amargosa Basin is closed to new appropriations of water rights due to the State of Nevada’s policy to limit water use to perennial yield. When I first saw the solid line of solar applications extending from Amargosa almost to Beatty, my first thought was “put them in Crater Flat so no one will have to see them”. I have driven past Daggett and Kramer’s Corner over the years and it isn’t my idea of desert visual esthetics. But I was later discussing life in Amargosa with a USGS hydrologist that I have worked with over the years while on the CAB. He made an interesting remark that stayed with me because of my earlier desire tuck the mirrors away in Crater Flat. He basically said that Nye County should be mad at DOE about the legacy contamination. Crater Flat is basically a virgin ground-water basin with very few assigned water rights, and yet it is directly down gradient of the Pahute Mesa underground test area. Using the Nevada Water Rights database, I come up with a little over 700 AFA either certified, permitted, or reserved with another 915 AFA pending action. Considering the finite availability of water in Amargosa, this looks like a pretty good source of untapped water, if you don’t consider the impact of new pumping on contaminant migration. Should future solar operations be unable to obtain water rights in the Amargosa Basin, it would be nice to know whether water resources can be safely considered for use from adjacent basins to the area.

Again, I appreciate the opportunity to offer comments and suggestions to the development of the PEIS for solar-energy development on public lands. I am in favor of the concept renewable solar energy and have been a long advocate of wise use of public lands. But the benefits of renewable energy must weighed against other environmental impacts. The greatest obstacle to overcome in solar-energy development is impacts on scarce water resources. I am sure with careful study, reasonable mitigations can be implemented to balance environmental impacts and allow wise and sustainable solar-power development to go forward.

Genne M. Nelson
P.O. Box 258
2640 E. Cook Rd
Amargosa Valley, NV 89020
gennel@veawb.coop

Sources

1. U. S. Dept of Energy, 2007, Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation, Report to Congress, 35pp.
2. Federal Facility Agreement and Consent Order. 1996 (as amended February 2008). Agreed to by the State of Nevada; U.S. Department of Energy, Environmental Management; U.S. Department of Defense; and U.S. Department of Energy, Legacy Management. Appendix VI, which contains the Underground Test Area Strategy, was last amended February 2008, Revision No. 2. Text available at <http://ndep.nv.gov/boff/agree.htm>.
3. Stoller-Navarro Joint Venture. 2006. Groundwater Flow Model of Corrective Action Units 101 and 102: Central and Western Pahute Mesa, Nevada Test Site, Nye County, Nevada, Rev. 0, S-N/99205--076. Las Vegas, NV.
4. Stoller-Navarro Joint Venture. 2007. Addendum to the Groundwater Flow Model of Corrective Action Units 101 and 102: Central and Western Pahute Mesa, Nevada Test Site, Nye County, Nevada, S-N/99205--076, Rev. 0 (June 2006), 9 May. Las Vegas, NV.
5. Stoller-Navarro Joint Venture. 2009. Phase II Corrective Action Investigation Plan for Corrective Action Units 101 and 102: Central and Western Pahute Mesa, Nevada Test Site, Nye County, Nevada, DOE/NV—1312-CD.
6. Nevada Site Office Environmental Management, Feb. 17, 2009, “National Nuclear Security Administration Nevada Site Office to Hold Open House on Nevada Test Site Groundwater Activities” in EM News Flash. The EM News Flash articles are available from envmgt@nv.doe.gov.
7. National Nuclear Security Administration, July 1, 2009, “Groundwater Results Support Computer Model,” in Nevada Site Office News, NSO-09-006.
8. Office of the State Engineer, State of Nevada, Order 1197, November 4, 2008, Carson City, NV.

Thank you for your comment, Doug Goodall.

The comment tracking number that has been assigned to your comment is SolarM60172.

Comment Date: September 9, 2009 15:41:48PM
Solar Energy Development PEIS
Comment ID: SolarM60172

First Name: Doug
Middle Initial:
Last Name: Goodall
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

I would like to see us use rooftops, parking lots, major transportation corridors and other already disturbed spaces before we start opening up large tracts of land for these complexes. These are dead spaces that could be used without threat of further disruption of ecosystems or scenic views. These are good places to start and we could add to them as needed.

Thank you for your comment, Johnney Coon.

The comment tracking number that has been assigned to your comment is SolarM60173.

Comment Date: September 9, 2009 17:54:45PM
Solar Energy Development PEIS
Comment ID: SolarM60173

First Name: Johnney
Middle Initial:
Last Name: Coon
Organization:
Address: P.O. Box 436
Address 2:
Address 3:
City: Desert Center
State: CA
Zip: 92239
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

I'm a long time resident of Desert Center, over 33 years, and land owner, over 300 acres. I'm very concerned about the large scale solar projects that are proposed for our desert regions and the speed to which they appear to be progressing. I live just south of the Coxcomb mtns. My land borders BLM land, which borders Joshua Tree National Park. I've always intended to put my acreage into a land trust to provide additional habitat for desert wildlife. Habitat is decreasing at an alarming rate throughout the U.S. I'm concerned about habitat destruction, water usage and our decreasing water table, transmission lines and roads, the threat to the already threatened and endangered species, the close proximity to a National Park, and the destruction of a mostly pristine desert environment. I would like to see meetings made available in which we may register our concerns and opinions. This is public land and our voice should be heard and acted upon. Sincerely,
Ms. Johnney Coon

Thank you for your comment, Timothy Anderson.

The comment tracking number that has been assigned to your comment is SolarM60174.

Comment Date: September 9, 2009 18:25:20PM
Solar Energy Development PEIS
Comment ID: SolarM60174

First Name: Timothy
Middle Initial: W
Last Name: Anderson
Organization:
Address: P.O. Box 436
Address 2:
Address 3:
City: Desert Center
State: CA
Zip: 92239
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

I'm writing to register my opposition to the massive solar projects slated for our deserts. It's not that I'm opposed to solar, I just believe there is a better way. Destroying a fragile desert environment is not the way. All new construction should have solar panels on every rooftop. The federal dollars, taxpayers dollars, could go towards providing all existing structures with solar panels and other energy conserving systems. Small business could be established to build, install, and service these systems. Many could find employment with these newly created jobs. Destroying our desert and way of life is not the way to produce needed energy. Please spend more time studying these proposals and don't fast track them. How about providing some local meetings in our area, an area that would be adversely impacted. Put the power with the private citizen and not big business. Thank You,
Timothy Anderson

Thank you for your comment, Kenneth Waxlax.

The comment tracking number that has been assigned to your comment is SolarM60175.

Comment Date: September 10, 2009 11:43:59AM
Solar Energy Development PEIS
Comment ID: SolarM60175

First Name: Kenneth
Middle Initial: B
Last Name: Waxlax
Organization: Realtor
Address: 43630 Pisces Court
Address 2:
Address 3:
City: La Quinta
State: CA
Zip: 92253
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The study area called Riverside East in California is an excellent area for large scale solar. It is fairly flat, transmission corridors already exist, and there are minimal issues with endangered species, flooding, and water. However, I believe it is important that if this 23,000 acre area is disturbed by solar power generation, that mitigation should be required--thus adding sensitive land to replace public land dedicated to solar power.

Thank You,
Kenneth B. Waxlax

Thank you for your comment, Christine Canaly.

The comment tracking number that has been assigned to your comment is SolarM60176.

Comment Date: September 10, 2009 12:10:39PM
Solar Energy Development PEIS
Comment ID: SolarM60176

First Name: Christine
Middle Initial:
Last Name: Canaly
Organization: San Luis Valley Ecosystem Council
Address: P.O. Box 223
Address 2:
Address 3:
City: Alamosa
State: CO
Zip: 81101
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: PEIS.SLVEC.Studyarea.draft.Scoping comments8.09.doc

Comment Submitted:

Please see attached comments below. There should be three attachments so we will send 3 forms.

Delivered via electronic mail and hard copy U.S. post

September 10, 2009

Linda Resseguie
Project Manager
Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Ave. – EVS/900
Argonne IL 60439

Re: Comments on the BLM Solar Energy Programmatic Environmental Impact Statement, (PEIS) specifically, 4 study areas selected for Colorado in the San Luis Valley

Dear Ms. Resseguie;

Please accept and genuinely consider these scoping comments on behalf of the San Luis Valley Ecosystem Council and the Citizens for San Luis Valley Water Protection Coalition. We serve the six county area of the San Luis Valley basin in South Central Colorado. We provide public policy recommendations for the entire Rio Grande Headwaters in CO, an area encompassing over 8,100 square miles.

San Luis Valley Ecosystem Council (SLVEC)

The mission of SLVEC is to protect and restore—through research, education, and advocacy—the biological diversity, ecosystems, and natural resources of the Upper Rio Grande bioregion, balancing ecological values and human needs. SLVEC works as the only local public lands advocacy organization that is concerned about protecting and restoring intact ecosystems and wildlife corridors, from the mountain peaks to the rivers along the valley floor, and into New Mexico.

Since 1995 SLVEC has been serving the San Luis Valley, which is surrounded by 3.1 million acres of public lands that includes the Great Sand Dunes National Park, the Rio Grande National Forest, three National Wildlife Refuges, numerous State Wildlife Areas, 230,000 acres of wetlands- the most extensive system in the Southern Rocky Mountains, and some of Colorado's most remote wilderness. SLVEC originally formed to offer input for the Revised Management Plan of the Rio Grande National Forest (RGNF). Today it stands as a voice for citizens concerned about threats from increased motorized recreation, destructive timber sales, unbridled development, oil and gas development, and most recently, utility scale solar power facilities and transmission lines. SLVEC has established a reputation for bringing a strong environmental voice that finds workable solutions to the rural, conservative, public arena. SLVEC has approx. 500 members and a mailing list of 4,000 supporters.

Citizens for San Luis Valley Water Protection Coalition (WPC)

is a grassroots organization representing a broad spectrum of interests. It's members are united by the belief that the vital ecological, wildlife, cultural, agricultural and water resources of the upper Rio Grande and Closed Basins of the San Luis Valley should not be jeopardized by destructive industrialization of any kind. By working with communities, local government and organizations, WPC is actively engaged in promoting an emerging culture of sustainability in the San Luis Valley that is responsive to climate change while protecting the vital natural resources that maintain the healthy functioning of ecosystem processes and services.

Thank you for giving us the opportunity to respond to, and offer input into the BLM and Department of Energy (DOE) Programmatic Environmental Impact Statement (PEIS) process for agency wide solar energy programs and policy.

We encourage both a national and a regional conversation on energy use and, especially, on fossil fuels and their impacts to climate change. It is imperative that our country makes the transition to the use of renewable energy sources. The warming effects are being felt in the San Luis Valley, as in other parts of the world, and are impacting wildlife, water supplies, and forest health.

We believe that renewable energy can offer a clean, affordable, sustainable, and environmentally friendly alternative. We support a measured approach, however, to the switch to alternatives.

We recognize the unique and valuable aspects of the San Luis Valley. We understand that the Valley has enormous potential in the area of solar production, and has a long history of supporting solar energy on a smaller scale. We encourage the development of renewable energy strategies that will promote the long-term health and well being of the community, and protect the environment, critical habitat, wildlife, sensitive corridors, and water, as well as the history and culture of this agro-pastoral community.

We urge the DOE and BLM to take a long term view when considering the scale, siting, water demands and the building of new transmission lines that will be required to accommodate Utility Scale Solar development in a culturally and ecologically sensitive area like the San Luis Valley (SLV). It is imperative that solar development remain **responsible and that renewable energy development does not compromise this area's unique values.**

We recommend a national model of appropriate energy development based on what is currently being implemented in European countries. They appear to exercise a three fold strategy; emphasis on flexibility in size and scale fitted to location and need, constructing open ended systems that can rapidly integrate new technologies, and suitably subsidizing research and development that encompasses a range of alternative energy sources.

Thank you for considering these scoping comments and for your commitment to prioritize and bring the possibility of responsible renewable energy development to our nation's infrastructure. We look forward to a continual interchange of ideas and information throughout this process.

Sincerely,

Christine Canaly, Director
San Luis Valley Ecosystem Council

Matthew Crowley, Co-Chair
SLV Water Protection Coalition

PEIS Comment Response Outline

- I. BLM Multiple Use Criteria-Amend Land Use Plan**
- II. Siting of Energy Corridors**
 - A. Areas to Exclude-National Historic and National Scenic Areas**
 - B. Threatened or Endangered Species, Wildlife Linkage Habitat**
- III. WATER**
 - A. History**
 - B. Water Quality**
 - C. Water Usage**
- IV. Site Specific Criteria**
 - A. Narrative of proposed areas**
 - B. Site specific species data Sheet**
- VI. Transmission Lines**
 - A. Regulatory Process- BLM Participation**
- VII. References**

There are 4 study areas within the San Luis Valley, representing all of Colorado totaling 22,000 acres.

1. DeTilla Gulch- North of Town of Saguache, between Hwy 285 and Hwy 17
2. Four mile East-NW corner of Hwy 150 and 160 intersection
3. Los Mogotes East- directly west of Town of Romeo & Hwy 285
4. Antonito Southeast- East of San Antonio Mountain

I. BLM Multiple Use Criteria-Amend Land Use Plan (Highlighted by BLM Question 35)

It is understood that “solar applications received by the BLM are for large- scale, commercial facilities. These facilities propose to have a large foot print and are likely to be an **exclusive use** of the land. They will also require occupancy of the surface for a long period of time, as much as thirty years. These characteristics generally require the BLM to amend the land use plan and will require the BLM to conduct a detailed environmental review under NEPA. Adequate time will also be needed to conduct any environmental studies needed and to coordinate with a wide variety of concerned organizations. There is also a need to consult with tribal and state governments and to conduct cultural and historic clearances.”

Recommendations:

The BLM will have to amend it’s land use plan, which is governed by “Multiple Use” policies to make an “exclusive use” determination of these proposed solar study areas. We are concerned about the precedence this will set on other BLM lands located in the general vicinity and strongly encourage the agency to consider a no action alternative, and leave the option open for siting on degraded private lands instead. Further, we encourage BLM to conduct a detailed environmental review that will be administered through the local field service offices. We assume this environmental review will be an Environmental Impact Statement (EIS). Local field offices should have the final say regarding the siting of these proposed utility scale facilities and the determination decision of what the land base is purported to support.

II. Siting of Energy Corridors

- A. Areas for Exclusion Consideration: National Historic and National Scenic Areas**

Special Management Areas-Sangre de Cristo National Heritage Area

The Notice of Availability identified a number of different types of special management areas where utility-scale solar development is not appropriate. Areas in the National Landscape Conservation System including National Heritage Areas are governed by other laws requiring protection as a priority to protect objects of historic or scientific interest, and must be managed to protect those values as a priority over other uses. NHA Legislation was passed in March of 2009 containing the counties of Conejos, Costilla and Alamosa counties. These areas also include the scenic by-way. Specifically, Study Area Four Mile East, which is on the Scenic by-way route and gateway to the Great Sand Dunes National Park.

Three of the four study areas are located within the Sangre de Cristo National Heritage Area.

- 1. Four mile East-NW corner of Hwy 150 and 160 intersection**
- 2. Los Mogotes East- directly west of Town of Romeo & Hwy 285**
- 3. Antonito Southeast- East of San Antonio Mountain**

The mission of the *Sangre de Cristo National Heritage Area (NHA)* is to promote, preserve, protect and interpret the profound historical, religious, environmental, geographic, geologic, cultural and linguistic resources. These efforts will contribute to the overall national story, engender a spirit of pride and self-reliance, and create a legacy in the Colorado counties of Alamosa, Conejos, and Costilla.

The geologic resources found in the NHA are directly associated with human habitation. The layered water systems first brought in game that attracted many Native tribes to the area, going back 12,000 years. Hispanic settlers from the south were enticed by the water to raise crops and sheep. This area boasts the oldest town in Colorado (San Luis), the oldest parish in Colorado (Our Lady of Guadalupe), and the oldest water rights in Colorado. Anglo ranchers and farmers raised cattle and wheat, and present-day crops of alfalfa, potatoes, and lettuce. **The geographic isolation of the area has essentially preserved cultural identity of those groups.**

Historically, the SLV area was a crossroads of culture. Mt. Blanca, southeast of the Great Sand Dunes, marks the eastern boundary of the Navajo. Mt. Blanca is considered one of four mountain peaks in the four corner area to be sacred among various tribes who inhabited and traded in this area.

B. Threatened, endangered and sensitive species habitat, as well as critical cores and linkages for wildlife habitat

Excerpts from Sangre de Cristo National Heritage Area feasibility Study

Wetlands and waterfowl

Within the Sangre de Cristo NHA, a mixture of wetland communities including, creek bottom, permanent and seasonal ponds, upland shrublands and playa wetlands provide breeding and migration habitat for raptors, songbirds, waterbirds and waterfowl. Wetlands are often found in areas where groundwater, from the aquifer, move towards low-lying areas and surfaces on the landscape.

Globally significant Flora and Fauna

A number of plant, plant community and animal species found in the Sangre de Cristo NHA have been recognized by the Colorado Natural Heritage Program (CNHP) as globally significant. These species have received a G1 to G3 rating, meaning they are vulnerable to extinction due to a very small population size, a very restricted range, or other biological factors.

Animals

Southwestern willow flycatcher-(*empidonax trailii extremus*), a federally endangered songbird inhabits riparian vegetation within the San Luis Valley. This songbird migrates and nests in dense willow and cottonwood areas throughout the SLV, including areas that are within the Sangre de Cristo NHA.

The following species are also found within the Sangre de Cristo NHA and have been

identified as “sensitive” by federal agencies. The sensitive designation indicates that the species’ population viability is a concern.

- Greater sandhill crane (Forest Service) [see map of flyway group](#)
- White-faced Ibis (FS/BLM)

Plants

Slender spiderflower (*Cleome multicaulis*)- a globally imperiled plant found in the transition areas between wet meadows and the adjacent silt grass/greasewood uplands throughout the NHA. (CNHP 1998). Although once widespread in the southern Rocky Mountains, this species now occurs almost exclusively in the San Luis Valley.

The San Luis Valley contains the most numerous, largest, and healthiest populations of the species in the world.”

Recommendation: We encourage withdrawal consideration of the 3 proposed study areas located within the Sangre de Cristo National Heritage Area.

- 1. Four mile East-NW corner of Hwy 150 and 160 intersection**
- 2. Los Mogotes East- directly west of Town of Romeo & Hwy 285**
- 3. Antonito Southeast- East of San Antonio Mountain**

It is imperative that the public lands within this NHA remain intact and continue as a cultural resource and a living example of the community history of the area. The NHA area needs to be maintained for traditional uses such as hunting, grazing and wood gathering purposes without having to create new access routes or changing the use so significantly that it no longer feasible for the land to be used for human substantive purposes. The reason for the NHA was to preserve a “sense of place”. It is important to remember that the study areas, if developed for industrial scale solar purposes, will alter surrounding areas as well.

III. WATER

A. History of Efforts to Protect the Waters of the San Luis Valley

The Great Sand Dunes National Park and Preserve Act of 2000 was a culmination of public support that was engaged for more than a decade. In December of 1987, a corporation called American Water Development Incorporated (AWDI), with Canadian shareholders, applied to water court for the right to pump 200,000-acre ft. of water per year from the confined aquifer underlying the Baca Ranch. Many efforts were made on the federal, state and local level to protect water interests in the San Luis Valley.

Examples include U.S. Senate Bill 1812 (102 Congress, 1st Session) introduced by Tim Wirth on October 4, 1991. The intention of this bill was to:

“provide for the protection of the water resources of the San Luis Valley from the potential impact of proposed water development projects for export of water out of the San Luis Valley upon Federal interests in Federal reclamation projects, interstate compacts for the allocation of water, national monuments, and national wildlife refuges, wildlife habitat area of withdrawals, and for other purposes.”

Saguache County passed a “Significant Recharge Area” ordinance through its 1041 regulations in 1994. It protected the waters flowing into the Baca Ranch based on a permeability study analyzing how much surface water will absorb into the soil within a 24-hour period. Anything above 6 ft./per day was considered a high recharge zone. A permeability rate of 17 ft./day was measured in some areas of the Baca Ranch (Allen Davey Study prepared for the 1991 AWDI legal case).

B. Water Quality Concerns

The significant recharge area highlights specific concerns,

especially regarding the introduction of heavy oils for heat transfer; ethylene glycol to stop water from freezing, and other types of potential spillage associated with the development of industrial scale solar.

In 1998, Colorado House Bill 98-1011 was passed requesting that, due to insufficient knowledge, a confined aquifer study be conducted in the San Luis Valley:

*“Concerning the replacement of depletions from new withdrawals of groundwater division 3 that will affect the rate **or direction of movement of groundwater in the confined aquifer**, and, in connection therewith, authorizing the State Engineer to promulgate rules that optimize the use of the groundwater and provide alternative methods to prevent injury”.*

In section (3) (a), the Water and Irrigation Act states that:

*“The hydrologic system in water division 3 and, in particular, the hydrology and geology of the shallow aquifer and confined aquifer systems and their relationship to surface streams in water division 3 are **unique and are among the most complex in the state**....there is currently **insufficient comprehensive data and knowledge of the relationship between the surface streams and the confined aquifer system** to permit a full understanding of the effect of groundwater withdrawals, affecting the confined aquifer upon the natural stream and aquifer systems in water division 3....(b)1..[rules promulgated by the State Engineer]shall be based upon specific study of the confined aquifer system and shall be promulgated prior to July 1, 2001...the State Engineer and the Colorado Water Conservation Board shall proceed with diligence to complete needed studies”.*

This act is important for two reasons:

- 1) It underscores the complex and poorly understood nature of the regions hydrogeology, even of the relatively shallow unconfined and confined aquifers and;
- 2) It addresses the need for further studies in order to better understand and inform water-related policy.

Water-The valley’s most prized Resources

Most recently, regarding the passage of the Sangre de Cristo National Heritage Area (NHA), the feasibility study states that “no other NHA has explored the role of water in shaping an alpine desert valley’s natural wonders and biological diversity.”

C. Water Usage-The Wilderness Society (TWS) comments as it relates to the SLV

Water continues to be a major concern in arid regions like the San Luis Valley where the proposed study areas are located and we urge the BLM to take a proactive approach to this issue in the PEIS.

Electric generation from solar (and other) thermal power plants is most efficient when a source of cooling – typically water – is available to remove waste heat from the thermal cycle.¹

Unfortunately, study areas that are the focus in places like the San Luis Valley, at the headwaters of the Rio Grande, are already dealing with intense competition between over-appropriated water supplies, Rio Grande Compact obligations to downstream users and agriculture.² Permitting

¹ See, e.g., Renewable Energy Transmission Initiative Phase 1B Final Report (January 2009), Chapter III – Environmental Assessment of Competitive Renewable Energy Zones, p. 3-3 (hereinafter “RETI Phase 1B Report”).

² See, e.g., Colorado River Project, River Report – Summer 2009, p. 8. See also *id.*, pp. 4-5, 6.

water-cooled production of energy from solar resources would add to that competition.³ The BLM should explore ways to avoid these results in the PEIS.

One option is to adopt a policy which would discourage the use of wet-cooling for power plants. Both California and Nevada have adopted such policies.⁴ California's policy states that the Energy Commission "will approve the use of fresh water for cooling purposes by power plants only where alternative water supply sources and alternative cooling technologies are shown to be 'environmentally undesirable' or 'economically unsound'."⁵ There is broad acceptance of this policy in California, including among the solar industry,⁶ where alternatives considered to date have included use of brackish water as well as dry-cooling.⁷ Although Arizona does not have an explicit policy, it has moved to strictly regulate water use in solar projects.⁸

Alternatively, there is the option of adopting a performance standard that specifies the amount of water that is acceptable per MW generated. Rather than tie solar development to one specific technology – i.e., dry-cooling, such an option would allow for any technology that would meet the standard and could in fact result in technology improvements.⁹

We also have concerns about converting an Agricultural water right into Municipal and Industrial (M &I) use, which will be the case with Industrial scale solar development. Once that change in water right occurs, it will remain in use for industrial scale purposes because it will no longer be economically feasible for it to return to agriculture. In viewing this scenario long term, we realize that in 30 years, consideration must be given to the future use of these converted M & I water rights, especially where technological changes will occur that render these industrial scale solar facilities obsolete.

Finally, there is the option of adopting a technology-forcing standard that would continue to elevate the bar regarding water use and, for that matter, encourage the use of new, innovative technologies. For an example, the Department of Energy's project selection criteria for renewable energy projects "seeks to give priority consideration to "new or significantly improve technologies" that are not extensively used in the marketplace, *See*, "Federal Loan Guarantees for Projects That Employ Innovative Energy Efficiency, Renewable Energy, and Advanced Transmission and Distribution Technologies," Loan Guarantee Solicitation Announcement, July 29, 2009, pp. 35-36.

³ The amount of water used for wet cooling a power tower plant is about 500 gallons of water per MWh of electricity, similar to a typical coal or nuclear plant. U.S. Department of Energy, Report to Congress, "Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation, p. 4 (hereinafter "DOE Report on Water Use") (accessible at http://www1.eere.energy.gov/solar/pdfs/csp_water_study.pdf). A water-cooled parabolic trough plant consumes about 800 gal/MWh, or about four times what a combined-cycle natural gas plant consumes. *Id.* Because wet-cooled plants are more efficient than dry-cooled, see text at note 6 *supra*, more land would be required to produce a given amount of energy.

⁴ See, e.g., California Energy Commission 2003 Integrated Energy Policy Report.

⁵ California Energy Commission, Preliminary Staff Assessment, Beacon Solar Energy Project, Application For Certification (08-AFC-2), Kern County (Posted April 1, 2009) (hereinafter "Beacon Staff Draft"), p. 4.9-5.

⁶ See, e.g., RETI Phase 1B Report, p. 3-3, describing agreement of all RETI stakeholders, including solar generators, to the assumption, for RETI purposes, that dry-cooling would be used except when reclaimed water from communities of a certain size is available.

⁷ In the case of the Beacon project, CEC analysis revealed that dry-cooling could "reduce ... consumption of potable water by up to 97 percent." Beacon Staff Draft, p. 1-6. In addition, the analysis revealed that not only were both of these options economically feasible, but also that dry cooling might "actually result in lower project operating costs." *Id.*, p. 4.9-48.

⁸ *See*

<http://www.azwater.gov/AzDWR/WaterManagement/documents/SolarPowerPlantsSummaryFINALPublic.pdf>

⁹ For additional options, *see* DOE Report on Water Use, *supra*.

Recommendations: The PEIS needs to produce guidelines on water use, including those described above, so that the agency and the concerned public can see the tradeoffs involved in saving fresh water. Some local citizens look at this utility scale solar movement as another opportunity for a large scale water grab, so it is imperative that the BLM be cautious about protecting these ground water systems, that they remain intact for future generations.

In conclusion, we want to ensure that all renewable energy development in the San Luis Valley:

- Does not put at risk our critically important aquifer, wetlands and other water sources that support migratory waterfowl, nor our diverse ecosystems, nor our historical and vital agricultural base; in particular the extensive but fragile aquifers that underlie these values, that we, and the citizens of the SLV have worked long and hard to protect.

V. Site Specific Criteria

The Nature Conservancy (TNC) identified key potential species conflicts that we would like to emphasize.

Since the entire Valley floor appears to be high potential for solar development, key potential conflicts were also identified throughout the Valley and beyond. Below are the most significant from an ecological/conservation perspective based on a preliminary analysis, and for which data was available data. See TNC map, species data and comments for rationale:

- Bald eagle roost sites and winter concentration areas
- Bighorn sheep production areas and severe winter range
- Gunnison sage-grouse production Areas, severe winter Range, winter Range, and overall range
- Globally imperiled plants and natural communities as ranked by CNHP
- Riparian areas
- Potential Conservation Areas as identified by the CNHP

Sandhill crane habitat

Los Mogotes Area of Critical and Environmental Concern (ACEC)

About 5 miles from Los Mogotes East solar study area- directly west of Town of Romeo & Hwy 285

This ACEC is located eight miles southwest of La Jara, the Conejos River forms its southern boundary. This area was designed as an ACEC due to the critical winter range for big game species. Mountain plover, a BLM sensitive species, nests in this area.

The area is characterized by wind sweep, gorgeous views of the Sangres, and a traditional hunting area for Antonito and Capulin residents. There are active Gunnison prairie dog colonies, winter wildlife range, mating grounds, and birthing grounds. It also contains special status plant values. We support preservation of the winter wildlife range, mating grounds, and birthing grounds and protection of the special status plant communities.

Identification of Resources

Active Gunnison prairie dog colonies, grouse, pronghorn antelope, elk, deer, coyote, wildlife winter range/birthing grounds.

Cumbres and Toltec Railroad Corridor ACEC Travel Management Area

This ACEC is located near the Antonito Southeast solar study area- East of San Antonio Mountain

“The Cumbres and Toltec Railroad ACEC was designated to protect the view shed for this historic railroad which runs from Antonito, CO to Chama, NM. The railroad is owned jointly by the states of Colorado and New Mexico. It was determined that the VRM classification (Class II) was of critical importance for the railroads financial stability. This is to protect the historic

cultural resources in context with the railroad and the VRM classification. This open terrain allows excellent scenery viewing for the train passengers.”

The final SLV BLM Travel Management Plan (TMP) EA objectives include:

- Strict conformance to VRM class objectives.
- Protect historical and visual values.
- Protect National Register eligible cultural resources for Cumbres and Toltec Scenic Railroad

Ortiz/Stateline

The railroad embraces this area because of the hills with flat open range, pinon, juniper, ponderosa pine forests. Traditional uses follow the wildlife corridor, hunting and fuel gathering used by people of Conejos County for more than 150 years.

Resources include: Gunnison Prairie Dog, pinon-juniper shrublands, ponderosa pine (higher elevation-near Forest BLM boundary). We continue to recommend seasonal closures for wildlife protection. The area is dissected by the Cumbres and Toltec Railroad, receives multiple exposure from the public. Herd migration patterns continue along Los Pinos Creek between Colorado and New Mexico.

De Tilla Gulch Solar Study Area- Species Identified within CNHP Potential Conservation Area (PCA) Review attached Data sheet for Species within specific area

Spermophilus tridecemlineatus blanca

Thirteen-lined ground squirrel

Subspecies

Spermophilus tridecemlineatus blanca

Libellula nodisticta Hoary Skimmer

Perognathus flavus sanluisi Silky Pocket Mouse Subsp

Thirteen-lined Ground Squirrel

Subspecies

Spermophilus tridecemlineatus blanca

Site Specific Recommendations: When reviewing the Species chart and other relevant data, it is clear there are potential conflicts in all 4 solar study areas. We recommend consideration of withdrawal of the 4 solar study areas based on the species, historical, traditional and scenic use data. Also, we do not know the consequences regarding impacts to flyway groups which are abundant in the SLV and take advantage of the concentrated wetlands. We do not know the impacts that heat/light concentrations at 40 plus ft (height of utility scale solar facilities) have on these water bird species. We have not been able to locate any research that has been done to analyze impacts to flyway groups as it relates to utility scale solar.

VI. Transmission lines

In addition to industrial scale solar energy plants themselves, habitat fragmentation can be caused by transmission corridors, which will need to be built to facilitate the export of solar power outside the SLV into a larger energy grid. Wildlife habitat fragmentation caused by transmission lines (including branch powerlines), pipelines (including feeder pipelines) and roads generally fall into three broad categories:

1. Construction impacts (access, right-of-way clearing, construction of towers, stringing of cables);
2. Line maintenance impacts (inspection and repair); and
3. Impacts related to the physical presence and operation of the transmission line.

As such, wildlife habitat must be examined on an individual project and site-specific basis. The only way to accomplish this requirement is to ensure that each individual solar

project is spatially evaluated for direct, indirect and cumulative impacts. Specific activities that negatively impact wildlife and cause destruction of core habitat or habitat fragmentation include the construction of facilities, blading and scraping of the ground, disturbance of soil by the use of heavy machinery, noisy machinery during construction and maintenance, noise from helicopters, removal of vegetation, blasting, filling depressions (a.k.a. re-contouring the landscape), disposal of waste and chemicals on site, use of herbicides, and the use of borrow pits.

Recommendation -Coordination of Transmission Corridor

BLM must work closely with the designation of new corridors and address it in the PEIS, then BLM must complete all of the necessary NEPA analysis for those corridors, including a thorough discussion as to why the ongoing corridor designation processes will not be sufficient. In making a determination about the need for additional corridors, the BLM should commit to first coordinating with the ongoing designation processes and prioritize using those corridors, instead of designating still more corridors without coordination. To our knowledge, BLM has played a minimal role in the public process regarding the proposed San Luis Valley/Calumet Comanche Transmission Project (from Walsenburg along Hwy 160 along La Veta Pass to the Alamosa sub-station). This will be an additional 95 miles of transmission line corridor. BLM needs to play a critical role in the designation process and become a cooperating agency with Tri-State and Excel through the Dept. of Agriculture.

Additional Recommendations

- **Benefits to the Local Economy from Undeveloped Public Lands**

The Solar PEIS should fully address the impacts that utility-scale solar energy development on undeveloped public lands will have on the local economies throughout the study area. The San Luis Valley in particular actively maintains the strong economic and cultural values based on agriculture and ranching. The Valley produces 92% of the potatoes grown in Colorado, which ranks fourth among potato producing states in the U.S. Local economic benefits of developing BLM lands for Solar siting purposes need to be reflected in the PEIS.

Thanks for giving us the opportunity to submit these comments. We look forward to further discussion and input regarding these proposed solar study areas. We appreciate your time and consideration in this matter.

VII. References

1. **Sangre de Cristo National Heritage Area** Feasibility Study, Mimi Mathers, Anne Marie Velasquez, July 8.23.05, Shapins and Associates
2. SLVEC/CSLV/WPC **Solar PEIS Scoping Comments** -July 2008, Ceal Smith, Research and Coordination
3. SLVEC **BLM Travel Management Scoping Comments**-July 2004, Christine Canaly
4. The Wilderness Society **Solar PEIS Scoping Comments**, July 2008
5. Center for Native Ecosystems, Eco Resolutions Forest Service **Ecologically based Travel Management Plan & GIS mapping Project** Julia Kinsch and Connor Bailey- March 2009
6. TNC BLM Colorado Solar Study Area Scoping Comments-September 2009
7. CNE Species Data SLVEC google Earth map review- September 2009

Thank you for your comment, Christine Canaly.

The comment tracking number that has been assigned to your comment is SolarM60177.

Comment Date: September 10, 2009 12:13:25PM
Solar Energy Development PEIS
Comment ID: SolarM60177

First Name: Christine
Middle Initial:
Last Name: Canaly
Organization: San Luis Valley Ecosystem Council
Address: P.O. Box 223
Address 2:
Address 3:
City: Alamosa
State: CO
Zip: 81101
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar.SpeciesData.doc

Comment Submitted:

Attachment 2

Species Data focus on 4 Solar Study Areas in the San Luis Valley totaling Approx. 22,000 acres, Areas include: **Detilla Gulch**-1520 acres, **Four Mile East**-3,878 acres, **Los Mogotes East**-5,905 acres and **Antonito South East**- 9,591 acres

Species	Detilla Gulch	Four Mile East	Los Mogotes East	Antonito South East	Miles in Length/Width
Elk Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Elk Winter Range	496 Acres Along Hwy 285 2.75 mi	None	Entire Study Area	5,442 Acres Western Half- 3.47 miles	
Elk Severe Winter Range	Same Area as winter range above	None	Entire Study Area	Same area as Winter range above	
Elk Summer Range	None	213 Acres NE Quadrant	None		.60 miles long .98 miles width
Gunnison's Prairie Dog Colonies	2 Areas 1. Along Hwy 285 2.05 Miles long, .23 mi Width, 2. entire eastern boundary .47 mi Length-.87 Width	1,016 Acres, 2.42 Mile long, 1.6 mi width Southern Quadrant	518 Acres 2.82 Mile length, .43 mi width Upper left Quadrant	9.48 acres Along western border .42 Mi length .05 mi width	
Gunnison's Prairie Dog Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Mtn Lion Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Mule Deer Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Mule Deer Winter Range	1,127 acres Along Hwy 285 2.73 mi length, .81 width	None	134 acres 1.94 mi length, .15 mi width Western border of Study area	None	
Pronghorn Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Pronghorn Winter Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Wildlife Linkage Corridor	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
Bald Eagle Winter	None	None	None	Entire Study Area	

Species Data focus on 4 Solar Study Areas in the San Luis Valley totaling Approx. 22,000 acres, Areas include: **Detilla Gulch**-1520 acres, **Four Mile East**-3,878 acres, **Los Mogotes East**-5,905 acres and **Antonito South East**- 9,591 acres

Forage					
Bald Eagle Winter Range	746 acres, Eastern border Parcel, 3 mi radius	Entire Study Area	Entire Study Area	Entire Study Area	
Black Bear Overall Range	Entire Study Area	Entire Study Area	Entire Study Area	Entire Study Area	
CNHP Potential CA's	Entire northern portion of study area 1.57 mi width 1.91 mile length	None	None	None	

Thank you for your comment, Christine Canaly.

The comment tracking number that has been assigned to your comment is SolarM60178.

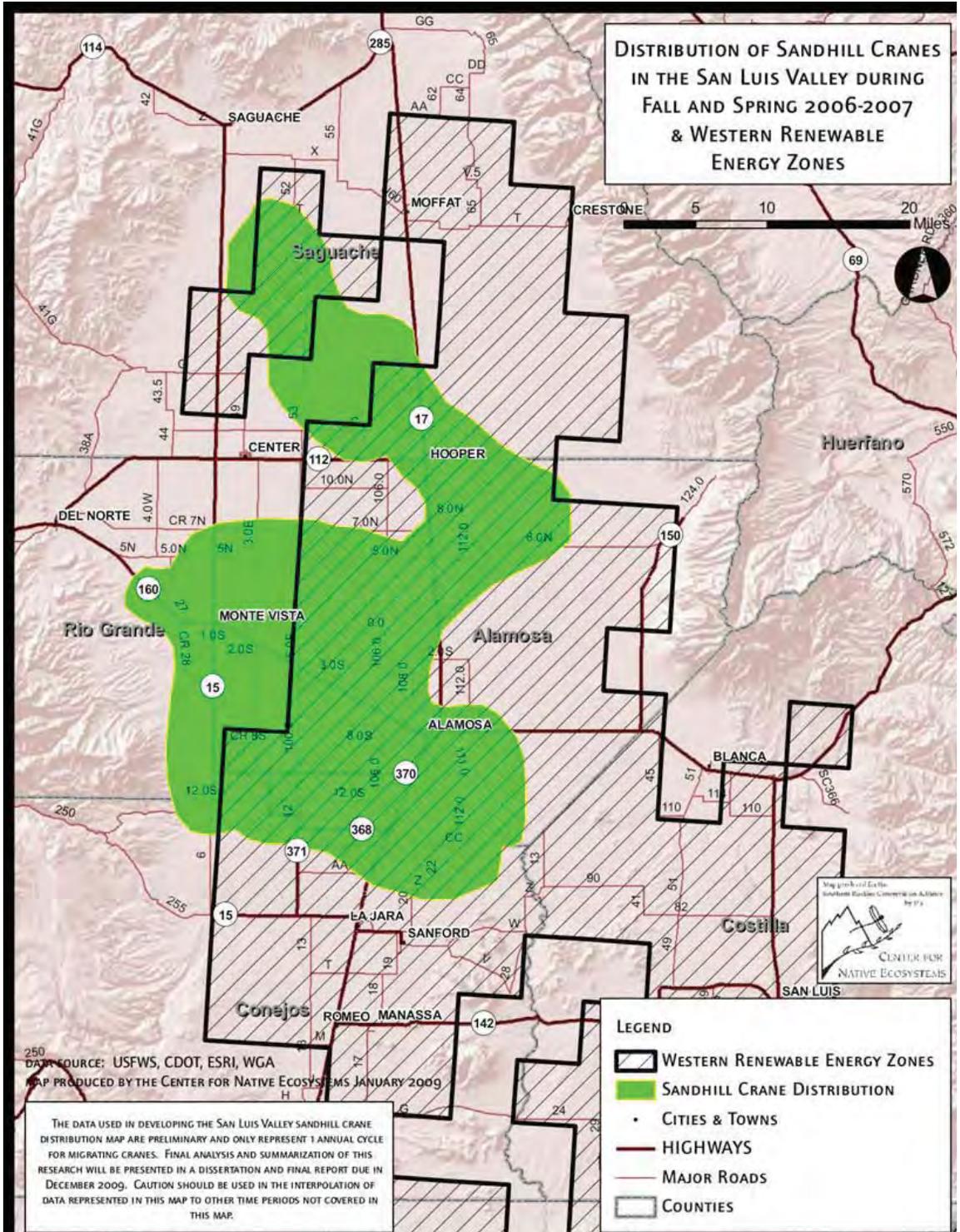
Comment Date: September 10, 2009 12:15:56PM
Solar Energy Development PEIS
Comment ID: SolarM60178

First Name: Christine
Middle Initial:
Last Name: Canaly
Organization: San Luis Valley Ecosystem Council
Address: P.O. Box 223
Address 2:
Address 3:
City: A
State: CO
Zip: 81101
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: SandHillCraneDistribution.1.doc

Comment Submitted:

Attachment #3

**DISTRIBUTION OF SANDHILL CRANES
IN THE SAN LUIS VALLEY DURING
FALL AND SPRING 2006-2007
& WESTERN RENEWABLE
ENERGY ZONES**



DATA SOURCE: USFWS, CDOT, ESRI, WGA
MAP PRODUCED BY THE CENTER FOR NATIVE ECOSYSTEMS JANUARY 2009

THE DATA USED IN DEVELOPING THE SAN LUIS VALLEY SANDHILL CRANE DISTRIBUTION MAP ARE PRELIMINARY AND ONLY REPRESENT 1 ANNUAL CYCLE FOR MIGRATING CRANES. FINAL ANALYSIS AND SUMMARIZATION OF THIS RESEARCH WILL BE PRESENTED IN A DISSERTATION AND FINAL REPORT DUE IN DECEMBER 2009. CAUTION SHOULD BE USED IN THE INTERPOLATION OF DATA REPRESENTED IN THIS MAP TO OTHER TIME PERIODS NOT COVERED IN THIS MAP.

LEGEND

- WESTERN RENEWABLE ENERGY ZONES
- SANDHILL CRANE DISTRIBUTION
- CITIES & TOWNS
- HIGHWAYS
- MAJOR ROADS
- COUNTIES



Thank you for your comment, Paul Whitworth.

The comment tracking number that has been assigned to your comment is SolarM60179.

Comment Date: September 10, 2009 12:33:43PM
Solar Energy Development PEIS
Comment ID: SolarM60179

First Name: Paul
Middle Initial:
Last Name: Whitworth
Organization: LightSource Renewables, LLC
Address: 9151 Rehco Road
Address 2:
Address 3:
City: San Diego
State: CA
Zip: 92121
Country: USA
Email: paulwhitworth@lsrenew.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Palo Verde PEIS Consolidated.pdf

Comment Submitted:

Please see attached letter. Thank you.



9151 Recho Road
San Diego, CA 92121

September 10, 2009

Solar Energy Development Programmatic EIS
Argonne National Laboratory EVS/900
9700 S. Cass Avenue
Argonne, IL 60439

RE: Comments On Solar Development & Study Areas, Solar Programmatic EIS (PEIS)

Dear Sir / Madame:

LightSource Renewables, LLC ('LSR') is a utility scale solar energy developer focusing on solar development in California and Arizona. LSR takes great care in its site selection process to identify project sites that minimize the impacts of solar projects on surrounding lands and communities. LSR is writing this letter because it appears, based on the map published by the BLM titled "Solar Energy Study Areas in Arizona", that an excellent potential solar site has been omitted from the PEIS (Attachment 1).

One of LSR's target sites ('Target Site') is in Arizona on BLM land near the Palo Verde Nuclear Facility on the west side of Phoenix. The legal land description for the Target Site is: T1N R7W sections 33, 34, 35 and T1S R7W sections: 1 (south half), 3, 4, 5 (east half), 8 (east half), 9, 10, 11 (federal lands only), 12 (north half). See Attachment 2 for a map of the Target Site.

LSR believes the Target Site is well suited to solar development:

- The area of the Target Site is an existing hub for electricity generation.
 - There are four large power plants already operating in the area (see Attachment 3):
 - 4,000 MW Palo Verde Nuclear Plant, 3 miles to the north east
 - 585 MW Dynegy Arlington Plant 1.5 miles east
 - 1,200 MW Sempra Mesquite Plant 3 miles east
 - 1,060 MW APS Redhawk Plant 4 miles east
 - There are at least two solar projects planned on nearby private land
 - LS Power: 3,500-acre solar thermal plant south of the Target Site
 - Sempra Mesquite Solar: 50 to 100 MW PV solar plant a few miles east of the Target Site

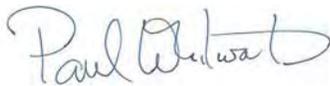
- The Target Site is close to large scale transmission infrastructure:
 - Four miles from the Hassayampa substation, which is a 500 KV substation with ability to deliver power throughout the southwestern United States
 - High voltage power lines (500 KV Devers-Palo Verde power line) cross the project site
- The Land at the Target Site is well suited to solar development:
 - Flat land with a slight south slope
 - The Target Site is not in or adjacent to designated critical habitat, special management areas, wilderness study areas or Areas of Critical Environmental Concern (ACECs)
 - Project Site has good availability of ground water in the Hassayampa sub-basin compared with the Harquahala solar development area

According to the map published by BLM on June 5, 2009 this Target Site has not been included in the BLM Lands Being Analyzed for Solar Development. For the reasons described above, LSR believes this area should be studied. Therefore, LSR would like to make the following requests:

- The “BLM Lands Being Analyzed for Solar Development in PEIS” be expanded to include the Target Site listed above
- The Gillespie Solar Energy Study Area be expanded to include the Target Site listed above.

Thank you for your assistance in this matter. We welcome the opportunity to discuss the contents of this letter with BLM (or the project team at Argonne National Laboratory) at its convenience. We can be reached at paulwhitworth@lsrenew.com.

Sincerely,



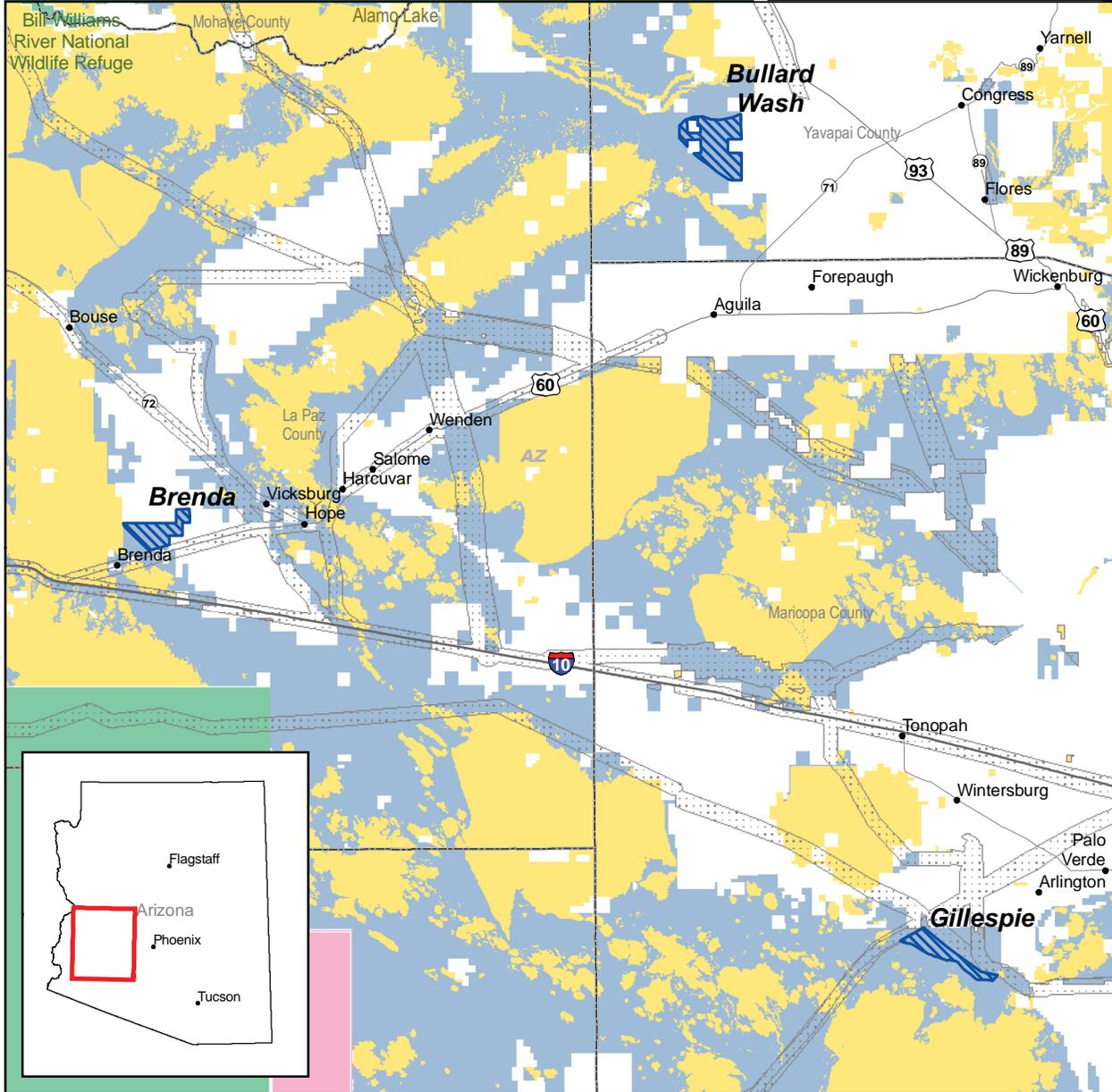
Paul Whitworth
Senior Vice President

Solar Energy Study Areas in Arizona

Map Prepared June 5, 2009



Property of the U.S. Departments of Energy and the Interior
for Use in Preparation of their Programmatic Environmental Impact Statement
to Develop and Implement Agency-Specific Programs for Solar Energy Development



Surface Management Agency

As of 3/26/2009

Tribal Lands	DOD	NPS
BLM	DOE	OTHER
BOR	FWS	USFS

State Line

County Boundary

Solar Energy Study Area (As of 6/5/2009)

Existing Designated Corridor (See Note 2) (As of 6/5/2009)

BLM Lands Being Analyzed for Solar Development in PEIS (As of 6/5/2009)



0 2 4 6 8 10
Miles

0 5 10 15
Kilometers

NOTE 1: Revisions to the National Landscape Conservation System included in Public Law 111-11 are not yet reflected in this map.

NOTE 2: Designated Corridors are developed for federal land use planning purposes only and are not applicable to state-owned or privately-owned land.

SOL142

Legend

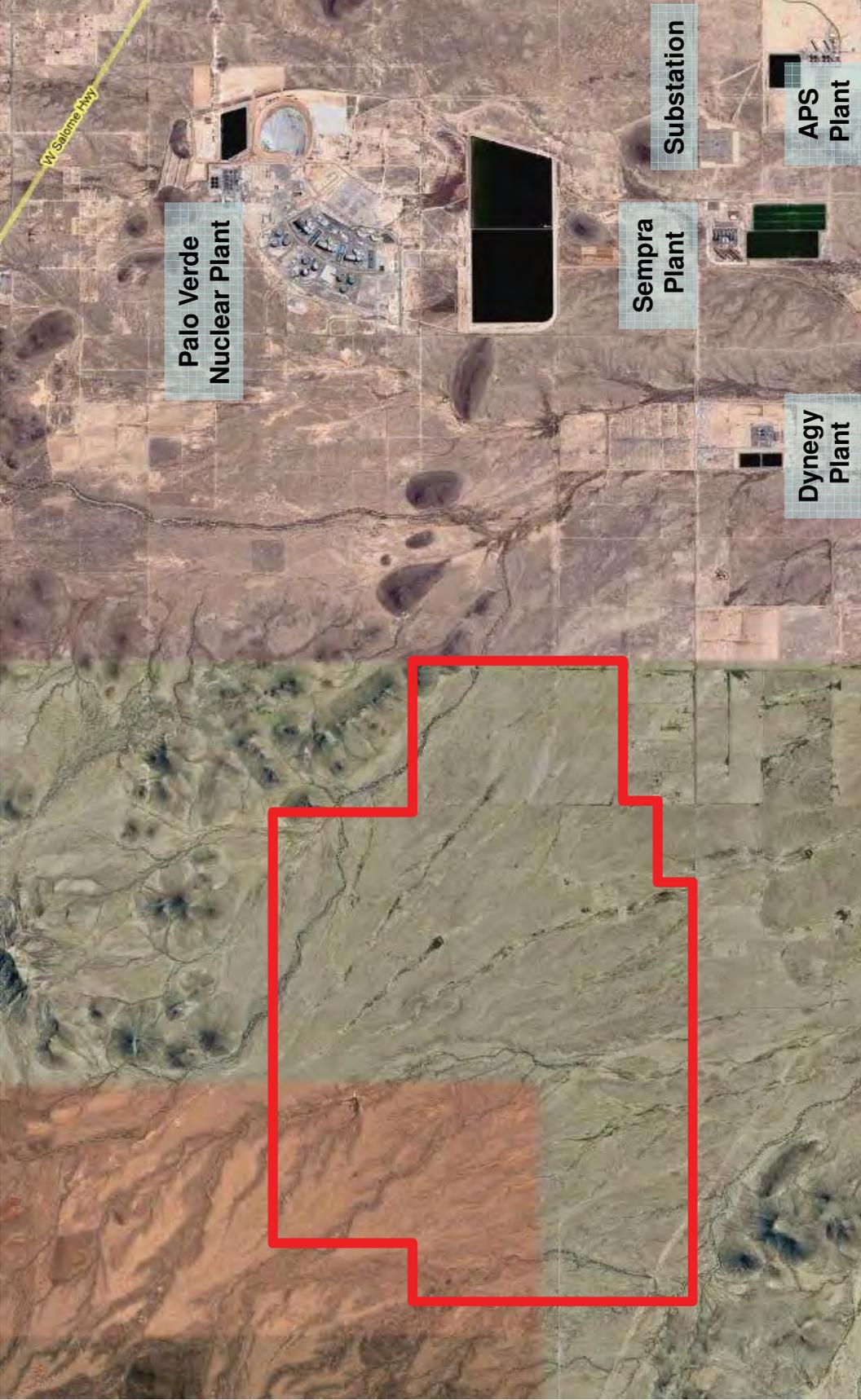
Downloadable PLSS Data			
Townships(BLM) 	Township Boundaries 	Township Labels 	Sections 
Reference Themes			
State Boundaries 	Roads 	Major Roads and Highways 	County Boundaries 
Lakes 	Rivers 	Urban Areas 	National Forests 
Base Maps			
Shaded Relief 	USGS Topos 	Ortho Aerial Photography 	
Surface Management Agency 	PLSS Principal Meridians 	No Base Map 	



9/8/2009



No warranty is made by the BLM for the use of the data for purposes not intended by the BLM.



Palo Verde Nuclear Plant

Sempra Plant

Dynegy Plant

Substation

APS Plant

W. Salome Hwy

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60180.

Comment Date: September 10, 2009 14:10:34PM
Solar Energy Development PEIS
Comment ID: SolarM60180

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address:
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

Everyone agrees we need to do some about reducing the emissions of greenhouse gas and our dependency of foreign oil. But how we do this is the real question. It doesn't make sense to destroy our beautiful irreplaceable desert to bring electricity to big cities like L.A., San Diego and Las Vegas. How about this idea: putting solar panels on every business and residence in these big cities (and small cities too) then it doesn't have to travel (on big ugly towers) through our smaller communities (who don't want them). How about the corridors for the wild life? where do they go to keep making future wildlife? How about the air quality, all the dust that will be stirred up building and maintaining the equipment. Water; where is that coming from? Will these solar farms be polluting our well water?

These "green" companies are wolves in sheep clothing, I don't believe they have any altruistic motives as they like to portray, the only green they care about is green money. The other thing I hear from these "green" companies is that there is no one out here-desert. Of course there are, there are real thriving communities who love the clean air, clean water, and wildlife. We need to have rural lands in these United States.

Like I said if they really care about being "green", make jobs installing solar panels on houses and businesses.

Leave our natural resources alone, we can't replace them.

Now do the right thing!

thank you,



Thank you for your comment, Richard Orr.

The comment tracking number that has been assigned to your comment is SolarM60181.

Comment Date: September 10, 2009 16:29:22PM
Solar Energy Development PEIS
Comment ID: SolarM60181

First Name: Richard
Middle Initial:
Last Name: Orr
Organization: Sustainable Grazing Coalition
Address: P.O. Box 145
Address 2:
Address 3:
City: Caliente
State: NV
Zip: 890080145
Country: USA
Email: bbwheatgrass@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar EIS Scoping Comments.doc

Comment Submitted:

Additional information to add to comment SOLARM60148

SUSTAINABLE GRAZING COALITION

*Nevada State Board of Agriculture • Nevada Rangeland Resources Commission •
Nevada Cattlemen's Association • Nevada Farm Bureau •
Nevada Central Grazing Committee
P.O. Box 310, Elko NV 89803*

September 5, 2009

SCOPING COMMENT POINTS FOR THE PROPOSED SOLAR POWER PROJECT:

1. There is no mention of actual surface acres of coverage of the collectors. How many surface acres of occupation will there be at maximum development of the site? This question is critical in evaluating extent of potential impact to vegetation, soils, and pre-existing permitted activity in the identified areas. The extent of impact to existing permitted activities increases exponentially in effect as the area of inaccessible area increases.
2. Will the area of surface occupation be closed to access? We assume this would be required for protection of the collectors.
3. How many years long is the build out phase? This is important to know to access the effect on pre-permitted activities.
4. The sites are all located in valley bottoms which are on silt and course-silt textured soils that are highly subject to wind erosion once disturbed. Any increase in traffic on roads or the area in general will result in increased disturbance and heavily eroded soils. This area is in an area with a preponderance of wind out of the south west during late winter and spring months and all of the valley areas classify as highly erodible under Natural Resources Conservation Service Highly Erodible Lands (HEL) identification procedures. What are you proposing to reduce or eliminate this impact.
5. These silt textured soils are principally dominated by the shrub Winterfat (*Krascheninnikovia lanata*) which is a very significant and desired forage plant but is also very difficult to successfully re-establish if it has been damaged due to excessive traffic or trampling or it has been lost from the site. This is exacerbated if the damage to the plant also broke up the soil's structure resulting in compaction and erosion of the surface layers of soil which contains the majority of available soil organic matter which is crucial for plant re-establishment and growth.
6. Livestock operations in the potential construction areas identified rely on these large valley areas for winter livestock grazing (winter forage) on their permits. The protected collector sites are likely to be fenced and will have a system of access routes all of which remove or disturb surface vegetation resulting in less forage available for the already existing permitted (tenured permit) livestock grazing. Grazing permits can only run as many livestock as the most limiting portion of the permit. For example, if the winter

portion of the permit is only capable of supporting 500 head of livestock but the summer portion of the allotment is capable of sustaining 1500 head, then the permit would likely only run a total of 500 head of cattle on a year round grazing operation. A permittee cannot successfully work with fluctuating livestock numbers over the long term on a seasonal basis like this in any economical manner. The disproportionate loss of access to forage on one portion of the allotment may render it uneconomical to run any of the permits. The only choice to cover for a disproportionate loss like this is to purchase other permits covering the period of forage that was lost if any such permits are even available, or to purchase private land or feed to cover the lost period. All of these are unlikely without some level of compensation for the part that was lost. This could make the entire operation unfeasible.

7. In the court case “The Estate of E. Wayne Hage and The Estate of Jean N. Hage vs. The United States”, the Hage permits were canceled by the federal agency for failure to abide by permit stipulations and terms and conditions as the agency had the authority to regulate this permit. The judge ruled in favor of the federal agency on this point but also ruled (abbreviated version) that all the improvements and water owned or held by the Hage’s were, in essence, personal property that had value and were considered a taking as they were no longer useable by the Hage’s without their holding the permit to graze. As a result, the Hage’s estate was awarded a substantial amount of monetary award from the government to compensate for the fact that by the agency canceling the permit they were denied use of their other properties. Several of the valleys in question hold numerous springs, wells and other water sources with water rights held by the permittees, and other range improvements such as corrals, fences, etc., that are owned by the permittees. If this action makes continued use and access to the permit unfeasible, will the permittees be adequately compensated for the value of their other property being rendered useless due to a federal action as in the Hage case? In addition, there is a cumulative effect of the disproportionate loss of a particular part of the permit making it uneconomic as stated in issue 6 above.

Sincerely;

Richard A. Orr
Certified Professional in Range Management

Thank you for your comment, CR Teeple.

The comment tracking number that has been assigned to your comment is SolarM60182.

Comment Date: September 11, 2009 13:35:23PM
Solar Energy Development PEIS
Comment ID: SolarM60182

First Name: CR
Middle Initial:
Last Name: Teeple
Organization:
Address:
Address 2:
Address 3:
City: Tucson
State: AZ
Zip: 85750
Country: USA
Email: crtee2@mindspring.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I think that setting aside these areas is a great start to encouraging solar energy activity. I would like to see more areas set aside in Arizona, because it seems that Arizona has great potential to provide solar energy to the rest of the country. Keep up the good work and try to move development along more quickly.

Thank you for your comment, David Welch.

The comment tracking number that has been assigned to your comment is SolarM60183.

Comment Date: September 11, 2009 16:31:59PM
Solar Energy Development PEIS
Comment ID: SolarM60183

First Name: David
Middle Initial: J
Last Name: Welch
Organization: Oregon-California Trails Association
Address: 4374 Vashon Dr NE
Address 2:
Address 3:
City: Lacey
State: WA
Zip: 98516
Country: USA
Email: welchdj2@comcast.net
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

The Oregon-California Trails Association, a 2,000 member national organization, is concerned about possible impacts to designated historic trails, historic trails that may be designated in the future and their setting. Placement of solar facilities should be designed so as to not adversely impact these (and other) cultural resources. A complete survey of potential sites should be performed before any final determination of a solar site.

Thank you for your comment, Michael Connor.

The comment tracking number that has been assigned to your comment is SolarM60184.

Comment Date: September 11, 2009 16:53:34PM
Solar Energy Development PEIS
Comment ID: SolarM60184

First Name: Michael
Middle Initial: J
Last Name: Connor
Organization: Western Watersheds Project
Address: California Office
Address 2:
Address 3:
City: Reseda
State: CA
Zip: 91337
Country: USA
Email: mjconnor@westernwatersheds.org
Privacy Preference: Don't withhold name or address from public record
Attachment: 09-10-09-WWPBLMSEZSolarPEIScomments.pdf

Comment Submitted:

Comments from Western Watersheds Project are attached as a pdf file.



Michael J. Connor, Ph.D.
California Director
P.O. Box 2364, Reseda, CA 91337-2364
Tel: (818) 345-0425
Email: mjconnor@westernwatersheds.org
Web site: www.westernwatersheds.org

Working to protect and restore Western Watersheds

September 11, 2009

Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, IL 60439

Filed electronically through: <http://solareis.anl.gov>

RE: Bureau of Land Management. Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications

Dear Sir or Madam:

Western Watersheds Project thanks you for the opportunity to submit additional scoping comments and comments on the maps released as part of the BLM's Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development ("PEIS").

Western Watersheds Project works to protect and conserve the public lands, wildlife and natural resources of the American West through education, scientific study, public policy initiatives, and litigation. Western Watersheds Project has over 1,600 members nationwide with offices in Arizona, California, Idaho, Montana, Utah, and Wyoming. Western Watersheds Project, as an organization and on behalf of its members, is concerned with and active in seeking to protect and improve wildlife habitats, riparian areas, water quality, and other sensitive resources and ecological values. We submitted scoping comments for this PEIS from our Boise, Idaho Office on July 7, 2008 and from our California Office on July 15, 2008.

The maps are part of the PEIS the agencies are undertaking to facilitate environmentally responsible, utility-scale solar energy development in six western states (Arizona, California, Colorado, New Mexico, Nevada, and Utah). The Solar PEIS will help BLM identify lands appropriate for solar energy development and establish a comprehensive list of mitigation requirements applicable to all future solar energy development on BLM administered lands. As part of the Solar PEIS, the agencies will conduct in depth environmental analyses of 24 solar energy study areas for the purpose of determining whether such areas should be designated as Solar Energy Zones (SEZs), specific locations determined best suited for large-scale production of solar energy.

The Federal Register notice announced that the BLM issued the maps and notice to inform the public of the availability of the solar energy study area maps; to solicit public comments for consideration in identifying environmental issues, existing resource data, and industry interest with respect to the solar energy study areas in particular; and to explain how the BLM will address existing and future solar energy development applications on BLM-administered lands.

The Federal Land Management Policy Act (“FLPMA”) mandates the BLM to manage the public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values” and to “manage the public lands under principles of multiple use and sustained yield.” The utility-scale solar energy developments envisioned in the PEIS would require landscape level conversion of desert lands into vast industrial tracts. These tracts will be permanently and irreversibly degraded, and will no longer be available for multiple-use. Although the life of the solar power plants themselves is only expected to be 20-30 years, the character of these public lands will be permanently changed.

The National Environmental Policy Act (“NEPA”) requires agencies to take a “hard look” at the potential environmental impacts of its proposed actions. The PEIS must fully consider the direct, indirect and cumulative effects of the proposed policy and actions. Further, NEPA directs agencies to “rigorously explore and objectively evaluate all reasonable alternatives” [40 C.F.R. 1502.14] A consideration of alternatives that lead to similar results is not sufficient to meet the intent of NEPA. The PEIS must address all substantial questions raised by the public. The PEIS should present the environmental impacts of the proposal and the alternatives in comparative form based on the information and analysis presented in the sections on the Affected Environment (40 C.F.R. § 1502.15) and the Environmental Consequences (40 C.F.R. § 1502.16). This more sharply defines the issues, provides a clear basis for choice among options by the decisionmaker and the public, and ensures that the choice not be arbitrary and capricious.

We offer the following comments and recommendations to help BLM comply with its responsibilities under FLPMA, NEPA and other applicable laws; and, include specific concerns related to the PEIS maps. All of these concerns must be addressed if the PEIS is to pass NEPA’s required “hard look” at the environmental effects.

1. Criteria Used In Selecting Sites for Utility-scale Solar Energy Development

The southwestern deserts are fragile, delicate ecosystems. In our scoping comments we outlined criteria that should be addressed to ensure that any locations selected for utility-scale solar energy development are sited in an environmentally responsible manner. These criteria include:

(a) Locate solar developments outside of the most environmentally sensitive areas.

Environmentally sensitive sites to avoid include: designated and proposed critical habitats; Areas of Critical Environmental Concern (ACEC); Desert Tortoise Desert Wildlife Management Areas (DWMA); designated species habitat areas such the CDCA Plan’s Mohave Ground Squirrel Conservation Area; CDCA Plan designated Unusual Plant Assemblages (UPA); desert riparian

areas, and important watersheds; National Landscape Conservation System (NLCS) Lands including federally-designated national monuments; other designated conservation areas including habitat that has been acquired to mitigate for impacts elsewhere to listed and sensitive species; locations that will increase habitat fragmentation and isolate populations; habitat providing connectivity with allowance for climate change effects; areas used by migratory birds and mammals; and, sites that are “hot spots” of species diversity to avoid decreasing the biodiversity of the land use planning area.

(b) Take a balanced approach to locating sites for energy development.

Development of utility-scale, solar energy facilities will transform the lands upon which they are located and preclude most other uses.¹ In order to compensate for the presence of solar power plants, the multiple impacts of all other consumptive uses authorized by any given land use plan will need to be reduced to achieve a net decrease in cumulative impacts to sensitive and listed species and their habitats to compensate for the habitat loss. The loss of the project sites carbon dioxide sink capability should be factored in to these calculations. Mechanisms to achieve this could include eliminating uses such livestock grazing from entire land use planning areas.

(c) Locate solar developments outside of Culturally Sensitive Areas.

Archeological and historic resources are non-renewable. Avoidance of cultural and heritage resources should thus be a key factor in locating study sites.

(d) Consideration of water requirements of solar power plants

Deserts are by definition regions that receive little precipitation and where water resources are at an ecological premium. All power plants require water to function. Construction of utility-scale solar power plants requires extensive engineering that will change hydrological processes. Identifying water needs, how these water needs will be met, impacts to site hydrology, and the cumulative impacts on all programmatic uses of water in the land use plans the PEIS will modify are key considerations. Again, the use of water for these developments must be mitigated by a decrease in other extractive multiple uses, including water developments for livestock operations.

(e) Consideration of the impacts of toxic treatments and wastewater.

The operation and maintenance of utility-level solar power plants generates potentially toxic waste products including herbicides and other toxic substances used to control vegetation, and wastewater. The water quality of runoff from the sites, the impacts of wastewater on surrounding wildlife, vegetation and habitat, the beneficial effects to opportunistic predatory species such as the raven and to invasive plants, and impacts on the water table and on water quality within the significant watershed are key considerations.

(f) Preferred locations.

Solar energy developments should be preferentially located on previously disturbed sites located near to point of use of the power. This will facilitate use of existing utility corridors and transmission lines, will help minimize impacts to watersheds and sensitive riparian systems, and will minimize the need for new water pipeline and new road construction. In Arizona, the BLM

¹ As noted by the BLM in Instruction Memorandum No. 2007-097., other uses of these sites “are unlikely due to the intensive use of the site for PV or CSP facility equipment.”

has initiated a pilot project to consider energy installations in areas where there is already substantial disturbance, such as abandoned mine sites. This idea - to repurpose already degraded areas - is far better than initiating degradation on otherwise ecologically-intact lands.

2. Range of Alternatives

The clear presentation of alternatives is the “the heart” of the NEPA process. BLM must fully examine a broad range of alternatives as part of this Solar PEIS process. Alternatives that propose locating Solar Energy Zones close to urban areas, that focus on development on private land, and that focus on de-centralized energy and home or other solar generation should be fully explored. Locating Solar Energy Zones close to urban areas and facilitating private land development will provide for local government engagement by enhancing local revenue sources for them. Locating study areas near to points of use would also allow solar energy developments to be located on previously disturbed sites, near to existing utility corridors, close to existing water pipelines, and would minimize the need for new road development.

To be “environmentally responsible” the policy should enshrine the requirement that each solar development proposal should consider multiple project sites in the subsequent NEPA analyses, including due consideration of sites outside the jurisdiction of the agency and alternative methods of producing the energy that would be generated. This would help ensure the feasibility of projects by allowing the selection of the environmentally preferred alternative from a full range of alternatives. The PEIS should also consider alternatives that constrain the range of technologies that could be used, to promote technologies that minimize water use and environmental footprints.

The BLM must also analyze how the alternatives it reviews comply with FLPMA. The scale of the size of the study sites and areas selected for review under the PEIS are unprecedented. The actions that may take place in these areas are industrial-scale conversions of open desert lands to vast industrial tracts. These tracts will be permanently and irreversibly degraded, and the character of these public lands permanently changed.

The analysis should incorporate the full range of ecological concerns associated with identified study areas and the enormous ecological footprint of the associated developments including power-lines, road networks, increased recreation via enhanced access, and impacts to hydrologic systems. Ecological concerns include direct, indirect and cumulative impacts to wildlife, sensitive species, listed species, rare plants, soils, riparian systems, habitats, cultural resources, and special areas identified in the criteria listed above. The analysis should also focus attention on the risks these massive disturbances place on the surrounding desert from invasive alien plants, changes in fire regimes, and changes in hydrology.

3. Cumulative Effects

In the PEIS, the agencies must consider the proposed actions along with other actions, “which when viewed with other proposed actions have cumulatively significant impacts.” 40

C.F.R. § 1508.25(a)(2). A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the actions when added to other past, present, and reasonably foreseeable future actions regardless of what agency [...] or person undertakes such actions.” *Save the Yaak Comm.*, 840 F.2d at 721. Under NEPA, cumulative impacts include both direct effects and indirect effects, “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(a).

The PEIS should consider the cumulative effects of all existing, planned and proposed energy developments (including all solar, wind, and geothermal projects), all existing planned and proposed utility developments (including transmission lines and gas lines), all projects that rely on groundwater extraction, all activities authorized under the land use plans to be amended by the PEIS, and global climate change, on all of the sensitive natural, ecological, cultural, hydrological, and geological resources that will be impacted by the utility-scale solar developments that will be facilitated by the PEIS.

4. General Comment on the Maps

The maps show both proposed solar energy study areas (blue) and larger areas in light blue that are largely unexplained in the Federal Notice and released maps but based on the map legends constitute areas that would be covered by the PEIS. The BLM should clarify the difference between these areas and identify the criteria by which they were identified. Parts of the study areas and larger identified areas include lands that fall within the sensitive resource criteria that BLM lists in the Federal Register as being removed from consideration. The BLM should use consistent, objective, criteria in reviewing all the areas identified in the maps.

The maps do not include the large number of pending solar development Right-of-Way (ROW) applications. Many of these are in environmentally sensitive areas that undermine the BLM’s stated goal of promoting environmentally responsible, utility-scale solar energy development. These current and pending and reasonably foreseeable future ROW applications must be considered in the NEPA effects analysis and should therefore have been included on the maps.

We have addressed the need for BLM to fully consider the direct, indirect and cumulative effects of solar energy development in our scoping letters. Below we outline concerns related to specific state maps. All of these concerns must be addressed in the PEIS if that document is to satisfy NEPA’s required “hard look” at the environmental effects.

5. Comments on Specific State Maps

We have reviewed the maps for California, Arizona, Nevada and Utah in the light of the criteria we listed in section 1 above.

California

California gets the lion’s share of the acreage of the proposed solar study areas. The maps depict four study areas within the FLPM A designated California Desert Conservation

Area: Imperial East (12,830 acres), Iron Mountain (109,642 acres), Pisgah (26,282 acres), and Riverside East (202,295 acres). The maps also depict vast tracts of land sweeping across the Mojave and Colorado Deserts that are lands being considered for development in the PEIS. Development of these four solar study areas would result in a massive loss of habitat, major fragmentation of entire desert ecosystems and loss of connectivity. This is clearly incompatible with the purpose of the California Desert Conservation Area espoused in FLPMA, that is “to provide for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality”. Accordingly, the BLM should reconsider all the study sites it has proposed.

Pisgah Study Area:

There are multiple resource conflicts at this study area. Desert tortoise, bighorn sheep, Mojave fringe-toed lizard, raptors, rare plants including white-margined beardtongue, small flowered androstephium and Emory’s crucifixion-thorn, and cultural resources would be directly and indirectly impacted by utility-scale projects. A recent study has cautioned identification of this area because of multiple impacts to desert tortoise and bighorn sheep movement.² This area provides the only connectivity between tortoises in the Southern Mojave and Central Mojave populations as identified by Murphy et al, 2007³, and it will impact connectivity between the West Mojave Recovery Unit and the eastern desert tortoise recovery units. The site is immediately adjacent to two ACECs and a Wilderness Study area, and includes part of the Pisgah Lava Flow Research Natural Area. Large-scale clearance and engineering construction within this site will severely disrupt essential hydrological processes. For all these reason, this sensitive and significant area should be removed from further consideration as a Solar Energy Zone.

Iron Mountain Study Area:

There are multiple resource conflicts at this site. The large mapped polygon includes parts of the Turtle Mountains and Iron Mountain which would not appear to even fit the slope criterion BLM claims to have used in identifying the study areas. The polygon includes the southern swathe of Ward Valley, well known to the public from the long-running controversy over the nuclear waste facility that was once proposed. Northern Colorado Recovery Unit desert tortoise populations, bighorn sheep, raptors, hepatic tanager, rare plants including Harwood’s eriastrum, and important cultural resources would be directly and indirectly impacted by large-scale projects. The study area abuts a number of Wilderness Areas and provides important wildlife connectivity in the heart of the more remote areas of California’s Mojave Desert. Large-scale clearance and engineering construction within this site will severely disrupt essential hydrological processes. For all these reason, this study area should be removed from further consideration as a Solar Energy Zone.

² Bare, L., Bernhardt, T., Chu, T., Gomez, M., Noddings, C. and Viljoen, M. 2009. Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave. Effects on habitat quality, physical movement of species, and gene flow. Masters Thesis. University of California, Santa Barbara. 144 pp. Available at: http://fiesta.bren.ucsb.edu/~westmojav/e/images/Wemo_Final.pdf

³ Murphy, R. W., Berry, K. H., Edwards, T. and Mcluckie, A. M. 2007. A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, *Gopherus agassizii*. Chelonian Conservation and Biology 6(2): 229–251.

Riverside East Study Area:

There are multiple resource conflicts at this site in part because the study site is extremely large and sprawls across California's Colorado Desert region. The northeastern portion includes extensive occupied desert tortoise habitat. The entire polygon effectively divides the Northern Colorado Desert Tortoise Recovery Unit from the Eastern Colorado Desert Tortoise Recovery Unit. The proposed study area also includes bighorn sheep, raptor, and sensitive bat habitats, and would impact several rare plant species including Coachella valley milkvetch, jackass clover at Palen Lake, and Harwood's milkvetch. There are important cultural sites particularly those associated with the dry lakes. The polygon also includes Ford Dry Lake and development would impact off-road vehicle use. Large-scale clearance and engineering construction within this site will severely disrupt essential hydrological processes. For these reason, the BLM should reconsider the size and boundaries of this study area. The boundaries should be significantly reduced and the study area restricted to previously disturbed habitat or this sensitive and significant area should be removed from further consideration as a Solar Energy Zone.

Imperial East Study Area:

This study area includes a 1985 occurrence of the endangered Yuma clapper rail (CNDDDB occurrence 17) and significant occupied flat-tailed horned lizard habitat. The study area boundaries should be altered to exclude the Yuma clapper rail occurrence and to provide an appropriate buffer to eliminate potential impacts on the hydrology at the occurrence. The study area boundaries should be reconfigured to minimize impacts to the flat-tailed horned lizard.

Arizona

Three Solar Energy Study areas have been identified in Arizona: Brenda (4,321 acres), Bullard Wash (8,201 acres), and Gillespie (3,970 acres). The map also identifies vast tracts of "BLM Lands Being Analyzed for Solar Development in PEIS" throughout southwestern Arizona. This region provides habitat for Sonoran desert tortoise populations. On August 28, 2009 the USFWS issued a positive 90-day finding on a petition to list the Sonoran desert tortoise for which Western Watersheds Project was a co-petitioner.⁴ The BLM must consider effects to the Sonoran desert tortoise at all three of the Arizona solar study areas and on the other "BLM Lands Being Analyzed for Solar Development in PEIS." The identified solar study areas are outside of the classified Sonoran desert tortoise habitat, but indirect and cumulative effects will still occur. Desert tortoises must cross ephemeral washes and open flats to move between habitats, and will be affected by the increased road densities, development, and infrastructure that electricity generating plants entail. This is true for all native wildlife species, but impacts to at-risk species such as bighorn, tortoise, and recovering Sonoran pronghorn are a particular concern.

The BLM must provide a careful analysis of the increased potential for invasion and infestation by non-native or noxious species, including Sahara mustard (*Brassica tournefortii*) and buffelgrass (*Pennisetum ciliare*) that would be posed by development. These species have been spreading in recent years, increasing the flammability of desert habitats and displacing

⁴ USFWS. 2009. Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List the Sonoran Population of Desert Tortoise (*Gopherus agassizii*) as a Distinct Population Segment (DPS) With Critical Habitat. Federal Register August 28, 2009. Vol 74(166): 44335-44344.

native species. This must be considered as a cumulative effect to the ecosystems proposed for development.

All the Arizona study sites are in livestock grazing allotments. We note that in Arizona, the BLM does not routinely evaluate effects to ephemeral drainages or arroyos in its environmental assessments for grazing authorizations. Rangeland Health Assessments conducted on Arizona grazing allotments only consider upland and riparian areas. As such, predicting and monitoring the effects of the proposed solar installations on ephemeral drainages or arroyos will require additional quantitative studies and analysis. Moreover, many of the water developments on Arizona BLM lands are unmonitored and un-assessed for their effects of groundwater and surface water availability. The BLM will need to conduct new hydrologic studies before determining the cumulative consequence of the solar developments.

The Solar PEIS should consider closing livestock grazing allotments as one of the mitigation measures. In Arizona, many of the allotments that would be affected by solar development are not economically or ecologically viable and are only available for infrequent ephemeral use. If the BLM and the Arizona State Trust Land Department worked towards permanent grazing closure of high-ratio acreage, this might help offset the new impacts to desert dwelling species.

Brenda Study Area:

The BLM must consider the cumulative impacts of multiple uses on the Brenda study area, which is within the Crowder-Weisser grazing allotment administered by the BLM. The Crowder-Weisser allotment is classed by the BLM as being in poor to fair condition. This allotment has experienced soil compaction and overutilization. Bouse Wash, critical for wildlife, flows through the study area and its significance should be emphasized and impacts to it analyzed in the PEIS. Additionally, the lands around the town of Brenda have been subject to heavy off-road vehicle use in recent years. The NRCS ecological site guide for the area identifies the susceptibility of the substrate to sheet and gully erosion, and indicates that, once gullied, this deprives the surrounding area of the scant moisture 2-7 inches of annual precipitation provides. The Solar PEIS must fully consider and analyze these concerns.

Gillespie Study Area: The Gillespie study area covers four grazing allotments and is very close to Sonoran desert tortoise habitat. It is also within the viewshed of the Sonoran Desert National Monument and the Signal Mountain and Woolsey Peak Wilderness Areas. This area is home to many significant archeological and historic sites, including rock art and scattered artifacts. This area also provides important bighorn sheep habitat, and the effects of fencing on this species as it crosses between rocky habitats are well known. The Solar PEIS must describe how it plans to mitigate the infrastructure impacts to this species. The cumulative impacts in this area include the nuclear power plant, vast agricultural fields, recreation, and development.

Bullard Wash Study Area:

The Bullard Wash study area is not accessible by major roads. If roads are to be built to develop or maintain the site, the effects of these roads must be disclosed and fully analyzed in the PEIS. The study area occurs on three grazing allotments and is within the habitat of bighorn sheep and

desert tortoise. It is not clear why the outline of the Bullard Wash study area encloses one entire parcel of private land. Please explain how this is feasible in the PEIS.

Nevada

Seven study areas have been identified in Nevada: Amargosa Valley (32,699 acres), Dry Lake (16,516 acres), Delamar Valley (17,932 acres), Dry Lake Valley North (49,775 acres), East Mormon Mountain (7,418 acres), Gold Point (5,830 acres), and Miller's (19,205 acres).

Four of these study areas (Amargosa Valley, Dry Lake, Delamar Valley and, East Mormon Mountain) are in desert tortoise habitat.

Six of the seven study areas are located within BLM grazing allotments: Millers (Monte Cristo Allotment), Gold Point (Magruder Mountain Allotment), Dry Lake (Dry Lake Allotment) Mormon Mountain (Gourd Springs and Summit Springs allotments), Dry Lake Valley (Wilson Springs, Simpson and Ely allotments), and Delamar (Buckhorn and Oak Springs allotments).

The Nevada map shows extensive areas classified as "BLM Land Being analyzed for Solar Development in PEIS". Many of these areas in the northern half of the map include sage grouse nesting, and summer and winter sue areas. The BLM must therefore consider the direct, indirect and cumulative impacts to sage grouse. These areas also include wintering areas for other sagebrush passerines in southern sagebrush, Mojave transition country.

There are many major utility projects underway throughout the area including Southern Nevada Water Authorities' Clark, Lincoln and White Pine Counties Groundwater Development Project, and the Southwest Intertie Project and related transmission lines. These must be addressed in the cumulative impacts analysis for the Nevada study sites.

Three of the solar study areas (Amargosa Valley, Dry Lake Valley North, and Delamar Valley) are situated in regions of the state with limited ground and surface waters. These water-related issues make these areas unsuitable for further consideration.

Amargosa Valley:

The Amargosa Valley site lies between Death Valley National Park and Ash Meadows National Wildlife Refuge and is part of the Death Valley regional groundwater flow system.

The 23,000 acre Ash Meadows National Wildlife Refuge provides habitat for 12 species listed under the Endangered Species Act. The refuge was established specifically to protect these threatened and endangered species. Most of the listed species are dependent on aquatic or wetland environments within the refuge. The refuge also includes the National Park Service administered Devil's Hole, the only known habitat for the Devil's Hole pup fish. On November 4, 2008, the Nevada State Engineer issued Order 1197 announcing that new applications to appropriate additional water from the Amargosa Desert basin within 25 miles of Devil's Hole would be denied due to concern over the effect of groundwater pumping on the water level in Devil's Hole. Based on the above, the Amargosa Valley study area should be eliminated from further consideration as a Solar Energy Zone.

Dry Lake Valley North & Delamar Valley:

The Dry Lake and Delamar Valleys are part of the White River Flow System. Groundwater in these two basins has been fully appropriated over-appropriated in down gradient basins. These two study areas are inappropriate locations for solar energy project development due to the lack of groundwater.

East Mormon Mountain & Dry Lake:

Both these study areas include desert tortoise habitat. East Mormon Mountain is immediately adjacent to the Mormon Mesa DWMA and Beaver Dam Slope DWMA in the Northeastern Mojave Recovery Unit. Recent monitoring reports from USFWS indicate that the genetically distinct Northeastern Mojave desert tortoise population appears to be declining. Because environmental stressors are indicated as a reason for this species decline, this area should be withdrawn from further consideration as Solar Energy Zones.

Utah

Three study areas have been identified in Utah: Escalante Valley (6,648 acres), Milford Flats South (6,440 acres), and Wah Wah Valley (3,676 acres).

All three study areas are in pygmy rabbit habitat. The Fish and Wildlife Service is currently reviewing the status of the pygmy rabbit as it considers listing the species under the Endangered Species Act.⁵ Milford Flats South is sage grouse habitat. The Fish and Wildlife Service is currently reviewing the status of the greater sage grouse as it considers listing the species under the Endangered Species Act.⁶ Western Watersheds Project was a co-petitioner on the petitions that lead to these status reviews.

The three study areas lie within BLM grazing allotments. Escalante Valley is within Butte Allotment, Milford Flats South is within the Minersville allotment group, Wah Wah Valley is in Wah-Wah Watson Allotment.

6. Mitigation Measures

BLM is obligated under FLPMA to “minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved.” [43 U.S.C. §1732(d)(2)(a)] Other laws, including the Endangered Species Act, also entail the need for mitigations to minimize impacts. BLM is required to consider measures to mitigate potential environmental consequences in its NEPA analysis. [40 C.F.R. § 1502.16] The NEPA implementing regulations define "Mitigation" to include:

⁵ USFWS 2008. Endangered and Threatened Wildlife and Plants: 90-Day Finding on a Petition To List the Pygmy Rabbit (*Brachylagus idahoensis*) as Threatened or Endangered. Federal Register. January 8, 2008. Vol. 73(5): 1312-1313.

⁶ USFWS 2008. Endangered and Threatened Wildlife and Plants; Initiation of Status Review for the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered. Federal Register. February 26, 2008. Vol. 73(38): 10218-10219.

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
 - (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
 - (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
 - (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
 - (e) Compensating for the impact by replacing or providing substitute resources or environments.
- [40 C.F.R. §1508.20]

The scale of the degradation and loss of the public lands that could result from the PEIS process is unprecedented, which makes consideration of appropriate mitigation measures difficult. All of the mitigation measures outlined in §1508.20 are applicable to various aspects of solar energy development.

As we have outlined above, a number of the proposed study areas should be dropped from consideration as Solar Energy Zones. The BLM should establish “Best Management Practice” measures to minimize impacts during construction and operation of facilities, and establish requirements for restoration of any transient facilities impacts such as temporary roads. These practices should be incorporated as terms and conditions of any permit issued for energy development projects and they should be conducted at the expense of the operator by third-parties.

In order to compensate for the enormous habitat losses, and the additional direct, indirect, and cumulative impacts to sensitive resources caused by the presence of solar power plants and associated infrastructure, the acquisition of off-site compensation lands will be needed and the BLM will need to reduce the multiple impacts of all other consumptive uses authorized by any given land use plan.

A combination of both acquisition of compensation lands and an overall reduction of impacts will be required to achieve a net decrease in cumulative impacts to sensitive and listed species to offset the habitat loss and other impacts,. In addition, the Mojave Desert acts as a carbon dioxide sink on a par with grasslands and temperate forests.⁷ In order to assure a net climate change benefit, the BLM should require that all solar energy projects demonstrate a clear net carbon dioxide reduction benefit. The loss of the project sites carbon dioxide sink capability should be factored into the mitigation calculations.

The BLM should adopt a policy of “no net loss” of sensitive species habitat whereby an equivalent acreage of private lands and inholdings are acquired by the project developers and conserved in perpetuity. Compensation habitat must be of an equal or better quality than the habitat lost to solar projects. The BLM developed a compensation process for projects in desert

⁷ Wohlfahrt, G., Fenstermaker, L. F. and Arnone, J. A. III. 2008. Large annual net ecosystem CO₂ uptake of a Mojave Desert ecosystem. *Global Change Biology*. 14(7): 1475-1487.

tortoise habitat in 1991.⁸ The process includes determining values for five factors: category of habitat, term of effect, existing disturbance on site, growth inducement, and effect on adjacent lands. The acreage impacted is multiplied by the sum of these factors to determine the compensation acreage required. We recommend that the BLM use this process for all impacted desert tortoise habitat in Arizona, California and Nevada.

There are opportunities for the BLM to offset impacts by decreasing impacts from other authorized activities on public lands. BLM could change land use designations to more restrictive categories in certain areas and eliminate some uses. For example, the BLM should consider closing livestock grazing allotments as a component of the mitigation measures. The ecological benefits of retiring allotments are high and this action may be easier to accomplish than other proposed management solutions. Livestock grazing is a landscape level impact, and the action area for livestock impacts tends to very large with a footprint indicated by the size of the allotment itself. Removing livestock removes direct and indirect impacts at a landscape level as well as reducing impacts on specific, sensitive resources such as riparian areas, cultural sites, and sensitive species and rare plant habitats. Removal of livestock benefits wildlife by removing negative interspecies interactions, reducing competition for forage, and reducing the risk of spread of invasive plants. Combined with the removal of range improvements, this measure would also help reduce the impacts of other threats such as OHV activities and unauthorized route use by eliminating “attractive nuisances”, and would reduce subsidized predators such as ravens and coyotes that use those range improvements. It would also reduce trampling impacts to biological crusts and allow allotment lands to reach full potential as carbon sinks, thus helping to offset the loss of carbon sequestration from utility-scale developments. After the initial buyout, it would potentially reduce BLM costs associated with rangeland management and administration.

We thank you for the opportunity to provide additional scoping comments on the Solar PEIS process. Please continue to include Western Watersheds Project on your list of interested public for future mailings.

Sincerely,

A handwritten signature in black ink that reads "Michael J. Connor". The signature is written in a cursive style and is positioned above a horizontal line that extends to the right.

Michael J. Connor, Ph.D.,
California Director
Western Watersheds Project
P.O. Box 2364
Reseda, CA 91337-2364.
(818) 345-0425
<mjconnor@westernwatersheds.org>

⁸ Hastey et al. 1991. Compensation for the Desert Tortoise. A report prepared for the Desert Tortoise Management Oversight Group by the Desert Tortoise Compensation Team. Approved by the MOG in November 1991. 15 pp., appendices.

Thank you for your comment, Randy price.

The comment tracking number that has been assigned to your comment is SolarM60185.

Comment Date: September 11, 2009 17:06:27PM
Solar Energy Development PEIS
Comment ID: SolarM60185

First Name: Randy
Middle Initial:
Last Name: price
Organization: Mesa County, Planning and Economic Development
Address: PO Box 20,000
Address 2:
Address 3:
City: Grand Junction
State: CO
Zip: 815025022
Country: USA
Email: randy.price@mesacounty.us
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar PEIS Review 9 11 2009.pdf

Comment Submitted:



**MESA
COUNTY**

Department of Planning and Economic Development

Land Use and Development • Long Range Planning

Development Engineering • Development Services and Code Enforcement

750 Main Street, P. O. Box 20,000 Grand Junction, CO, 81502-5022 (970) 244-1636 www.mesacounty.us

September 11, 2009

Solar Energy PEIS, Argonne National
Laboratory, 9700 S. Cass Avenue—EVS/
900, Argonne, IL 60439.

To Whom it May Concern;

Thank you for the opportunity to contribute to the scoping for the Solar Programmatic Environmental Impact Statement. Please consider the following comments during the drafting of Solar PEIS. Mesa County is interested in the development of all forms of energy in a manner that will preserve our quality of life while minimizing impacts on the communities and environment. We would like to see development of the solar energy resources within the County. However, none of the proposed reserved tracts under consideration are in this county. Mesa County is located approximately 150 miles northwest of the nearest location in the San Luis Valley.

The Solar PEIS proposes to reserve 24 tracts of land in six States. There are 4 tracts in Colorado. The Solar PEIS will reserve and restrict uses and prohibit mineral leasing and surface uses in the study areas during the time of the study. The following are concerns, comments and questions that we would like to see addressed in the drafting of the PEIS.

- The PDF maps on the Solar PEIS website provide insufficient detail to evaluate the 4 sites proposed in Colorado. The data used to create these maps should be made available for download in formats that can be used by popular GIS software. Additionally, maps should be made available interactively online similar to <http://www.nrel.gov/eis/imby/>.
- The PDF maps only show the extent of the transmission corridors within the area Solar PEIS. An additional map of a wider scale should show how the corridors connect with the surrounding transmission grid. The map should show the existing capacities of the transmission lines.
- The PEIS should take into account existing infrastructure and proximity to urban areas in a formula for calculating suitability of BLM land for solar development. The map titled “Solar Potential from Concentrating Collector,” shows that the tracts in southern Colorado that are part of this PEIS provide 6.0 to 6.5 kwh/sq. meter/day. Other areas managed by BLM of slightly less available solar energy with values of 5.5 to 6.0 kwh/sq. meter/day that are closer to urban areas and are located along existing transmission lines were not considered for this PEIS. Electrical transmission loss over long distances may negate the slightly higher (10%) solar energy available in the PEIS study area. New

electrical transmission corridors and higher capacity transmission lines will consume land and create their own negative environmental and aesthetic impacts. As part of the draft Solar PEIS, areas slightly less than 6.0 to 6.5 kwh/sq. meter/day, should be considered and included as one of the alternatives if they are more efficient by their close proximity to existing infrastructure.

- The BLM Grand Junction Field Office is currently revising the GJFO Resource Management Plan. The plan is revised every 20 years. Revision of this plan should include the identification of those areas suitable for solar development and include addressing DOI initiatives in support of the President's New Energy for America Plan. Options for solar energy development in areas not identified in the Solar PEIS such as the Grand Junction resource management area should be looked at and included as an alternative in the PEIS.

Thank you for your consideration. We look forward to reviewing the Draft PEIS. Please contact me if you have any questions.

Sincerely,

(emailed)

Kurt Larsen, AICP
Director of Planning and Economic Development

cc: Mesa County Board of County Commissioners
Jon Peacock, County Administrator
Lyle Dechant, County Attorney
Catherine Robertson, GJFO Manager

Thank you for your comment, John Shepard.

The comment tracking number that has been assigned to your comment is SolarM60186.

Comment Date: September 11, 2009 18:10:49PM
Solar Energy Development PEIS
Comment ID: SolarM60186

First Name: John
Middle Initial:
Last Name: Shepard
Organization: Sonoran Institute
Address: 7650 E. Broadway, Suite 203
Address 2:
Address 3:
City: Tucson
State: AZ
Zip: 85710
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Final SESA PEIS Comments 9-14-09.doc

Comment Submitted:



Shaping the Future of the West

www.sonoraninstitute.org

TUCSON, ARIZONA
BOZEMAN, MONTANA
PHOENIX, ARIZONA
MEXICALI, BAJA CALIFORNIA
HELENA, MONTANA
CHEYENNE, WYOMING
DENVER, COLORADO
GLENWOOD SPRINGS, COLORADO

September 14, 2009

Ms. Linda Resseguie
Project Manager
BLM Solar PEIS

Dear Ms. Resseguie:

Please accept and fully consider these comments on behalf of the Sonoran Institute, the Sierra Club, the Arizona Wilderness Coalition, and Tonopah Area Coalition related to the Solar Energy Study Areas in Arizona.

I. Intro

a. Description of commenting organizations

The Sonoran Institute is dedicated to inspiring and enabling community decisions and public policies that respect that land and people of the West. Our work extends from the Canadian Rockies, through the U.S. intermountain states, extending into northwestern Mexico, allowing us to apply our approach to conservation in diverse landscapes and communities. Our approach to conservation addresses the full range of Western land, water and energy issues, and seeks to demonstrate that conservation, energy sustainability, and smart growth are key elements of community well-being and economic prosperity.

The Sierra Club is a non-profit, public interest environmental organization with over 700,000 members, 12,000 of which reside in Arizona, whose mission is to explore, enjoy and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environment. Sierra Club has a strong interest in public lands in Arizona and has long advocated for protection and management that sustains the ecological integrity of the lands. Our members enjoy the public lands and utilize them for hiking, backpacking, hunting, and wildlife viewing, among other activities. We also have a strong interest in promoting clean renewable energy and energy efficiency.

The Arizona Wilderness Coalition works to permanently protect and restore Wilderness and other wild lands and waters in Arizona for the enjoyment of all citizens and to ensure that Arizona's native plants and animals have a lasting home in wild nature. We do this

by coordinating and conducting inventories, educating citizens about these lands, enlisting community support, and advocating for their lasting protection.

The Tonopah Area Coalition is a neighborhood association that has covered a range of issues within western Maricopa County for over two decades.

We appreciate the opportunity to submit these comments to the Bureau of Land Management (BLM) on the maps of proposed Solar Energy Study Areas (SESA), supplementing the Programmatic Environmental Impact Statement (PEIS) for agency-wide solar energy programs and policy. We are submitting these comments today via email and also forwarding a copy with attachments to you separately.

b. Support for renewable energy development and the role of public lands

It is clear that the nation's growing addiction to fossil fuels, coupled with the unprecedented threats brought about by global warming, imperil the integrity of our wildlands as never before. To sustain both our wildlands and our human communities, the Sonoran Institute, the Sierra Club, the Arizona Wilderness Coalition, and Tonopah Area Coalition believe our nation must transition away from fossil fuels as quickly as possible. To do this, we must moderate demand through energy efficiency, conservation, and demand-side management practices, and rapidly develop and deploy clean, renewable energy technologies, including at utility-scale solar power projects.

Our public lands harbor substantial wind, solar, and geothermal resources. Developing some of these resources will be important to creating a sustainable energy economy and combating climate change, and the Sonoran Institute, the Sierra Club, Arizona Wilderness Coalition, and Tonopah Area Coalition support such responsible development of renewable energy. However, renewable resource development is not appropriate everywhere on the public lands. Development that does occur on the public lands must take place in a responsible manner.

II. SESAs in Arizona

a. Description of comments

These comments are limited to the SESAs that have been proposed in Arizona. The groups submitting these comments sincerely hope that the topics discussed below and the questions raised will assist the BLM in carrying out the task before it in the best possible manner.

b. SESA selection process in AZ

The BLM has identified three SESAs in Arizona totaling 16,492 acres. These were selected as part of a GIS analysis "to locate places on BLM land that had the lowest known conflict with renewable energy development." This process excluded from consideration BLM lands that are legally, by presidential decree or secretarial designations, off limits to solar development. The BLM also excluded "high sensitivity"

areas that have resource or Land Use Plan conflicts that would be considered not in compliance with the agency's Resource Management Plans, or areas "where mitigation would prove particularly difficult, costly, impractical, or impossible." Finally, the BLM chose to exclude "moderate sensitivity" areas where "resource conditions or Land Use Plan decisions would not necessarily preclude the project, but mitigation would likely be required."

What remained where lands the BLM deemed areas of "low sensitivity." These areas were then subject to additional analysis. This included integrating data from Arizona Game and Fish Department (AZGFD) that was provided to the Arizona Renewable Resource Transmission Identification Study (ARRTIS) and the WGA's WREZ initiative. The GIS layer that resulted represented those lands that are low known conflict areas to the BLM and AZGFD.

From low known conflict areas, lands were selected as SESAs if they met the following criteria:

- High solar potential by the National Renewable Energy Lab (insolation values of 6.5 or more)
- Slopes of less than five percent,
- Parcels for 2,500 acres or larger,
- Near existing transmission and transportation corridors, and
- No existing applications.

Because the analysis was conducted at a very coarse level, the three areas selected as SESAs still must be subject to site-specific review and NEPA analysis.

c. Overarching concerns regarding SESAs in Arizona

i. Impacts on wildlife corridors and habitat

In identifying low known conflict areas that might be candidates for SESAs, the BLM relied on AZGFD data that ultimately precluded significant amount of BLM lands from consideration as SESAs. We note that this data was used as part of the WGA's WREZ initiative, and that during that process concerns were raised that AZGFD may have overstated the amount of wildlife habitat that would be significantly impacted by solar energy development. As a result, the AZGFD agreed to revisit its findings.

Recommendations: The BLM should request that, once it has revisited its findings, the AZGFD provide the agency and make publicly available the multiple wildlife data layers that are part of its analysis, so that all interested parties have the opportunity to assess and prioritize the various wildlife values that will be under consideration as part of the PEIS.

ii. Impacts on water resources, particularly groundwater

Currently, most proposed solar power facilities being proposed in Arizona involve wet-cooled technologies that require significant amounts of water. If located on BLM lands, these projects will likely depend on groundwater to meet their cooling needs, placing increased demands on an already scarce resource.

While we are supportive of policies that discourage water-intensive technologies, we want to underscore the need for a broader set of policies to guide water usage for energy development projects on public lands, so that a consistent policy is applied regarding water usage for all energy development on public lands.

The water usage of these large concentrated solar facilities that are utilizing wet cooling has already engendered much controversy in Arizona. Two plants in the Kingman area – Hualapai Valley Solar and Albiassa Solar – are meeting resistance from local residents primarily based on the significant amount of water they will use. Many opponents are asking that both facilities utilize dry cooling for the plants.

Dwindling water supplies and increased demand in the West are likely to heighten water-use conflicts. Public lands management policies should pro-actively address these conflicts by encouraging water uses that are sustainable while meeting a clear set of national policy priorities, including mitigating and adapting to climate change.

Any impacts relative to land subsidence, earth fissures, etc. relative to groundwater pumping should be thoroughly evaluated. Likewise, the BLM must consider any potential impacts from groundwater pumping to any nearby surface water, including small springs. Any water in these arid lands is critical for wildlife.

Recommendations: There is a pressing need for the BLM to develop policies that encourage the adoption of low- or no-water technologies for solar development on BLM lands. The PEIS should assess the economic feasibility and environmental impact of dry and hybrid cooling technologies and provide direction to developers on when dry and hybrid cooling should be considered

iii. Joint planning/venture opportunities with Arizona State Land Department

Given the fragmented nature of land ownership between the BLM and the Arizona State Land Department's trust lands, there are likely economies of scale and financial advantages to both agencies working together to identify and approve lands for solar siting. The three proposed SESAs in Arizona underscore this opportunity. Significant amounts of trust lands are either immediately adjacent to or in close proximity to the SESAs. Moreover, the SESA's relatively small size and the likelihood that site constraints might be identified may lessen their viability for utility-scale solar projects. Collaborative planning between both agencies could expand siting opportunities on their lands, as well as enhance the appeal of these lands to solar developers by allowing one or more projects co-locate and share infrastructure.

Recommendations: The BLM should effectively engage the Arizona State Land Department as a cooperating agency and, if the Land Department consents, consider extending the PEIS to include trust lands adjacent to SESAs as a precursor to collaborative planning.

iv. Coordination with Arizona's Fifth Biennial Transmission Assessment

In 2007, the Southwest Area Transmission planning group comprised of utilities, renewable energy developers, federal and state officials, and other stakeholders formed a Renewable Transmission Task Force (RTTF) to respond to the Arizona Corporation Commission's (ACC) requirement that utilities in Arizona assess the state's renewable energy potential and develop a plan to integrate renewable energy resources into Arizona's transmission system.

The RTTF, which is comprised of utilities and other interested parties has provided information on the location of renewable resources in Arizona, assessed available transmission capacity on existing lines, and developed a conceptual transmission network based on this information. To further assist Arizona utilities and stakeholders in identifying the top three potential renewable energy transmission corridors as part of the state's Fifth Biennial Transmission Assessment, the task force created a subcommittee (Arizona Renewable Resource and Transmission Identification Subcommittee) to more specifically identify areas with the best potential for solar, wind, geothermal, and biomass generation in Arizona. This subcommittee has just released its draft final report.

The subcommittee's report, along with the task force's analysis of potential transmission corridors, will inform the ACC's detailed examination of the existing and planned configuration of the state's electrical transmission system as part of its biennial assessment. This assessment will help chart the future location of expanded and new transmission corridors, which in turn will significantly influence where utility-scale renewable power projects will be located. It is imperative that the BLM effectively engage members of the ACC, so that they clearly understand the PEIS process, including its timeline and various options under consideration, and ensure that commissioners are kept fully apprised of the milestones and results of the process, so the ACC can plan their decisions based on complete and accurate information.

Recommendations: The BLM should become engaged in the ACC's biennial transmission planning effort to ensure that the siting of SESAs is consistent with the state's transmission planning priorities.

v. Mitigation strategies

Because the impacts of solar development are expected to be long lasting, mitigation strategies that offset these impacts are critical. We would encourage consideration of the following strategies that are particularly relevant to Arizona's Sonoran Desert environment: retirement of grazing leases, acquisition of private or state trust lands with

significant conservation values, new administrative or legislative protective designations for BLM lands that restrict off-road vehicle activities, mining, and other activities that degrade the lands, and acquisition and retirement of water rights. Any mitigation strategy addressing groundwater pumping should ensure that the acquisition and retirement of water rights occur in the same sub-basin (as defined by the Arizona Department of Water Resources) in which the project is located.

Recommendations: The PEIS should consider and offer a menu of mitigation strategies that the BLM can draw upon in evaluating and approving site-specific projects.

d. Sites-specific Issues

i. Gillespie SESA

The current configuration of this SESA (narrow width and scenic road bisecting the proposed area) would appear to present problems for siting a utility-scale project. We would request that the BLM consider possible adjustments to the area's boundaries away from Webb Mountain and closer to the transmission corridor, including moving the north-eastern boundary toward the natural gas pipeline and using scenic road as southern boundary.

We note that trust lands lie north of the proposed area. (If reconfigured as we suggest, these trust lands would be immediately adjacent to the area's boundaries.). We would encourage the BLM to include an alternative in the PEIS which analyzes the development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

The area falls within the Phoenix Active Management Area, so there are some restrictions on what water resources might be available for a utility-scale solar plant. We do note that the proposed area is located south-west of an area identified by Arizona Department of Water Resources as experiencing significant subsidence (primarily west of Arlington School Road). The PEIS should assess the impact that a utility-scale, wet-cooled solar plant's groundwater pumping will have on subsidence rates on nearby lands.

Recommendations: The PEIS should consider reconfiguring the Gillespie SESA's boundaries away from Webb Mountain and closer to the transmission corridor, consider expanding the PEIS to include state trust lands (with the Land Department's consent), and assess potential impacts of water use for utility-scale solar development .

ii. Brenda SESA

We suggest that the BLM consider possible boundary adjustments in order to preserve the wash and drainage areas in northwest corner, which may involve aligning the western boundary with Avenue 42 East and moving the southern boundary toward U.S. 60.

We note that state trust lands lie immediately north and east of the proposed area's current boundaries. We would encourage the BLM to include an alternative in the PEIS which analyzes the development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

We also note that the proposed area lies adjacent to a large BLM Solar Energy ROW application (#AZA 034750) that is now closed. This demonstrated interest by industry in developing solar projects on these adjacent lands, in addition to the likelihood that they may have similar characteristics to the Brenda SESA, warrant their consideration as potential SESA lands. We recommend that the BLM evaluate the lands covered under this application for inclusion in the Brenda SESA or as a separate SESA.

Recommendations: The PEIS should consider reconfiguring the Brenda SESA's boundaries to preserve wash and drainage areas, consider expanding the PEIS to include trust lands (with the Land Department's consent), and consider expanding or creating a separate SESA to include all or a portion of the lands included in the closed ROW application (#AZA 034750).

iii. Bullard Wash SESA

There is a significant Joshua Tree forest on the northern portion of the area. We would request consideration of a boundary adjustment in order to preserve this forest. Also, there appears to be some overlap between the area's northwest reach and a wildlife linkage corridor as identified by Arizona Game and Fish and the Arizona Department of Transportation.

We note that state trust lands lie immediately west, east, and south of the proposed area's current boundaries. We would encourage the BLM to include as an alternative in the PEIS development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

On July 1, 2009, during a site visit of the SESA, a Southwest Willow Flycatcher was observed flying over the area, but no nests were identified. The BLM should analyze any potential impacts to Southwest Willow Flycatcher habitat as part of the PEIS.

Recommendations: The PEIS should consider reconfiguring the Brenda Wash SESA's boundaries to preserve the Joshua Tree forest on its northern edge and consider expanding the PEIS to include state trust lands (with the Land Department's consent).

e. Consideration of additional SESAs

Because the BLM's stated goal of identifying and analyzing SESAs in the PEIS is to determine the most appropriate locations for solar development on public lands, it is critical that a robust set of SESAs be identified and development be guided to these lands. A description of the methodology used by Arizona BLM to identify the three Arizona SESAs (attached) indicates that there were five other SESAs identified through the

screening process. These SESAs were not included in the SESAs published for public comment because of overlap with existing solar ROW applications. Overlap with existing ROW applications was not included in the exclusion criteria directed by the BLM WO to the states, and any such overlap does not diminish an area's potential to be a successful SESA. In fact, SESAs included for public comment in several other states overlap with existing ROW applications. The BLM should analyze these additional five areas for potential inclusion as SESAs.

Recommendations: The BLM should analyze the additional five areas identified in the Arizona BLM screening process for potential inclusion as SESAs.

Below are narratives from site assessments we conducted for the three AZ SESAs. Each assessment includes a set of accompanying maps. Due to the maps' size, we were unable to include these with our comments, but these can be requested by contacting John Shepard at the Sonoran Institute (520-290-0828).

Sincerely,

John Shepard
Senior Adviser
Sonoran Institute
7650 E. Broadway, Suite 203
Tucson, AZ 85710

Sandy Bahr
Chapter Director
Sierra Club - Grand Canyon Chapter
202 E. McDowell Rd, Suite 277
Phoenix, AZ 85004

Kevin Gaither-Banchoff
Executive Director
Arizona Wilderness Coalition
P.O. Box 40340
Tucson, AZ 85717

David Schwake
President
Tonapah Area Coalition
3499 North 371st Ave
Tonopah, AZ 85354

BRENDA SOLAR ENERGY STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Brenda Solar Energy Study Area of approximately 4,325 acres on BLM land.

LOCATION: The Solar Energy Study Area (SESA) is 115 miles west of Phoenix and is two miles east of Brenda, AZ, in La Paz County. Site is 15 miles east of Quartzsite and 30 miles west of Salome AZ. Highway US 60 is one mile south of the site. Ave 42E bisects the west side of the area, while Ave 47 and Bouse Wash are on the eastern side of the site. Brenda is three miles north of Interstate 10 but lacks an exit. Central Arizona Project (CAP) is five miles east of SESA. Bear Hills are one mile west and south. The Ranegras Plain follows Bouse Wash northwest to southeast. See T4N, R16W Sections 1-5, 8,9,10 & T5N R15W Section 31.

Brenda SESA is overlaid with Pending Solar Application AZA 035155. Site was surrounded on east, south, and west by BLM ROW Solar Energy Application AZA 034750, which is now closed. The SESA is bordered by BLM land, private land on southeast, and State Trust land on north.

TRANSMISSION CORRIDORS: South of the Brenda SESA is a proposed WWEC transmission corridor that runs parallel with Interstate 10. This corridor is 3 miles south of SESA. Paralleling US 60 is lower voltage transmission line in a corridor one mile south of Brenda SESA.

INSOLATION: The west half of the area is rated at 7,341 watt-hours / per sq. meter/ day of incoming solar radiation. The east half of the SESA is rated at 7,297 by National Renewal Energy Laboratory (NREL) modeling.

CLIMATE: In this region, of the Sonoran Desert, precipitation ranges from 3.7 - 13.4 inches per year. To the east, a 100-year precipitation average of 6.8 inches per year is recorded for Salome, AZ. (Brenda lacks weather station.) However, the Brenda SESA borders the Lower Colorado River Subdivision that records even lower amounts of annual rain. Cloud free days dominate. Summer temperatures can reach over 114 degrees. Drought for past decade has stressed this region.

SOILS: In this area an alluvial fan stretches from the nearby volcanic mountain range south and east to a plain that has a gradual slope towards Bouse Wash. This site contains a top level of small, darkened 'varnished' basalt rocks. This layer forms 'desert pavement.' This unique layer comes from the erosion of parent mountains and is bound together by fine grain soil. By providing a crust that stabilizes sand and dirt, this layer results in erosion and dust control, and is a rare scenic feature. Patches of desert pavement stretch diagonally across the Solar Study Area to Bouse Wash. In the lowest

elevation, like the Bouse Wash floodplain and Ranegras Plain, soft 'flour like' soil caps the alluvial basin. (Soil resource for this region is under study. No data is currently available from National Resource Conservation Service.)

SLOPE: The 4,325 acre SSA slopes < 3 percent gradually south west to north east across 5.5 miles of bajada and alluvial plain to Bouse Wash. One major wash (not named) on the west side and many arroyos (gullies) divide the site diagonally.

VEGETATION: Within the Lower Colorado River Valley Subdivision, this area also includes some flora of the neighboring Arizona Upland Subdivision of the Sonoran Desert. This region of bajadas and desert plains is characterized by creosote bush, triangle bursage, ironwood, and buckhorn cholla. Additions (from AZ Upland) include saguaros and ocotillo.

Cattle grazing allotments and terrain are key factors affecting the Sonoran desert vegetation within the SESA. The western points visited show a long history of grazing. Additional stress due to a decade of drought has resulted in sparse amounts of small bushes and grasses. Today, the west side corral and tank is maintained. These improvements are inside the Brenda Solar Energy Study Area. Similar effects of significant cattle grazing were found inside the northeast corner of the SESA and along a small mesquite bosque near Bouse Wash. Retirement of one or more cattle allotments may affect land outside of the SESA.

The creosote bush-dominated desert floor is divided by numerous small washes that are lined with Palo Verde, mesquite, and ironwood trees, plus compass barrel, buckhorn cholla, and saguaro cactus. In this area, these small, but numerous, washes are the arteries between the peninsulas of the 'desert pavement' in the topography of this part of the Sonoran Desert environment. Studies show that desert regions like this one can only support vegetation on less than 30% of the surface.

Broken surface allows invasive (non-native) plants to out compete native plants in areas that have been disturbed. Invasive plants (like Tamarisk) have already affected roads, development sites, and abandoned farm land in this region.

Significant amount of abandoned farmland exists near east side of Solar Energy Study Area.

WILDLIFE: Evidence of jackrabbits, gophers, lizards, coyote, doves, and turkey vultures were found during short hikes into the SESA. Arizona Game & Fish Department analysis of this area lists Species of Concern: Sonoran Desert Tortoise. BLM has given this area a "sensitive" designation for the Sonoran Desert Tortoise.*

HISTORIC: Plomosa Windmill, cattle tank, and corral on west side of Solar Study Area are over 50 years old. The Ranegras Plain follows Bouse Wash. Ranegras is described as a corruption of a Hualapai word (hanagas) which means "good". The possibility that

General Patton trained troops near the SESA relates to a historic structure and known activity north and south of SESA.

ECONOMIC: This site is remote. Few residents live in this region. Once based on mining, Brenda is now tied to tourism and winter snowbirds via three large, and several small, RV Parks, plus a restaurant and vehicle repair shop. Salome and Quartzsite are larger towns but are outside of this region. Abandoned farm land exists east of the Bouse Wash. A sewage sludge disposal plant northeast of area may represent the region's only industry. Further east a group of cattle feed lots exist along Vicksburg Road. Unincorporated Brenda is in the Salome Consolidated elementary and high school district.

REMAINING POINTS: The Brenda SESA shows considerable stress from cattle grazing and drought. In this region, a considerable amount of farmland is fallow. Questions exist regarding hook-up to 500kV Transmission Corridor along with competition with neighboring ROW application. Review of possible cultural resource, grazing allotment(s), land subsidence, and groundwater or CAP resource for SESA are still needed. Brenda SESA is Department of Defense Airspace Consultation Area.

*Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.
(Updated 0909.)

BULLARD WASH SOLAR ENERGY STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Bullard Wash Solar Energy Study Area covers 8,203 acres of BLM land.

LOCATION: Bullard Wash Solar Study Area (SESA) is approximately 20 miles northwest of Wickenburg, AZ, in Yavapai County. North access of the area is via Highway 93, a.k.a. Joshua Tree Parkway, and Alamo Road, which runs parallel with the north edge of SESA. Bullard Wash is near the southern boundary. Tres Alamos Wilderness is five miles north. Harcuvar Mountain Wilderness and Bullard Peak (3,124 elevation) are six miles southwest of SESA. See T9N, R9W Sections 1-5, 7, 9, 10, 22-25. Pending ROW Solar Application AZA 035156 overlays much of this SESA.

TRANSMISSION CORRIDORS: A transmission corridor that contains two 500kV lines is five miles east of SESA. (The corridor runs north south).

INSOLATION: The north 80% is rated at 7,500 and 7,498 watt-hours / per sq. meter / day of incoming solar radiation. The southern 20% is rated at 7,389 by National Renewal Energy Laboratory (NREL) modeling. This SESA has the highest insolation of the three study areas.

CLIMATE: In this region, of the Sonoran Desert, precipitation averages 11.2 inches per year (Wickenburg, AZ). This is nearly twice the rain fall that the other two SESA receive annually. Summer temperatures can reach over 109 degrees. Drought for over the past decade may have stressed this region. Estimated 200-240 frost-free days.

SOILS: The Basin and Range Province provides deep alluvial valleys with through-flowing drainage. In this area, fine to medium textured soils are well drained alluvium made of sands and rocks. South of the SESA, on the desert floor, fine 'flour like' soil caps the basin. Whitlock or Whitlock Anthony gravelly sandy loam and Mojave sandy loam dominate the SESA.

SLOPE: Bullard Wash is a 8,203 acre SESA that slopes gradually from northeast to southwest at < 3 percent. Many minor washes and arroyos divide the site northeast to southwest with small undulations.

VEGETATION: The elevation of the SESA is 2,851' vs. 1,117' of Phoenix. Area combines the flora of the Arizona Upland Subdivision of the Sonoran Desert with a mingling of plants, like Joshua tree, tied to the Mohave Desert.

The SESA is characterized by a transition zone that combines velvet mesquite, creosote bush, triangle bursage, ocotillo, hedgehog, fishhook barrel, compass barrel, buckhorn cholla, and saguaro cactus with, soap tree yuccas, tall grasses, and Joshua trees.

This unique combination of plants is reduced within the area as it slopes southwest to an elevation approximately 450 feet lower. The SESA north boundary is approximately ½ mile south of the unmaintained Alamo Road. This separates the SESA from the road and the highest quality vegetation but does not remove it completely from the transition zone. However, the southern (and lower) half of the SESA lacks the flora diversity seen in the north half. There, creosote dominates the plain.

While cattle grazing allotment(s) cover this entire SESA and are combined with neighboring State Trust allotment(s), the effects are spread over a large and relatively lush desert environment. The west tank (on private land in holding) shows decades of damaging cattle traffic. However, other stock tanks show less damaging impacts. Cattle grazing allotment(s) and terrain are key factors affecting Sonoran desert vegetation within the SESA. Retirement of one or more cattle allotments may affect more land than just the SESA.

WILDLIFE: Evidence of jackrabbits, lizards, coyote, ringtail cat, deer, doves, Swainson’s hawk, southwestern willow flycatcher, and turkey vultures were seen during visits. Numerous examples demonstrate the quality of the environment and a wide variety of wildlife. This area is part of Arizona Game & Fish Department (AZGF) Hunting Unit 44A. Analysis by AZGF of this area lists Species of Concern: Sonoran Desert Tortoise, Banded Gila Monster, California Leaf-Nosed Bat, Cave Myotis (bat). Endangered: Desert Pupfish and Gila Topminnow*. BLM “Sensitive” designation for Sonoran Desert Tortoise, and Leaf-Nosed Bat.

HISTORIC: Corral in north half of SESA is over 50 years old. Small amounts of historic debris were found at the corral and two camp sites. No other historic resources were found except for three dammed wash-style water tanks. No analysis was made regarding cultural resources.

ECONOMIC: This site is remote. No residents live in this region. Mines exist; however, few if any are active. Ranching is active on many, maybe even most, of the allotments on BLM and State Trust land within this region. The SESA is within Congress (AZ) Elementary School District.

REMAINING POINTS: Ground water resource and cultural resource are unknown at this time. The remote location, rugged terrain, and large (8,203 acre) size make this a difficult SSA to appraise. During both visits training flights of two F-16’s from Luke Air Force Base were seen over this SESA and neighboring Wilderness Areas. The Bullard Wash SESA is within the Department of Defense’s Airspace Consultation Area.

* Species of Concern (SC) term defined under Endangered Species Act – Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.

GILLESPIE SOLAR ENERGE STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Proposed BLM Gillespie Solar Energy Study Area of approximately 3,790 acres.

LOCATION: The Solar Energy Study Site (SESA) is 50 miles west of Phoenix and southwest of Arlington (valley) AZ in Maricopa County. The east edge of the SESA is two miles west of the Gila River and Old US 80 Highway. After four miles Agua Caliente Scenic Road reaches the SESA. Site includes portions of sections in T2S, R6W & T2S, R7W.

Nearby Pending ROW Solar Energy Applications include: AZA 035157 (includes part of SESA) and AZA 035166 directly north of Gillespie SESA; AZA 034799 and AZA 034758 are northwest of the SESA (four and nine miles respectively); and closed application AZA 034806. Palo Verde Nuclear Generating Station and PV/Salt River Project transmission hub are nine miles north.

The Gillespie Solar Energy Study Area is two miles north of Webb Mountain and Woolsey Peak Wilderness, three miles northeast of Signal Mountain Wilderness, and four miles east of Arizona Game and Fish Department Gila River Wildlife area.

TRANSMISSION CORRIDORS: Two 500kV Transmission Corridors border the SESA. One touches the east corner. Another 500kV line runs parallel with the west end of the SESA and has been approved for expansion by 2012. This corridor includes Southern Pacific Rail Road track. El Paso Natural Gas lines run parallel with the SSA one mile north of the boundary. El Paso Natural Gas Gila Station (compressor site) is one mile from north east corner of the SESA.

INSOLATION: The west half of the area is rated at 7,431 watt-hours / per sq. meter / day of incoming solar energy. The east half of the area is rated at 7,364 by National Renewal Energy Laboratory (NREL) modeling.

CLIMATE: In this region of the Sonoran Desert, precipitation averages 7.5 inches per year to the north (Tonopah) and 6.1 inches to the south (Gila Bend). Cloud free days dominate. Summer temperatures can reach over 113 degrees. Drought for over that past decade has stressed this region. Region is rated at 260-320 frost-free days.

SOILS: The region hosts patches of cryptobiotic soil. Portions of this area expose a top level of small, darkened 'varnished' basalt rocks. This layer forms 'desert pavement'. This layer comes from the erosion of parent mountains and is bound together by fine grain soil. This rare feature provides a crust that stabilizes sand and dirt, plus it provides

a unique type of erosion and dust control. The area also includes well-drained soil dominated by extremely gravelly coarse sandy loam of Gunsight Cipriano complex.

SLOPE: In this basin and range region, the SESA is dominated by nearby volcanic mountain ranges south and west of the area. Webb Mountain drains north toward the SESA where a major wash bends around an escarpment and divides the east half from the west half. This 'terrace' makes up the largest part of SESA and allows a gradual slope north for two miles toward Centennial Wash.

The western part of the SESA has a gentle slope of < 3 percent with only arroyos (gullies) dividing the area. However the 3,790 acre SESA is divided by a significant wash and undulating terrain in the middle of the area. Parts of this middle band have slopes of 3-7 percent. While the narrow eastern extension of the SESA is again flat at < 3 percent slope.

VEGETATION: This area contains the flora common to the Arizona Upland Subdivision of the Sonoran Desert. This region's bajada is characterized by plants like creosote bush and triangle bursage; trees like mesquite, ironwood, and Palo Verde, plus cactus like barrel, cholla, and saguaro. Due to cattle grazing allotment(s) and terrain, the vegetation variety and density varies within this area. A long history of grazing is shown by a lack of small plants like triangle bursage. A decade of drought may also contribute to sparse amounts of bushes and grasses. Retirement of cattle allotment(s) may affect more land than just the SESA.

The 'flat top terrace' of the escarpment (the western half of SESA) is dominated by creosote bush but also supports scattered buckhorn and pencil cholla plus saguaro cactus that line the arroyos.

Invasive (non-native) plants compete with native plants in areas that have been disturbed and can be a development issue. Roads, abandoned farm land, and developed property have been affected by invasive plants in this region. One plant is listed on Arizona Game & Fish Department (AZGFD) web site for this specific area is Straw-top cholla (native plant law 'salvage restricted; collection only with permit').*

WILDLIFE: Evidence of jackrabbits, gophers, lizards, coyote, deer, doves, road runner, red tail hawk, and turkey vultures were seen during short hikes into this area. AZGFD analysis of this area lists Species of Concern as Sonoran Desert Tortoise, California Leaf-Nosed Bat, Cave Myotis (bat). Listed as Endangered under ESA: Southwestern Willow Flycatcher, Yuma Clapper Rail. BLM "Sensitive" designation for Sonoran Desert Tortoise, California Leaf-Nosed Bat*.

HISTORIC: Agua Caliente Scenic Road (BLM defined) bisects half of the study area. It has experienced several alignments since the 1920's. Near the road, a small debris site inside the SESA could be from 1930's. Poison Well, over 50 years old, (historic), is near SESA southeast corner. Outside the SESA are a dozen small mines that dent the earth's

surface near Webb Mountain. The Gillespie Dam trestle bridge and Enterprise Canal (1886) are historic features three miles east of SESA.

ECONOMIC: No residents live close to this remote site. Mining was short lived in this region. However, farming in nearby Arlington Valley along the Gila River has over a 100-year history. Ranching on tracts of private, BLM, and State Trust land continues. The Desert Rose restaurant & bar, a post office, the Hassayampa General Store, a small feed lot, and a grade school are all located nearby. Abandoned cotton gin site and abandoned farm land exist (private and State Trust land) in this region. Area is within Arlington Unified School District (elementary) and Buckeye Union High School District.

REMAINING POINTS: The Gillespie SESA shows stress from cattle grazing and drought. In this region significant farmland is fallow. Cultural resource, grazing allotment(s) and ground water resources need further evaluation. El Paso Pump Station near east SESA boundary has EPA posting regarding Chromate discharge from plant. Remediation and off-site ground water monitoring continues. Gillespie SESA is over-flight zone for Luke AFB and considered an Airspace Consultation Area by Department of Defense.

*Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60187.

Comment Date: September 11, 2009 18:15:25PM
Solar Energy Development PEIS
Comment ID: SolarM60187

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

The first priority of any solar installation is that it be of dry technology. The SW can't stand more massive water users. In NE AZ, a solar/wind project could drain out aquifer and they haven't ruled out wet solar. Secondly, greater consideration should be given wildlife and wildlife corridors. With fencing and basically the destruction of the environment with some technologies, we won't have any environment to save. Third, like wind turbines, solar installations need to have large set backs from private property.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60188.

Comment Date: September 11, 2009 23:35:14PM
Solar Energy Development PEIS
Comment ID: SolarM60188

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

Please consider the following in the EIS for the Solar Energy Development PEIS:

As an alternative, discuss the cost and comparative efficiency of producing the same amount of energy on roof tops of homes, business and parking lots near the location of consumption.

Discuss where the energy will be consumed and how far it will have to travel and the loss associated with that distance.

Discuss the cost to the local communities for the loss of tourist dollars for lands taken from use as recreation lands.

Discuss the loss of habitat, loss of species and the ultimate consequence of that loss to the local area and the country.

Discuss the use of water and how that will affect the local communities (will their water rates increase? Why or why not).

Discuss in depth any subsidies that will be used for the construction and production of the energy and the source of such subsidies.

Thank you for considering my comments.

Thank you for your comment, Nancy Boland.

The comment tracking number that has been assigned to your comment is SolarM60189.

Comment Date: September 12, 2009 15:53:21PM
Solar Energy Development PEIS
Comment ID: SolarM60189

First Name: Nancy
Middle Initial: J
Last Name: Boland
Organization: Esmeralda County Nevada
Address: POB 146
Address 2:
Address 3:
City: Silverpeak
State: NV
Zip: 89047
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar PEIS Comments.doc

Comment Submitted:



BOARD OF COUNTY COMMISSIONERS
ESMERALDA COUNTY, NEVADA

MEMBERS

NANCY J. BOLAND, CHAIRMAN
WILLIAM KIRBY, VICE CHAIRMAN
R.J. GILLUM, MEMBER

P.O. BOX 517 GOLDFIELD, NEVADA 89013

STAFF

SANDRA JOHNSON
ADMINISTRATIVE ASSISTANT
(775) 485-3406 FAX (775) 485-6351
(800) 884-4072

sjesco@citlink.net

September 16, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

RE: Esmeralda County Comments Solar Energy PEIS

Two of the in depth proposed Nevada study areas are within Esmeralda County, Gold Point (5,830 acres) and Millers (19,205 acres).

Millers:

1. Environmental Concerns

This area is within a water basin designated for preferred uses only. Solar development should be restricted to (dry) photovoltaic panel based projects. The Millers area is an established bird watching area and there may be wildlife issues specifically disturbing nesting areas.

2. Social/Economic Concerns

The area is closer to Tonopah Nevada in Nye County than to any community in Esmeralda County and any economic benefit from jobs would be felt in Nye County while all the costs, Public Safety, Road Maintenance, Emergency Services, and general governmental costs would be borne by Esmeralda County.

Gold Point

1. Environmental Concerns

This area is within the Lida Valley Water basin the annual yield of this basin is only 350 acre feet. Of these 240 acre feet is currently permitted for use leaving only 110 acre feet not appropriated.

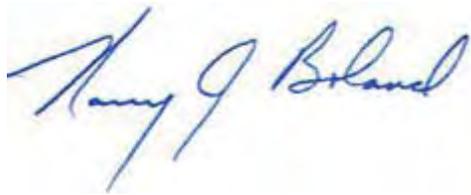
This area is serviced by the Valley Electric Cooperative and the transmission line dead ends at the community of Gold Point, Nevada. The existing lines are barely adequate to serve the needs of the approximately 20 full and part-time residents. To make any project viable either the existing transmission capacity would need to be vastly increased or new lines to provide for interconnection with NV Energy constructed. Both options will lead to a lot of disturbance as it is at least 18 miles to the NV Energy system and approximately 40 miles from the nearest substation to the study area.

Alternative Study Areas

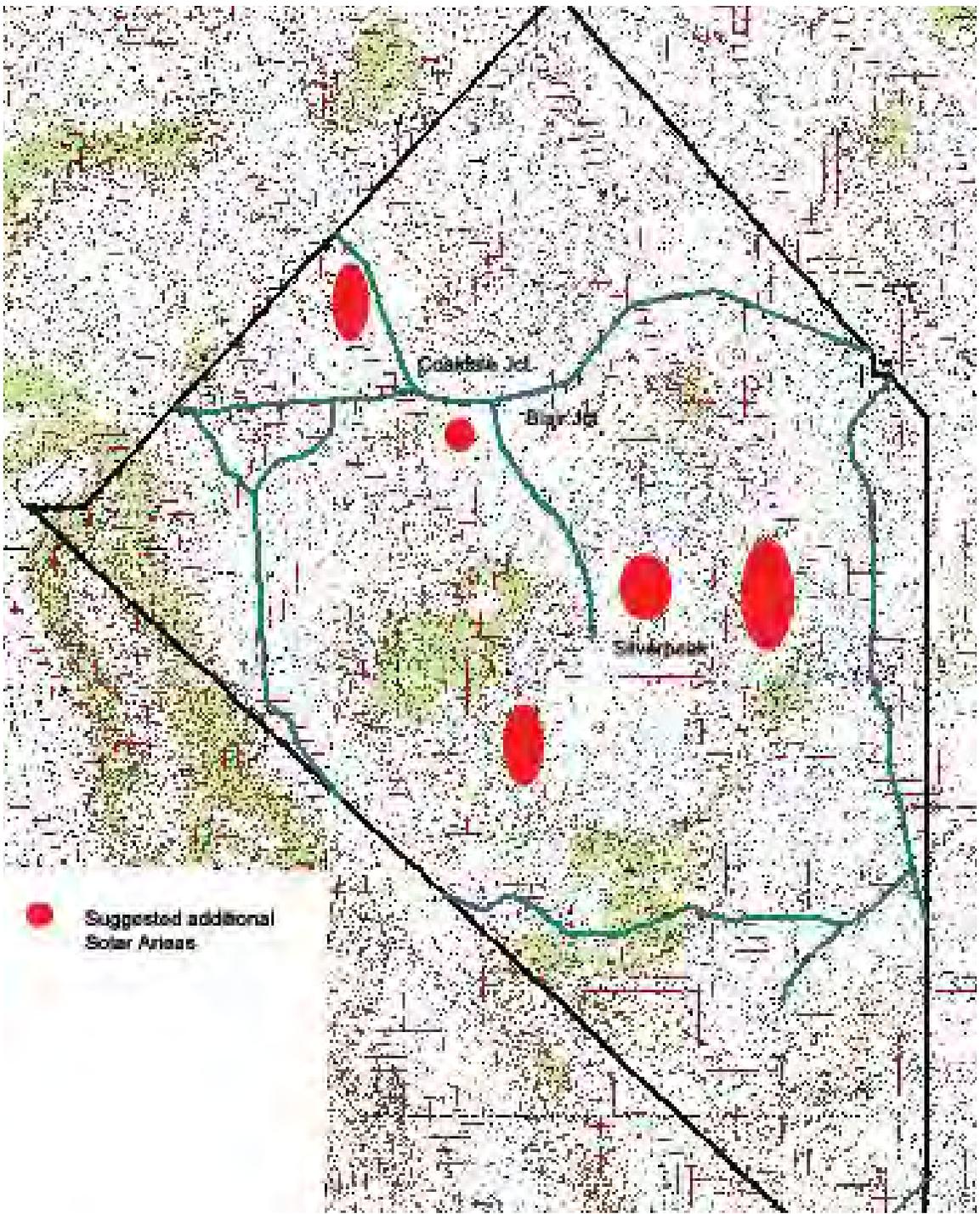
During the initial selection process for the PEIS the BLM land records still reflected as withdrawn two rail corridors, (Mina 1, and Mina 2) that the DOE had considered as transportation routes for Yucca Mountain. Because these were still shown as withdrawn many areas within Esmeralda County that otherwise would have been suitable could not be considered.

Esmeralda County respectfully requests that the U.S. Department of Energy and the Bureau of Land Management either substitute, or add some of these areas as shown on the map which accompanies this submission. These areas are in known geothermal resources which have not as yet been fully explored. These resources could be combined with solar parabolic trough development benefiting development of both sources. The areas are closer to existing communities in our county in all cases but one already connected to the NV Energy grid.

Respectfully submitted,

A handwritten signature in blue ink that reads "Nancy J. Boland". The signature is written in a cursive style with a large, stylized initial "N".

Nancy J. Boland, Chair and Primary Representative Solar PEIS Cooperating Agency



Thank you for your comment, Kena Gloeckner.

The comment tracking number that has been assigned to your comment is SolarM60190.

Comment Date: September 13, 2009 09:30:10AM
Solar Energy Development PEIS
Comment ID: SolarM60190

First Name: Kena
Middle Initial: L
Last Name: Gloeckner
Organization: Flying H Ranch
Address: HC 74 Box 237
Address 2:
Address 3:
City: Pioche
State: NV
Zip: 89043
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: solar comment letter.doc

Comment Submitted:

To Whom It May Concern:
Please see attachment for my comments.
Kena L. Gloeckner

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

RE: Comments to the Solar Programmatic Environmental Impact Study

To Whom It May Concern:

I am a permittee in the Dry Lake Valley North Solar Energy Study Area in which 49,775 acres have been outlined to be included in you PEIS. My family has been involved in the cattle ranching business for over 150 years, and our ownership and use of water and grazing rights in the majority of this particular area exceed 100 years. Our allotment is one of the best grazeable areas in all of Dry Lake Valley. In our operation, this location with its abundant white sage (winter fat) and moderate temperatures serves as the primary locale for the winter grazing and early spring calving of our cattle; most importantly, it is essential to the existence of our operation. Without this area, our livelihood would be destroyed. Not only would this area affect us, it also is crucial for the livelihood of several of our neighboring ranchers. In fact, more than 10,000 AUMs (animal units per month) would be lost in Dry Lake Valley North if this area were approved for solar construction. Even more detrimental is the fact that the thousands of summer AUMs belonging to these ranchers would also prove to be useless since it would be economically and physically unfeasible to feed these large numbers of cattle during the six months (November through April) that they normally spend in Dry Lake Valley. The summer and winter AUMs balance each other as two essential parts to the whole ranching operations.

Not only do we ranchers have grazing allotments in this area, but we also own the vested water rights for the springs that service this valley. Currently, the ranchers in our allotment have a pipeline network (over 31 miles long) that transports water to 5 reservoirs, in addition to 2 wells located at reservoirs within the proposed area. If this area were approved for solar, we would lose both accessibility and serviceability to our waters. Additionally, these reservoirs provide water for the wild horse, deer, and antelope herds in the valley. The ensuing consequences for affecting these vested water rights could prove to be drastic. Again, not only would these particular water rights be affected since the ranchers could show no beneficial use by cattle, the water rights (which are extremely numerous) in the summer ranges would also be detrimentally affected without the cattle herds to show usage.

Upon closer inspection, I believe a solar expert would discover that much of this area is unsuitable for solar facilities. In the area there is found a very finely divided soil composed of dust blown by the wind and silt deposited by water. After any disturbance of the surface crust, it easily becomes airborne again. The area is prone to many dust storms, and this soil type becomes even more troublesome whenever it is disturbed by travel.

Often times during the fall and spring, the powdery levels reach almost six to eight inches on many of the roads. Wind often carries the material throughout the valley, and it is not uncommon for one to see numerous whirlwinds throughout the valley.

Finally, if this area were to be selected, great economical and environmental adversities could occur. Lincoln County is an economically depressed area, and the ranching industry is a vital element to the economy since it represents one of the main commercial activities in the area. If chosen, this proposed area would be detrimental to some of the biggest ranches in Lincoln County, forcing them out of business and causing a drop in revenue to businesses from which they purchase feed supplements, veterinarian supplies, equipment, fencing materials, and other ranching necessities. The domino effect would be extensive. Along with the economical effects would come the environmental consequences. For over a hundred years, the ranchers have been excellent stewards of the land because it, in essence, is their livelihood. The loss of the native white sage in this area as a result of solar construction would be irreplaceable since this particular plant is difficult to reintroduce. Once the white sage is gone, it is gone. Since this area does not receive substantial amounts of precipitation, disturbance to the native vegetation would greatly impact rangeland health.

It is my understanding that the Lincoln County Commission supported a proposed solar study area within the Ely Springs Cattle Grazing Allotment since its owner, Vidler Water, had asked to become involved in this project. It is my request that the Dry Lake Valley North study area be redefined to include only this portion since it would have minimal adverse effects to all involved.

Your careful consideration of the concerns expressed in this letter would be greatly appreciated.

Sincerely,

Kena Gloeckner
Permittee in the Dry Lake Valley North Purposed Solar Energy Study Area

Thank you for your comment, Kenneth Lytle.

The comment tracking number that has been assigned to your comment is SolarM60191.

Comment Date: September 13, 2009 09:32:53AM
Solar Energy Development PEIS
Comment ID: SolarM60191

First Name: Kenneth
Middle Initial: E
Last Name: Lytle
Organization: Lytle Ranches
Address: HC 74 Box 245
Address 2:
Address 3:
City: Pioche
State: NV
Zip: 89043
Country: USA
Email: kenagloc@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Ken's solar comment letter.doc

Comment Submitted:

Please see attachment for my comments.

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

RE: Comments to the Solar Programmatic Environmental Impact Study

To Whom It May Concern:

My family has been ranching in Nevada for almost 150 years, and I am a fourth-generation rancher in that same business. For over 100 years we have been using the area that you have labeled Dry Lake Valley North on your maps outlining proposed solar locations. The Simpson allotment and everything north of that constitutes our entire winter/spring grazing allotments where our cows graze from November through April. Without the use of this area, we would be forced out of the cattle ranching business. Not only do we use this area, but four other large ranching operations operate here as well. I feel that there is only one section of this proposed area that may be suitable for solar and that would be the portion labeled as the Ely Springs Cattle and Sheep allotments. Recently that section of the proposed area was purchased by Vidler Water, a company that has expressed a desire to house solar facilities on its allotment.

Besides being a crucial area for some of Lincoln County's largest ranching operations, I feel that the Dry Lake Valley North area is also unsuitable for solar development for other reasons. First of all, one of the main types of vegetation that grow in the area is white sage (or winter fat), a very delicate plant that is ideal for grazing. This plant is easily destroyed by man-made traffic and can not be reestablished. If a plant dies, it is gone forever. Dry Lake Valley North definitely represents some of the best winter grazing land in the state of Nevada. It seems ludicrous that this area would even be considered as a site for solar facilities. Secondly, the area is very dusty. Most times of the year, a fine, powdery silt becomes airborne since some degree of wind is usually blowing. I believe dust and solar facilities don't mix well. Next, the ranchers in the area not only lose all or most of their winter AUMs (animal units per month), but they also lose thousands of summer AUMs since it is impossible to sustain their herds without the winter portion. Most importantly, these ranchers also lose their stock-based vested water rights (all of these ranches own a considerable amount of vested water rights dating back into the 1800s) since they have little or no cattle to show beneficial use. I believe compensating these ranchers for their water losses (property which they own) would prove to be very costly. Finally, these ranching operations are very important to the economy of Lincoln County; it is essential that this area of Dry Lake Valley remain intact for these ranches to survive.

Recently at a meeting in Caliente, Nevada, with BLM personnel and ranchers in the area, several alternative sites were selected to replace those containing areas with grazing allotments that are currently being used. I would strongly urge you to replace the current

proposed solar areas with these other suggested sites that have few, if any, detrimental effects or impacts. Most of these outlined areas contain dry lake beds with little vegetation or surface areas that are not suitable for adequate grazing. These sites also have power transmission lines running adjacent to them, making them more ideal than the present locations.

In closing, I would like to request that you redefine the Dry Lake Valley North area to include only the Ely Springs allotments. I would also like to urge you to consider the alternate sites outlined in the scoping meeting in order to cause the least amount of adverse effects.

Sincerely,

Kenneth Lytle
Permittee in the Dry Lake Valley North proposed solar area

Thank you for your comment, Donna Lytle.

The comment tracking number that has been assigned to your comment is SolarM60192.

Comment Date: September 13, 2009 09:34:38AM
Solar Energy Development PEIS
Comment ID: SolarM60192

First Name: Donna
Middle Initial: B
Last Name: Lytle
Organization: Lytle Ranches
Address: HC 74 Box 245
Address 2:
Address 3:
City: Pioche
State: NV
Zip: 89043
Country: USA
Email: kenagloc@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Donna's solar comment letter.doc

Comment Submitted:

Please see attachment for my comments.

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

RE: Comments to the Solar Programmatic Environmental Impact Study

To Whom It May Concern:

I am writing this letter in protest to the proposed solar area in Dry Lake Valley North. I disagree strongly with a large portion of this area being designated as a future solar site. In fact, the only section I believe should become a possible site is the Ely Springs allotments since the owner (Vidler Water) of those allotments expressed a wish to place solar facilities on his portion of the area.

There are several reasons for my protest. First of all, from the Simpson allotment all the way to the top northern boundary makes up our total winter/spring grazing allotment. Not only does our entire cattle herd spend the cold winter months in this area, but it also serves as the calving grounds for our cattle since the temperatures are a bit more moderate than any other locations we have. Without this land, our ranching operation would go out of business, along with four other large ranches in Lincoln County. Since our family has been in the business for over 150 years, not only would these consequences destroy our heritage, they would also be detrimental to the economy of Lincoln County since we ranchers make up a large portion of the tax base. Not only would our winter grazing lands become useless, but our summer ranges would also be of no use to us since we no longer would have cattle to use them. Our herd numbers are dependent on the numbers of cattle we are able to place in the Dry Lake Valley since it is impossible to purchase feed or to physically undertake that burden for the large numbers we are able to locate in Dry Lake. Because of the recent Wayne Hage court decision, I believe it would also be very costly for the government or for the developer to compensate us for our range improvements and for our numerous vested water rights.

In addition to the great financial burden placed on all parties involved, there would also be great environmental impacts. Our portion of the Dry Lake Valley makes up some of the best winter grazing areas in all of Nevada, primarily because of the abundance of white sage. Once this plant is destroyed, studies have shown that there is very little or no success with trying to reintroduce it to an area. Additionally, because of the soil type that exists in the area, any disturbance to the vegetation there would turn the area into a dust bowl. Already there is much dust that circulates throughout these sections. In fact, I believe the prevalent amount of dust already present in the area would not mix well with the solar equipment.

Presently we have a 31-mile pipeline that brings water to 5 reservoirs throughout our allotment. These reservoirs not only provide water for our cattle, but they also supply the wildlife and the wild mustang herd in this area with water. Without our water rights and our pipeline, these reservoirs would become dry, and the wild horse herds and wildlife

would suffer greatly. We also have two wells located at two of the reservoirs that are included in the range improvements made by members of these local ranching families. Again, compensation would be extremely expensive.

At a recent meeting at the Caliente BLM, local ranchers met with Wells McGiffert, the Ely BLM Renewable Energy Project Manager, and proposed alternate sites. I urge you strongly to consider these proposed sites and to redefine any of the current locations that detrimentally impact local ranchers. Moreover, Nevada has numerous sites with little or no impact that invite solar developers to take advantage of. I would first urge you to place these sites on any private lands that are inviting developers; for example, Harvey Whitmore's Coyote Springs, a Lincoln County development, has set aside over 8,000 acres for solar development. I am also wondering why the huge area of the Nevada Test Site has not been considered for these projects since it is currently managed by the government and has the perfect resources available to accommodate these sites; this area would also eliminate negative impacts to individuals who enjoy or rely upon the multiple use aspect of public lands. I believe your findings will guide all future developers to the sites which you select. Please give the areas careful consideration before selecting them in order to minimize adverse effects to everyone.

Sincerely,

Donna Lytle

Lytle Ranches and Permittee in the Dry Lake Valley North proposed solar area

Thank you for your comment, Tiffany Bartz.

The comment tracking number that has been assigned to your comment is SolarM60193.

Comment Date: September 13, 2009 13:32:25PM
Solar Energy Development PEIS
Comment ID: SolarM60193

First Name: Tiffany
Middle Initial:
Last Name: Bartz
Organization: Southern Utah Wilderness Alliance
Address: 425 E 100 S
Address 2:
Address 3:
City: Salt Lake City
State: UT
Zip: 84111
Country: USA
Email: tiffany@suwa.org
Privacy Preference: Don't withhold name or address from public record
Attachment: SUWA SESA Scoping Comments.pdf

Comment Submitted:



southern
utah
wilderness
alliance

September 13, 2009

*DELIVERED VIA ELECTRONIC MAIL (THROUGH THE PROJECT WEBSITE) AND U.S. POST
(WITH EXHIBITS)*

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Greetings,

On behalf of the Southern Utah Wilderness Alliance (“SUWA”), please accept these scoping comments regarding the Bureau of Land Management’s and the Department of Energy’s (“the Agencies”) three proposed Solar Energy Study Areas (“SESAs”) in Utah.

SUWA is a non-profit organization based in Salt Lake City, Utah, with approximately 15,000 members, many of whom reside in Utah. SUWA’s mission is to further the preservation of the outstanding wilderness-quality lands throughout Utah and to promote the management of these lands in their natural state for the benefit of all Americans. SUWA has a deep and longstanding interest in the protection and preservation of all of the Bureau of Land Management’s (“BLM’s”) wilderness-quality lands in Utah, including lands identified by the Utah Wilderness Coalition (“UWC”) as possessing wilderness characteristics and proposed for wilderness in America’s Red Rock Wilderness Act (“ARRWA”). Because SUWA’s mission is to preserve wild lands in Utah, SUWA will limit these comments to the three Solar Energy Study Areas that are proposed in Utah, and will not provide comments on the SESAs proposed in other states.

SUWA strongly supports increasing renewable energy, including solar power, throughout the western United States, but believes such development must be conducted in a responsible manner that preserves wilderness-quality lands and remote wild landscapes. SUWA appreciates the Agencies’ efforts to expand solar energy via the Solar Programmatic Environmental Impact Statement (“Solar PEIS”) and to identify problematic issues early in the National Environmental Policy Act (“NEPA”) process.

SUWA appreciates that Utah BLM has already applied screening criteria, including Wilderness Study Areas, Areas of Critical Environmental Concern, as well as the BLM’s 1999 wilderness inventory and the Utah Wilderness Coalition’s wilderness proposal data to arrive at this first round of SESAs in Utah.

During this exciting time when our country is beginning the transition away from its reliance on fossil fuels, SUWA is eager to be part of the process of developing the

country's renewable energy resources and ensuring that such development occurs in a deliberate, responsible manner in locations appropriate for such large scale developments.

A. SUWA Supports Channeling Solar Development into Previously Disturbed Areas and Areas Near Existing Transmission Lines and Infrastructure.

SUWA supports channeling renewable energy development into previously disturbed areas and leaving undisturbed areas wild. Likewise, SUWA supports developing renewable resources near existing transmission lines and infrastructure. Channeling development into such areas will ensure that solar energy development in Utah will not unnecessarily contribute to soil disturbance, erosion, dust storms, water shortages, climate change effects, other potential adverse impacts to resources. SUWA commends the Agencies' choice of SESAs in Utah, particularly the Escalante Valley and Milford Flats South SESAs, that meet these criteria. The Escalante Valley and Milford Flats South SESAs already have a significant amount of development, including transmission lines and roads within and surrounding them.

There remain few areas on Utah's public lands where soils have not yet been disturbed. Keeping these places undisturbed is important for many reasons: it will help reduce soil erosion as drought and climate change effects continue; will help retain native vegetation and reduce the potential for non-native invasive species; will significantly benefit wildlife, including threatened, endangered, and sensitive species; will help protect water quality and quantity; will benefit air quality; will preserve cultural resources; will safeguard clear night skies and visual resources; and will protect other resources in the ecosystem.

New research shows the importance of limiting the generation of dust by ensuring that undisturbed soils remain undisturbed. This research illustrates that dust generated in Utah is carried by winds into Colorado, falls on the mountain snowpack, and accelerates the melting of the snowpack, causing serious consequences for river flow levels and the timing of snowmelt. *See, e.g.,* Neff, J.C., et al., *Increasing Eolian Dust Deposition in the Western United States Linked to Human Activity*, NATURE GEOSCIENCE, (Nature Publishing Group, 2008) (attached as Exhibit A); Eilperin, Juliet, *Dust Storms Escalate, Prompting Environmental Fears*, THE WASHINGTON POST, (Apr. 23, 2009) (attached as Exhibit B); *see also* Photos of Colorado snowpack with layers of dust from two separate March 2009 snowstorms (attached as Exhibit C). The dust on the snowpack absorbs more sunlight than does white snow, which is highly reflective, and contributes to certain effects that are already exacerbated by climate change, such as early spring runoff. *See* Exhibit B. It is therefore very important to ensure that solar energy development in Utah will minimize the amount of soil disturbance and not significantly increase the amount of dust generated.

Not only does Utah's dust contribute to premature snowpack melt in Colorado, it also contributes to serious local air quality concerns in Utah. Dust generated in the

southwestern part of the state, where the SESAs would be located, may travel on the prevailing winds northeast to the populous Salt Lake Valley and the Wasatch Front, raising the level of particulate matter and affecting the health of over two million residents. The spring and summer of 2009 saw several such dust storms. *See, e.g.*, Photos taken in July 2009 in southwestern Utah's Pine Valley, one valley west of the Wah Wah Valley (attached as Exhibit D). The best way to limit the creation of dust is to locate development in previously disturbed areas.

In addition to decreasing the amount of dust generated, reducing the extent of surface disturbance is important for wildlife, vegetation, water quality, erosion, visual resources, and many other resources. Preserving undisturbed soils or soils with biological soil crusts is crucial for combating the spread of invasive species and preventing erosion. Studies show that disturbed soils lead to the spread of invasive plant species, such as cheatgrass. *See, e.g.*, Reid, Chad R., Goodrich, Sherel, and Bowns, James E., *Cheatgrass and Red Brome: History and Biology of Two Invaders*, USDA Forest Service Proceedings (2008) (indicating that cheatgrass, perhaps the biggest threat to native plant communities in Utah, invades areas where the soil has been previously disturbed) (attached as Exhibit E). Undisturbed soils also help to prevent erosion by reducing the amount of runoff from heavy rain or snow events. *See, e.g.*, Belnap, Jayne, et al., *Biological Soil Crusts: Ecology and Management*, U.S. Department of Interior, Bureau of Land Management, Technical Reference 1730-2 (2001) (attached as Exhibit F).

B. SUWA Supports the Development of the Escalante Valley and Milford Flats South Solar Energy Study Areas.

SUWA supports the development of the Escalante Valley and the Milford Flats South proposed Solar Energy Study Areas. These two proposed SESAs are located near existing infrastructure, including existing high-capacity transmission lines (see Wild Utah project map attached as Exhibit G). Locating large-scale renewable energy facilities near existing infrastructure is important because it reduces the necessity for substantial new surface disturbance. Reducing the extent of surface disturbance is important for all the reasons discussed above, including limiting the amount of dust generated.

In addition, these two proposed SESAs will benefit the local economies of Beaver, Iron, and Millard counties and provide local jobs. The Milford Flats South SESA is near the town of Milford, which is currently experiencing a boost to its economy from the ongoing construction of the Milford Wind farm, located approximately 10 miles north of Milford, and consisting of nearly 100 wind turbines. Construction of a solar energy facility south of Milford will continue to help the local economy, including the towns of Milford and Minersville. Construction of the Escalante Valley SESA would similarly provide a boost to Beaver and Iron County's economy. In addition, Beaver County is home to two existing geothermal power plants, the Blundell plant and the Cover Fort-Sulphurdale plant, both located northeast of Milford. Construction of the

Milford Flats South and/or the Escalante Valley SESAs would make southwestern Utah home to all three types of renewable energy (wind, solar, and geothermal), and would continue to transform the area into one of the country's hot spots for renewable energy.

For all of these reasons, the Escalante Valley and the Milford Flats South SESAs are appropriate candidates for renewable development. SUWA requests that the Agencies prioritize the development of these two proposed SESAs.

C. SUWA Suggests that the Agencies Reconsider the Wah Wah Valley Solar Energy Study Area.

SUWA suggests that the Agencies reconsider development of the Wah Wah Valley SESA. Unlike the Escalante Valley and the Milford Flats South SESAs, the Wah Wah Valley SESA does not lie near existing high-capacity transmission lines (it merely lies along a proposed Section 368 Energy Corridor). *See* West Wide Energy Corridor Final PEIS, available at <http://corridoreis.anl.gov/eis/fmap/sbm/index.cfm>.

Importantly, the Wah Wah Valley is surrounded on both the east and the west by areas proposed for wilderness designation in America's Red Rock Wilderness Act. *See* Wild Utah Project Map attached as Exhibit G. Although the Wah Wah Valley SESA is not within an area proposed for wilderness in ARWA, the Wah Wah Valley retains a wild and generally undisturbed character, as well as impressive visual resources. This remote basin and range complex exhibits an overwhelming sense of isolation and wild character that is slowly becoming a dwindling resource in America. Any development, small or large scale in the Wah Wah Valley would impact the undeveloped nature of this region. In addition, the wilderness experience from the San Francisco Mountains east of the valley and the Wah Wah Mountains west of the valley would be affected by a large solar development that would change the character of the region and dramatically affect the experience of recreationists who visit this remote and wild region of Utah.

In addition, unlike the Escalante Valley and the Milford Flats South SESAs, which are located on lands governed by the Cedar Beaver Garfield Antimony Resource Management Plan ("CBGA RMP"), the management guidance for the lands in the Wah Wah Valley comes from the Pinyon Management Framework Plan ("MFP"), which was completed 26 years ago, in 1983. MFPs are very different documents from RMPs. The primary distinction is that RMPs are considered major federal actions under the National Environmental Policy Act, and necessitate the preparation of an Environmental Impact Statement ("EIS"). 43 C.F.R. 1601.0-6; *see* 40 C.F.R. § 1502. The completion of an MFP, however, does not necessitate the completion of an EIS, or even an Environmental Assessment. *See* 40 C.F.R. § 1508.10; *Southern Utah Wilderness Alliance (SUWA), et al.*, 164 IBLA 118, 124 (2004).

According to regulations governing the BLM, 43 C.F.R. § 1610.8(a)(1), MFPs may serve as the basis for considering proposed actions, but only until superseded by

RMPs. These regulations governing MFPs were published in 1979 and the drafters envisioned that MFPs would govern land management only for a “transition period” until RMPs could be completed. *See* 43 C.F.R. § 1610.8(b) (1979); *SUWA*, 164 IBLA at 124. Thirty years after these regulations were passed, the outdated Pinyon MFP remains the governing management document for the Wah Wah Valley.

Because of the difference between MFPs and RMPs, and the corresponding lack of environmental analysis in the Pinyon MFP, different considerations apply to the Wah Wah Valley SESA than the other two SESAs. The Agencies must ensure that BLM completes any additional analysis required for the Wah Wah Valley SESA due to the lack of an existing RMP and EIS for the region. In particular, section 201 of the Federal Land Policy and Management Act (“FLPMA”) requires that BLM conduct periodic resource inventories and keep these inventories current. 43 U.S.C. § 1711. Under FLPMA, BLM “shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values . . . This inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values.” 43 U.S.C. § 1711(a). Thus, FLPMA requires BLM to identify any visual resources that exist by conducting visual resource inventories and repeating these inventories as necessary to keep them current. Therefore, BLM is required to consider whether, and to what extent, visual resource values are now present in the Wah Wah Valley and, if the values are present, how development of the Wah Wah Valley SESA would impact these values. As far as *SUWA* knows, the last visual resources inventory of the Wah Wah Valley occurred with the preparation of the Pinyon MFP, prior to 1983. *See* Pinyon MFP at Appendix VR.

In addition, because the Wah Wah Valley SESA is located further from existing transmission lines and remains relatively undisturbed, solar development in the Wah Wah Valley would result in more surface disturbance and would create a concomitant increase in soil erosion and dust, which would have ecological and health impacts, as discussed above. *See, e.g.*, Exhibit D, photos taken in July 2009 in southwestern Utah’s Pine Valley, one valley west of the Wah Wah Valley, and one of the light blue areas on the SESA Map prepared June 5, 2009; Streater, Scott, *Climate Change, Water Shortages Conspire to Create 21st Century Dust Bowl*, THE NEW YORK TIMES, (May 14, 2009) (article mentions probable escalation of the dust problem due to renewable energy development) (attached as Exhibit H); Nelson, Paul, *Health Experts Warn Utah Residents to Prepare for the Dust*, KSL NEWS, (July 8, 2009) (attached as Exhibit I).

For these reasons, *SUWA* suggests that the Agencies reconsider the development of the Wah Wah Valley SESA, and prioritize the development of the Escalante Valley and Milford Flats SESAs.

D. The Solar PEIS Should Consider an Alternative that Discourages the Development of Solar Power Plants that Use Significant Amounts of Water.

Water is of paramount importance in Utah and throughout desert Southwest, and solar energy development has the potential to consume significant quantities of water. In developing renewable energies to help combat climate change, the Agencies must be careful not to exacerbate one of the effects of climate change: diminishing precipitation and water supplies on the Colorado Plateau and throughout southwestern Utah. *See, e.g.,* U.S. Geological Survey, *Impacts of Climate Change on Water and Ecosystems in the Upper Colorado River Basin* (August 2007) (attached as Exhibit J); Union of Concerned Scientists, *Southwest: Arizona, California, Colorado, Nevada, New Mexico, West Texas, Utah*, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES (2009) (attached as Exhibit K). Because of the projected outlook of decreased precipitation on the Colorado Plateau and throughout southwestern Utah, it is important that the Solar PEIS thoroughly analyze the impacts that the development of the proposed SESAs could have on water quantity and quality, groundwater levels, downstream users, and other individuals and industries that use water in Utah and throughout the Southwest.

Although water-cooled solar power plants are the most efficient, such plants may not be practical for desert regions of southwestern Utah. SUWA urges the Agencies to adopt policies in the PEIS that encourage reduced water consumption. For example, the PEIS should consider alternatives, or a combination of alternatives, that discourage the use of water-cooled plants and require power plants to be air-cooled, or that require plants to use reclaimed or brackish water for cooling. Similarly, the PEIS should consider alternatives that significantly reduce the amount of water needed to run solar power plants or that require mitigation for the water use.

E. The Solar PEIS Should Analyze The Impact of Solar Development on Dark Night Skies.

Utah is blessed with some of the darkest night skies in the western United States. As an example, Natural Bridges National Monument in southeastern Utah was recently named the first international dark skies park. National Park Service, Natural Bridges Named the World's First International Dark-Sky Park, *available at* <http://www.nps.gov/nabr/parknews/news040507.htm> (April 2007) (last visited Sept. 5, 2009). It is important to protect such dark sky areas, as these rare places are currently protected from the light pollution that pervades most of the country.

As stated above, the Escalante Valley and Milford Flats South SESAs are located in places where development has already occurred, and light pollution therefore presents less of an issue. The Wah Wah Valley SESA is, by contrast, in an area that has seen little development, and a solar power plant in the valley has the potential to significantly impact the area's dark skies. Importantly, the University of Utah is in the process of constructing an optical telescope that depends on dark skies. The telescope will be

located on San Francisco Peak in the mountains rising up from the Wah Wah Valley's eastern side. To ensure that large-scale solar development will not unnecessarily affect dark night skies, the Solar PEIS should analyze the impact that the proposed SESAs, and the Wah Wah Valley SESA in particular, will have on southwestern Utah's dark night skies.

F. Comments Regarding the Areas that Appear in Light Blue on the Solar Energy Study Area Map.

Although it appears that the Solar PEIS will focus on the proposed Solar Energy Study Areas, the Map entitled Solar Energy Study Areas in Utah states that the lands that appear in light blue are also being analyzed for solar development in the Solar PEIS. Although information on all of the light blue areas in the state has not been provided to the public at this time, there are many light blue areas that would present significant concerns to SUWA if solar development were proposed for those areas.

For example, the Parowan Gap area, containing rare and unique petroglyphs and what is thought to be a prehistoric astronomical site, is depicted in light blue on the SESA Map. Given the cultural importance of this site, no development of any kind should occur here. It is highly likely that other such conflicts exist in the light blue areas in southwestern Utah and throughout the state. Should proposed development of any of the areas currently appearing in light blue on the SESA Map progress, SUWA will provide comments on those areas at that time.

CONCLUSION

SUWA is excited about the prospect of renewable energy development throughout in Utah, and is dedicated to ensuring that such development occurs in a responsible manner and where appropriate. SUWA commends the Agencies' efforts to screen out and exclude sensitive lands from large-scale solar development. SUWA strongly supports the development of the Escalante Valley and Milford Flats South SESAs, and suggests that the Agencies reconsider development of the Wah Wah Valley SESA.

SUWA is grateful for the Agencies' efforts to involve the public early in the solar energy development process, and hopes that early collaboration will alleviate disputes further along in the process. Thank you for your consideration of these scoping comments. We look forward to remaining involved in the Solar PEIS process.

Sincerely,

Tiffany Bartz
Southwestern Field Attorney

Thank you for your comment, Gary Thomas.

The comment tracking number that has been assigned to your comment is SolarM60194.

Comment Date: September 13, 2009 13:56:56PM
Solar Energy Development PEIS
Comment ID: SolarM60194

First Name: Gary
Middle Initial: F
Last Name: Thomas
Organization: SCBS
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

We have worked for years to keep the desert from large scale development. If there was no other way to generate power this might be a good idea, but this is greed and politics only. Put the panels on roof tops where the power is needed. Gary Thomas

Thank you for your comment, Beaumont McClure.

The comment tracking number that has been assigned to your comment is SolarM60195.

Comment Date: September 13, 2009 15:56:55PM
Solar Energy Development PEIS
Comment ID: SolarM60195

First Name: Beaumont
Middle Initial: C
Last Name: McClure
Organization: Public Lands Foundation
Address: 6510 W. Lucia Drive
Address 2:
Address 3:
City: Phoenix
State: AZ
Zip: 850837406
Country: USA
Email: bmcclure@cox.net
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar PEIS Letter FINAL.doc

Comment Submitted:

I am submitting a letter on behalf of the Public Lands Foundation President. See attachment.

September 9, 2009

Bob Abbey, Director
Bureau of Land Management
1849 C Street NW (WO350)
Washington, DC, 20240

Dear Director Abbey:

This is in response to your request for comments on your joint Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (Solar PEIS).

The Public Lands Foundation (PLF) is a nonprofit national organization incorporated in 1987 to support keeping public lands in public hands, embracing multiple use management of BLM lands as prescribed by the Federal Land Policy and Management Act (FLPMA), and following sound environmental principles. We are a membership organization whose members are predominantly retired former employees of the BLM. As such, our membership represents a broad spectrum of knowledge and experience in public land management.

PLF supports the intent and the procedure for identifying the 24 areas in the six states (Arizona, California, Colorado, Nevada, New Mexico, and Utah) that are listed in the June 30, 2009 Federal Register as solar energy study areas to be analyzed in a Programmatic Environmental Impact Statement.

We have been concerned about the "Land Rush" by solar energy companies applying for sites on lands within the National System of Public Lands based on industry criteria and with little consideration of the potential impacts on other public values, and also with the industry intention that the first applicant for a site will have priority in getting the right-of-way permit for the solar energy facility.

We understand that the 24 areas listed in the Federal Register Notice have been identified by BLM as being relatively free of environmental conflicts and potential controversies and your intent is to have these 24 areas evaluated in the Programmatic EIS. The lands that are classified as suitable for solar energy production would then be made available for solar energy development through a competitive bidding process.

While the identified areas may have a low level of environmental conflict, that does not mean that important resource values are entirely absent. Wildlife habitat, watershed, and open space values can be adversely affected even in remote desert areas and consideration should be given to these kinds of impacts during the environmental assessment process. We believe the BLM should develop and implement an aggressive

mitigation program in partnership with the benefitting industries, local land users, and other citizens who use and care about our public lands. Considering that solar energy development can heavily impact large areas of land, mitigation measures, including off-site mitigation should be a strong component of the overall strategy.

Another aspect of the strategy we believe you should pay attention to as you proceed down this path is to be sure that the Federal government is not setting up a program that encourages private development on public lands to the exclusion of otherwise suitable private lands. Using public lands to subsidize the development of a particular industry can have long term impacts which are difficult to undo as private investments are made and communities are developed on the basis that these industries will be supported by the government even after their economic viability has passed.

That being said, we believe the proposed process will minimize conflicts with other public values and local concerns; will speed up the process of authorizing solar energy facilities on public lands; will help ensure that the public is getting a fair rental from the solar energy use of their public lands; and, if properly mitigated, could result in benefits to America's public lands.

PLF may have future comments about solar energy development on some of the individual areas, and, if so, we will express them during the PEIS process. Meanwhile, PLF endorses the approach BLM is taking in dealing with the solar energy initiative on the National System of Public Lands.

Sincerely,

/s/ George Lea

George Lea, President

Identical letter to:

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue --EVS/900
Argonne, IL 60439

Thank you for your comment, Christine Carraher.

The comment tracking number that has been assigned to your comment is SolarM60196.

Comment Date: September 13, 2009 16:14:35PM
Solar Energy Development PEIS
Comment ID: SolarM60196

First Name: Christine
Middle Initial:
Last Name: Carraher
Organization:
Address: P.O. Box 935
Address 2:
Address 3:
City: Twentynine Palms
State: CA
Zip: 92277
Country: USA
Email: magicgroove@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar PEIS Scoping Comments Carraher 09 13 2009.doc

Comment Submitted:

Please see Comments attached as file "Solar PEIS Scoping Comments Carraher 09 13 2009". If Comments fail to transmit, please contact me. Thank you.

Christine Carraher
P.O. Box 935
Twentynine Palms, CA 92277
magicgroove@gmail.com www.magicgroove.net

September 13, 2009

Solar Energy PEIS Scoping
<http://solareis.anl.gov/involve/comments/index.cfm>

Delivered via electronic mail

**Re: Scoping Comments on the Solar Energy Development Programmatic
Environmental Impact Statement**

To Whom It May Concern:

I appreciate the opportunity to comment on the Solar Energy Development Programmatic Environmental Impact Statement (PEIS).

I am a 17-year full-time resident of Wonder Valley in San Bernardino County, California. I own five acres, a well, a home, and an art studio in a vintage cabin north of Amboy Road between Godwin and Gammel. I work both as an artist and as a medical transcriptionist, telecommuting from my home. My community of Wonder Valley and the Dale Basin is specifically included in the lands being analyzed for solar energy development.

I am concerned that industrial-scale solar development of the desert imposes an undue burden on desert communities, threatens to destroy and damage desert ecosystems, and is not economically or scientifically justifiable in the face of better alternatives, mainly dispersed rooftop solar generation in the areas of load, as well as conservation. I further am concerned about the potential to destroy a unique culture and community in Wonder Valley and the Dale Basin.

Below are General comments on the scope of the PEIS, followed by comments specifically addressing potential material and nonmaterial impacts on the Wonder Valley/Dale Basin community.

GENERAL COMMENTS

1. The PEIS should include consultation with Native American tribal governments to determine whether there are sites or specific areas of particular concern, including sites of traditional religious and cultural significance.

2. The PEIS should study the impacts of increased vehicular traffic and congestion on desert communities, environmental resources, road infrastructure, and public safety during both construction and operational phases of solar and transmission development.
3. The PEIS should study the impacts of worker populations on sensitive desert resources during both construction and operational phases of solar and transmission development.
4. The PEIS should study the impacts on resources that would follow from the introduction of new routes, in view of the known problems caused by off-road vehicle activity and the “invitation” effect of new routes.
5. The PEIS should study impacts on limited water resources and the effects of competition with desert communities, as well as biological communities, for those resources.
6. The PEIS needs to include evaluation of the cumulative and long-term effects of the Project in light of concurrent proposed expansion of the 29 Palms Marine Corps Air-Ground Combat Center; numerous wind projects and geothermal projects; “Route 66” Monument; and Cadiz Land Company water project.
7. The PEIS needs to consider how the desert communities’ own energy needs will or will not be served by these projects.
8. The PEIS must thoroughly analyze the socioeconomic, security, and environmental effects of remote installations versus locally distributed power and consider alternatives that focus renewable energy development close to the load centers. The impacts and benefits of a comprehensive program involving rooftop solar across the developed Southwest, as well as additional potential energy alternatives, must also be thoroughly analyzed and considered. To single out the desert and its communities to bear the brunt of providing energy for the urban areas is an ENVIRONMENTAL JUSTICE issue. To demand sacrifice only of the desert areas and not the load areas is not acceptable!
9. Areas that have already been degraded should be prioritized for consideration for solar and transmission development. No public lands that are basically still relatively undisturbed should be considered for solar energy or transmission use until all degraded lands have been utilized.
10. Removed from any consideration for solar and transmission development should be all protected lands, such as national and state parks, monuments, and preserves; environmentally significant areas such as Designated Wildlife Management Areas and Areas of Critical Environmental Concern; and lands with significant environmental resource potential such as Wilderness Study Areas, other lands with wilderness characteristics, and areas that are under consideration as potential wildlife corridors.
11. The PEIS must include a programmatic evaluation of cumulative impacts to Endangered and Listed species, especially the Desert Tortoise.
12. The PEIS must study the potential of construction and operational phases to introduce or encourage invasive vegetation, including *Brassica tournefortii* or Saharan Mustard, not just at project locations but throughout the desert areas, as vehicles are one of the biggest culprits for spreading invasives.

COMMENTS SPECIFIC TO WONDER VALLEY AND THE DALE BASIN

The community of Wonder Valley and the Dale Basin was formed in intimate relationship with its desert setting. The area is a sort of tidal zone, where the residential interfaces with wilderness at the edge of civilization. The setting and its natural resources, including the broad expanse and its peace, quiet, and visual aesthetics, are intrinsic to the history, identity, and cultural and socioeconomic character and well-being of this community and its residents. Deterioration of or encroachment upon these resources would remove the meaning, heart, and viability of a unique community that has survived in the margins and continues to make a unique contribution to the larger culture of California and the world.

POTENTIAL IMPACTS

The Programmatic Environmental Impact Statement must thoroughly analyze potential economic, material, and nonmaterial impacts on the Wonder Valley/Dale Basin community.

The construction and operation of solar and transmission facilities would bring increased noise, dust and other air-borne pollutants, light pollution, loss of quality viewshed, and other impacts on the quality of life for our residents and quality of experience for the visitors, guests, and clients who come to the Dale Basin for a unique experience of beauty and peace and upon whom many of our residents depend for income. These effects must be measured in the analysis.

Deterioration of desert viewshed and open space and other natural resources would mean loss of identity, livelihood, and investment for the residents of Wonder Valley and the Dale Basin. The area depends economically on location- and resource-reliant industries such as mining and farming; tourism; vacation rentals; location shooting for film, television, and advertising; recreation, both motorized and nonmotorized; and other cultural activities such as art, historical, and spiritual tours and retreats. The area also relies on the aesthetic and environmental quality of its setting to attract today's increasingly mobile workforce, which has become less geographically tethered and can choose where they live. (I myself was able to choose Wonder Valley because of the geographic independence offered by my digital-based trade.) Retirees are also a significant part of our community who can choose where they live based on natural amenities and appeal. Therefore, the area's property values depend on these amenities and that appeal. A diminishment in the quality of the desert setting and resources means jobs, income, and property investment directly lost and future potential thrown away for the Wonder Valley/Dale Basin community. The PEIS must analyze potential socioeconomic impacts to the area that might be caused by deterioration of the quality of the setting and other effects of the Project.

The PEIS further must include a thorough survey of culturally and historically significant resources and sites as well as mining/freighting and archaeological/tribal routes and sites and analyze potential impacts. Wonder Valley and the Dale Basin were roamed by the Serrano, Chemehuevi, and Cahuilla peoples, and its early American history is connected to the Oasis of Mara and Twentynine Palms, mining and ranching activities, and the early homesteading movement of wounded World War I veterans. In 1888 two freight lines run by muleskinners

such as Sabathy crossed the area serving the robust mining industry, and the Dale-Amboy Stageline was used in the early 1900s. There is still much to be learned about the early history of this fascinating area, and it is important that resources not be destroyed before they can be surveyed and preserved for future generations.

AN EXCEPTIONAL RESOURCE: THE SMALL-TRACT HOMESTEADS

The PEIS must include a thorough analysis of potential impacts on Wonder Valley and the Dale Basin as a unique community shaped by the historic 1938 Small-Tract Homestead Act.

Contemporary Wonder Valley and the Dale Basin are visually characterized by two prominent features: The immensity of the natural desert landscape, and the presence of numerous scattered small homestead cabins, in varying states of repair. The cabins are a source of constant curiosity on the part of passers-through, who frequently stop by the Fire Station to ask a version of the perennial query, “What are all those old shacks out there?”

Wonder Valley developed as part of the Small-Tract Homestead Act of 1938, an attempt by the Federal Government to bring residents into the Mojave Desert in which five-acre parcels of land were given to individuals who agreed to build a small residential structure and meet other minor requirements. It is those small structures, whether whole, refurbished, or in ghostly disrepair, that provoke such curiosity and attention today and form the nuclear framework of the community.

Wonder Valley is largely intact as a Small-Tract homestead community. The role of the homestead heritage in shaping the community cannot be overstated, and the cultural and historical significance of this heritage is only recently becoming recognized. Little has changed since the following appeared as one of numerous passages on the movement in various issues of *The Desert Magazine* (1954):

Passage of the Small Tract Act has opened vast areas of land, not for profit or exploitation, but for folks who like to build with their own hands, and who are thrilled by the challenge of creating a home of their own...These homesteads are for people who delight in watching the moon rise over purpled hills, for those who would call the stars by name, and who love the peace that is found only in remote places.

The appeal remains. Today, the five-acre homesteads have become the basis of a special edge-culture built upon a combination of resourcefulness, creativity, determination, and diversity that is increasingly rare in the monotonous suburban landscapes of California. The population spans a remarkable spectrum of class and interests. Whether as recreational cabins used by generations, showcases refurbished by artists, retreats for spiritual seekers, resorts for frazzled urbanites, or refuges for the invalid or the person on fixed income, the homestead cabins have bound together a remarkably diverse population. The historically low real estate prices have continued to allow many of the less-privileged to attain their “little bit of heaven”, or at least an affordable roof over their head, an opportunity for home-ownership that essentially cannot be duplicated elsewhere in California. The variety of the population and the economic, social, and

civic systems its members have devised to survive are a unique expression of modern American culture and a living face of history.

It is critical to keep in mind that the glue that binds this community is the combination of the homestead heritage and the natural desert expanse within which it sits. Both are fundamental for its survival as an identifiable entity. Therefore, the Project must be analyzed as an Environmental Justice issue, with a unique, irreplaceable, lower-income population at risk.

The cabins have architectural significance as a class, with the characteristic “jackrabbit” cabin tailored to meet government requirements and put up almost overnight by such landmark enterprises as Homestead Builders, as well as by many local independent contractors. As well, many cabins were and continue to be unique personal creations of the original homesteaders and their followers, including a notable number of single women as documented in contemporaneous issues of *The Desert Magazine*.

Potential Project impacts also need to be evaluated in light of clear eligibility on the part of both individual homesteads and the entire Wonder Valley community under Section 106 of the National Historic Preservation Act:

- It is associated with an historic event.
- It includes historic structures, the homestead cabins, that were created as a result of this historic act and which remain for the most part architecturally intact.
- The entire community may be eligible as historic under Section 106 as there has been very little alteration to its architectural, physical, and historic integrity since it was founded as a Homestead Community.

As well, the community meets several criteria for consideration for the State of California Register of Historical Places:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation (Criterion 4).

RESOURCES AT RISK

The artists, homesteads, and cultural traditions, products, and events of Wonder Valley and the Dale Basin have been featured in a variety of publications, including locally such as *The Sun Runner* and *The Desert Sun* and nationally such as the *Los Angeles Times* and the *New York Times*. Despite this repeated exposure, there is a persistent public and institutional view that there is “nothing” in the desert, including in the local Study Area.

Contrary to that view, below are some of the resources, events, and traditions that are an intrinsic part of the fabric of the Dale Basin communities, all elements that are intimately tied to and dependent upon the natural resources of their desert setting and, at the same time, are economic generators for the area. These elements contribute to the cultural, visual resource, and socioeconomic life and health of the community and could all potentially be adversely affected by the effects of the Project. They must be considered within the PEIS analysis of impacts.

- The Poste Homestead Historical and Natural Area (Chadwick south of Amboy) contains the adobe ruins of a 1923 homestead occupied by local historic figures David and Anna Poste, owners and operators of the Virginia Dale Mine. The area is of sufficient historical and environmental significance to be the target of a BLM Public Lands Day Volunteer clean-up in 2009, as well as preservation efforts by the Twentynine Palms Historical Society, the Morongo Basin Conservation Association, and the Mojave Desert Land Trust.
- The historic Neugebauer Adobe on Blower north of Amboy, dating from 1939 and still occupied by the original family.
- The Fire Station on Amboy Road, long a center of community life, was originally a State of California Agricultural Inspection Station built in 1960. There are currently plans to create a historical mural on the wall of the Station featuring famed muleskinner Sabathy, who ran a freight line in Wonder Valley servicing Dale Mine a hundred years ago.
- The innovative local “tinkerbelle” telephone system that connected the far-flung homesteads with buried wire that can still be found.
- The Desert Electric Cooperative, Inc. (Amboy at Gammel). This original power provider was a critical factor in the development of the Small-Tract communities across the Basin. The Mid-Century-style building still stands as a landmark and is currently used as a retreat center.
- “Jackrabbit Homestead: Tracing the Small Tract Act in the Southern California Landscape, 1938-2008”, a multimedia project by Kim Stringfellow. Included: A book of fine-art photographs and text on the homestead history of Wonder Valley, to be published in 2009 by Center for American Places as third in the series, “Center Books on the American West.” Also, a “Web-based multimedia presentation featuring a downloadable car audio tour exploring the cultural legacy of the Small Tract Act. Stories from this underrepresented regional history will be told through the voices of local residents, historians, and area artists—many of whom reside in reclaimed historic cabins and use the structures as inspiration for their creative work”; sponsored by the Twentynine Palms Historical Society Museum and supported by a Stories grant from the California Council of the Humanities.
- Wonder Valley Institute of Contemporary Art, located in a vintage cabin on Amboy Road at Sheephole Pass, had its inaugural exhibition in fall 2008 as part of the California Biennial and “seeks to nurture creativity across a range of disciplines by sponsoring imaginative projects on site and throughout the desert area. The tranquil, remote location provides for a fertile home where established and emerging artists can discover new creative paths expanding beyond the confines of the studio and gallery walls.... WVICA will eventually serve as a multi-functional space including a library, exhibition gallery and performance space.”

- Wonder Valley Arts/Fi-Lox-See Gallery and The Glass Outhouse Art Gallery, both exhibiting the work of Wonder Valley artists.
- Wonder Valley is a highly popular destination during the annual Open Studio Art Tours, sponsored by the Morongo Basin Cultural Arts Council and providing a major source of income for area artists.
- The Beauty Bubble Hair and Beauty Museum (Godwin south of Amboy), a unique venue and collection as featured in major publications such as the *New York Times*.
- Poplight, an ongoing project involving regular nighttime abstract video projection on a semi-abandoned cabin off the salt flats near Amboy, by Wonder Valley artist Helena Bongartz.
- High Desert Test Sites, acclaimed annual site-specific experimental art event organized by prominent designer Andrea Zittel and numerous volunteers and including both local and internationally known artists.
- The Palms, a family-owned restaurant and bar that is a local tradition for music and other community cultural events, including Ben Vaughn's Wonder Valley Music Festival series and the popular open-mic nights (see *Press Enterprise* http://www.pe.com/lifestyles/stories/PE_Fea_Daily_D_hootenanny03.24906ce.html#). The Palms is a regular stop on international motorcycle tours and has been used as a location for numerous film, video, and fashion shoots.
- The 2008 Wonder Valley Homestead Cabin Festival, which explored through the arts the legacy of the Small-Tract Homestead Act in two exhibitions and related events. Featured were visual and performing artists who have made the homestead cabins a major subject of their work, as well as a "Show 'n Tell" that was open to anyone and brought together a sharing across the diverse population over the feature they most share in common, their homesteads and their homestead way of life. The Festival and the cabins as a cultural force are documented at <http://homesteadcabin.wordpress.com/>. As well, the Festival was featured in the *Dune Magazine* (Palm Springs) Architectural issue, which positioned the article (see <http://www.jackadandy.net/magicgroove/magicgroove/DuneMagazineFeb08.htm>) opposite its centerpiece on iconic architectural photographer Julius Shulman, the man who put Mid Century Modern architecture on the cultural map:

"It's with a sense of aesthetic-historic juxtaposition, and a bit of mischief, that we've placed our story about the cabins adjacent to writer Lydia Kremer's beautifully illustrated feature on renowned architectural photographer Julius Shulman. The subjects of these two articles aren't so mutually exclusive: Both are observing 70-year anniversaries, and they've contributed substantially in their respective ways to local culture. It's worth noting that some folks have taken to remodeling their old High Desert homesteads in the Mid-Century Modern style exalted by Shulman's brilliant Palm Springs record. The desert may be a study in contrasts, but its underlying interrelationships and shared influences keep it fascinating."
 - Dean Lamanna, Executive Editor, *Dune Magazine*

- “The Road to Wonder Valley”, a film series by Massif Pictures currently in production and profiling artists of Wonder Valley’s robust and diverse community as intrinsic parts of their desert setting.
- The uniqueness of area qualities and amenities continues to make it a popular location for film and advertising. Past films range all the way from commercial B-grade thriller “Route 666” with Lou Diamond Phillips; to “Palms” by German artist John Bock, supported by REDCAT/CalArts, The Andy Warhol Foundation for the Visual Arts, and The Nimoy Foundation.

CONCLUSION

The community of Wonder Valley and the Dale Basin is a special culture based in an interaction with a wild world, where little infrastructure is provided, independence and resourcefulness are prized, and support systems have been devised unique to the area and its geographical and built circumstances. This culture has made and is continuing to make unique contributions to our world. Large-scale solar and transmission projects have the potential to destroy this culture as well as the local economy and therefore the community, most especially because of its potential to adversely impact the desert setting upon which the culture and economy depends, and the Project must be evaluated in this light.

As an artist who has both specifically sought out and whose creative work is inspired and enabled by this desert setting, my living is in part dependent upon the specific qualities of this desert setting. The deterioration of those qualities would have an ultimately terminal effect on my ability to live and work in my home and studio in Wonder Valley.

Further, industrial-scale solar development of the desert has the distinct potential to impose an undue burden on desert communities and destroy and damage desert ecosystems. Finally, such development is not economically or scientifically justifiable in the face of better alternatives, mainly dispersed rooftop solar generation in the areas of load, as well as conservation.

Thank you again for the opportunity to comment. I am submitting these comments electronically as an attachment via the Public Comment Form at <http://solareis.anl.gov/involve/comments/index.cfm>. Please include me on the mailing list for all future communications regarding the PEIS. Postal communication may be sent to the above street address and electronic communication to magicgroove@gmail.com. If disk copies of documents are made available I request an opportunity to receive those rather than being left to depend on Website access, as like many in this rural area I am restricted to dial-up service.

Sincerely,

Christine Carragher

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60197.

Comment Date: September 13, 2009 16:18:20PM
Solar Energy Development PEIS
Comment ID: SolarM60197

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

I am a property owner in the area of Wonder valley (CA 92277). I do not agree that oversize solar or wind energy generation stations will solve our energy problems. The loss of irreplaceable magnificent wild and natural land and the wildlife that depends upon it will itself prove these projects unreasonable. The additional loss of land to an antiquated and inefficient method of moving generated power across great distance is a second strike against concentrated power generation. Replacing one system of outdated power generation with another system that will be placed in 'hidden' in low density population areas is called 'Green Washing'. Handing over priceless wild and natural heritage to new generations of 'green' entrepreneurs to experiment with as yet unproven methods of power generation systems is short sighted. Not enough focus has been given to true lower impact alternatives to centralized generation. The true environmental impacts of centralized power generation have not been understood or widely published yet. More study is needed before a land and technology grab like this is allowed to move forward. Thank you for your time.

Thank you for your comment, Cecelia Smith.

The comment tracking number that has been assigned to your comment is SolarM60198.

Comment Date: September 13, 2009 16:45:44PM
Solar Energy Development PEIS
Comment ID: SolarM60198

First Name: Cecelia
Middle Initial: M
Last Name: Smith
Organization: TIERRA Consultants
Address: P.O. Box 316
Address 2:
Address 3:
City: Crestone
State: CO
Zip: 81131
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Dear Ms. Resseguie;

Thank you for the opportunity to comment on the Programmatic Environmental Impact Statement (PEIS) and the 4 proposed Solar Energy Study Areas comprising 22,380-acres in the San Luis Valley, Colorado. I have lived and worked in the San Luis Valley since 2006. During this time I have served as a consultant to a number of communities, NGOs and local government agencies. I've also worked with industry, our local Federal field offices, the GEO and our State and Federal representatives.

The San Luis Valley (SLV) is already experiencing effects from climate change on wildlife, watersheds, ecosystems and agriculture. Making a swift and effective transition to a renewable energy economy is imperative if we are to have a sustainable future. This transition offers an unprecedented opportunity to re-imagine how energy is produced, distributed and used in this country and I encourage BLM to be forward looking in its approach.

The SLV has many unique values that its citizens have organized effectively to preserve and protect over the years. Due to its high elevation and relatively flat terrain, the SLV has long been recognized for its superior solar energy generation capacity. For a small, rural Valley, we are home to an exceptionally diverse number of renewable energy advocates, off-grid homesteaders and experts in sustainable design and living.

Recently, the US Department of Energy (DOE) and National Renewable Energy Laboratory (NREL), and Governor Ritter's office identify the SLV as the major "hotspot" for solar energy in Colorado. The 2008 Report of the Colorado Senate Bill 07-091, "Connecting Colorado's Renewable Resources to the Markets" identified a "technical potential of 240 GW [2,400 sites for a 100 MW CSP plant] in the San Luis Valley".

Two very different paradigms for solar energy development (centralized vs. distributed) are emerging. While not inherently mutually exclusive, the relative costs and benefits of these competing paradigms are subject of growing interest, debate and concern to our citizens and communities.

In either case one thing is clear: to be accepted renewable energy development must not compromise the San Luis Valley's unique cultural and ecological values (especially water) and must offer a clear return to our communities and not just private corporations. In short, it must support a sustainable future for the SLV without undermining the values that make this a special place. I urge you to be sensitive to these widely held values and to direct our local SLV field offices to work collaboratively with Valley citizens, communities, NGOs and local governments before approving Solar Energy Study Areas or permit applications.

The SLV contains thousands of acres of degraded agricultural lands that are suitable for solar energy development. We are also currently grappling with the removal of 40,000-acres from production to balance long-term water use. Solar energy development should be sited on these degraded agricultural lands before destroying valuable intact public lands. I urge BLM to allow our local field offices to work with industry, the SLV Water Conservation District, private land owners, NGOs and County and regional land use experts in siting and approving Solar Energy Development Zones that contain degraded lands.

Intact lands have enormous public value and should not be destroyed simply because they are publically owned. They provide

important wildlife habitat and protect watersheds, soil and air quality. Wetlands sequester significant amounts of CO₂ and should be preserved at all cost. SLV and regional NGOs have submitted extensive comments on the specific biological values of the 4 proposed SESA's as well as policy requirements of NEPA. I urge BLM to take these comments and recommendations seriously in finalizing the PEIS and not just simply note them in the appendix.

There are already several public and private utility-scale solar energy facility proposals on more than 6,400-acres in the SLV. According to our Rural Electric Coop, industry has purchased options on private lands adjacent to all of the utility substations in the Valley. This haphazard, unplanned approach to renewable energy development leaves the Valley vulnerable to market-driven, unregulated industrialization.

I urge BLM/DOE and DOI to give our local field offices the authority and resources needed to effectively collaborate as noted above and to participate in the development of a comprehensive cumulative impact analysis and SLV-wide plan for renewable energy development in the SLV. Additionally, I urge you to administer all environmental reviews required under NEPA through the local field offices and to allow them to make the final determination regarding the scale and siting of SESA's, siting and permitting of proposed utility scale facilities and cumulative impacts, land use and mitigation.

Lastly, renewable energy technologies are evolving very rapidly. I urge BLM/DOE and DOI not to commit to the "old energy" model currently being pushed by the utility industry. Many energy experts are predicting that large centralized generation and costly remote transmission will soon be obsolete. A growing number of countries, states and communities world-wide are demonstrating that flexibly designed point-of-use renewable energy generation is more efficient, easily permitted, has greater security and can more rapidly integrate new technologies. I strongly encourage the BLM/DOE and DOI to consider a more flexible and cost-effective approach to the rapidly changing renewable energy environment.

Thank you for considering my comments. I look forward to a continued dialogue.

Sincerely,

Ceal Smith
TIERRA Consultants

Cc: Secretary Salazar, Rep. Salazar, Senator Bennett, Senator Schwartz, GEO.

Thank you for your comment, Eddie Bundy.

The comment tracking number that has been assigned to your comment is SolarM60199.

Comment Date: September 13, 2009 18:24:53PM
Solar Energy Development PEIS
Comment ID: SolarM60199

First Name: Eddie
Middle Initial: M
Last Name: Bundy
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

As a permittee in the East Mormon Mountain Solar PEIS, I am opposed to the use of the area that has been suggested. The area is one mile from the only live water on our permit. This area is some of our best grazing land in the spring of the year. There will be impact to our existing AUMs, native vegetation, existing range improvements, water resources and water rights. The area east of the Toquop Wash would be more suitable because there wouldn't be as much impact to our ranching business. The area would not be affected by shade from the East Mormon Mountains. There is also a railroad proposed to go through the area west of the Toquop Wash. I also think that we need to be compensated for whatever area is taken from the grazing permit that we have bought and paid for and done many improvements to. This compensation can either be monetarily or with BLM permits adjacent to our existing permit.

Thank you for your comment, James Wade.

The comment tracking number that has been assigned to your comment is SolarM60200.

Comment Date: September 13, 2009 18:45:29PM
Solar Energy Development PEIS
Comment ID: SolarM60200

First Name: James
Middle Initial: L
Last Name: Wade
Organization:
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

In regard to the East Mormon Mountain Solar PEIS, it is within one to two miles from the only live water on our permit. The feed there is the best spring feed we have. We sacrificed as a family for a number of years to pay for the privilege of grazing this permit. About one third of our permit has been removed from our use without any compensation for a power plant and tortoise habitat. We have had to cut our numbers in order to run efficiently. There is also a water line and railroad proposed that will go through this same area that will also impact our grazing. There are many areas that are not favorable for multiple use such as an area in Dry Lake Valley north of Highway 93, Cane Springs Valley, South of Coyote Springs West of Highway 93, and there are places on the Sand Hollow Allotment. There are a lot of low flying aircraft from Nellis AFB that we have seen and heard that fly these valleys year round. We understand that this will be detrimental to their project also. We need to be compensated monetarily or with similar permit adjacent to our existing permit.

Thank you for your comment, PETE DELMUE.

The comment tracking number that has been assigned to your comment is SolarM60201.

Comment Date: September 13, 2009 19:08:29PM
Solar Energy Development PEIS
Comment ID: SolarM60201

First Name: PETE
Middle Initial: T
Last Name: DELMUE
Organization: LAZY D LIVESTOCK
Address: 4766 DELMUE RANCH ROAD
Address 2:
Address 3:
City: PIOCHE
State: NV
Zip: 89043
Country: USA
Email: delptd@lcturbonet.com
Privacy Preference: Don't withhold name or address from public record
Attachment: solar project comment.rtf

Comment Submitted:

Dear Sirs:

I would like to express my concerns related to the Dry Lake North Solar Project; I have many but here are just a few of the main ones.

First, I question your ability to maintain multiple use as set forth in BLM guidelines. For many years multiple use has benefited many individuals and businesses and the tax base for Lincoln County.

Second, how do you plan to maintain a healthy plant community under the directly affected area and address erosion problems?

Third, how do you plan to reduce fire danger and control fuel build up without proper grazing? For many years the livestock industry, wild horses and other wildlife have worked very hard not, always seeing eye to

eye, but putting the land and plants first in trying to maintain a proper balance. I fail to see your ability to maintain this delicate once the project goes in.

Fourth, what steps are proposed to reduce impact during the initial setup, and what steps to restore sensitive plants like white sage and rice grass.

In finishing I would like to again state that I have other concerns but prefer to stick to the main ones for now. For many years in some cases four, five and six generations or more the livestock industry has been

the one of the most if not the most stable industry or Lincoln County's tax base. Can this solar project make a guarantee for six generations? I seriously doubt it. I would hate to see plants damaged beyond repair

, wildlife displaced and livestock and related businesses put out of business only for the project to be abandoned because of inefficiency, better technology or other unseen reasons. I would suggest that the location be

reconsidered and look at areas that do not have such a plant diversity and not such key use areas for livestock and wildlife, possibly private ground or a smaller private allotment that could be purchased from a willing

seller.

Sincerely yours,

Pete Delmue

Thank you for your comment, FRANK DELMUE.

The comment tracking number that has been assigned to your comment is SolarM60202.

Comment Date: September 13, 2009 19:18:41PM
Solar Energy Development PEIS
Comment ID: SolarM60202

First Name: FRANK
Middle Initial: J
Last Name: DELMUE
Organization: LAZY D LIVESTOCK
Address: HC 74 BOX 400
Address 2:
Address 3:
City: PIOCHE
State: NV
Zip: 89043
Country: USA
Email: rdelmuedryvalley@lcturbonet.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Dry Lake Solar Project for Frank.rtf

Comment Submitted:

September 9, 2009

Bureau of Land Management
Caliente Field Office 1400 Front Street
Caliente, Nevada 89008

Dear Sirs:

I'm very concerned to hear about solar studies planned for Dry Lake. For so many years, in fact all my life, we have had strict oversight of this grazing area. From an environmental viewpoint, it is a very beautiful valley and the white sage is abundant, yet delicate and an ideal winter feed for cattle; as if it were made to order. Without a doubt there is a great deal of open land in the West and with it goes a lifestyle renowned and envied by much of the world. To see this changed into a commercial project for energy in an industry that is just being born is truly disturbing. In this age of rapidly changing technologies, it is hard to imagine this commercial project will last long; however, the damage to the plants and wildlife as well as the livestock interests in the area will forever be affected.

With so much open country in the western United States surely there are areas that will not destroy small businesses which play such a vital role in the entire economy. It seems that, in this time of high unemployment, this too should be a consideration.

Respectfully yours,

Frank Delmue
HC 74 Box 415
Pioche, Nevada 89043

Thank you for your comment, Judyann Medeiros.

The comment tracking number that has been assigned to your comment is SolarM60203.

Comment Date: September 13, 2009 19:19:45PM
Solar Energy Development PEIS
Comment ID: SolarM60203

First Name: Judyann
Middle Initial:
Last Name: Medeiros
Organization:
Address: 3350 Thunder Road
Address 2:
Address 3:
City: Alamogordo
State: NM
Zip: 88310
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am gravely disturbed about you including the Red Sands solar energy study area for Solar Energy Development and have been studying the area in relation to environmental concerns. This area is NOT suitable for including in the development for large-scale solar energy for the following reasons:

1. The name "Red Sands" is a misnomer because it implies that the land has little value as an area of only sand dunes. In fact, the area is by and large north of the majority of the red sand area; therefore, it is instead mainly productive grasslands which support cattle and wildlife in good numbers.
2. The area has numerous archaeological sites as evidenced by the archaeological studies that have been conducted by BLM in the area. The area that I have concern with has been waiting for over 2 years to have archaeological clearance for pipelines.
3. The area has historic value as the settlers of the Tularosa Basin used various sites in the area to establish and settle this area. It has been a productive grazing area since before the settlers came in the late 1800's and has continued to support the industry well since that time.
4. The area has diverse wildlife including the burrowing owl, hawks, and migratory birds that have been endangered.
5. This area is used as an airplane fly zone between two military areas (White Sands Missile Range and Macgregor Range) that have restricted air space. With large expanses of land in our county taken for government purposes, it would seem that land taken previously from our citizens could be used for solar production.
6. This land has very few good surface tanks for water, and a large part of the area has poor water quality from wells.
7. The Escondida Well Ranch portion on the map dated July 27, 2009 of the Red Sands area barely meets the minimum 2,000 acres, and it is our best grassland pasture. Losing entry to that area would destroy our ranch, our heritage, our ability to survive economically, and the good pasture land.

In summary, solar energy production may be a viable energy production method in the future, but land taken for government purposes and already withdrawn from public use in our county should be considered to be used instead of greater government intrusion into people's livelihood on productive land. It would also become single user land instead of the current multiple use. The Red Sands area should NOT be included in the study for the above reasons.

Thank you for your comment, eleanor clark, M.D..

The comment tracking number that has been assigned to your comment is SolarM60204.

Comment Date: September 13, 2009 20:43:05PM
Solar Energy Development PEIS
Comment ID: SolarM60204

First Name: eleanor
Middle Initial: a
Last Name: clark, M.D.
Organization: B and E Twin Butte Ranch
Address: 11084 N. Chinook Dr.
Address 2:
Address 3:
City: Casa Grande
State: AZ
Zip: 85122
Country: USA
Email: bwhite520@aol.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Hualapai Tribal Nation Dept of Planning and Econ Devel0001.pdf

Comment Submitted:

The study areas should not impact ground water usage! The types of CSP Plants that require water cooling are totally unacceptable in an area that is already arid and tapping into the aquifers. At the expense of efficiency the dry cooled CSP Plants must be studied so as not to further deplete our water for the future generations. If we are to allow the BLM to use "OUR" land for "RESEARCH" it must be based on the most modern and eco friendly CSP plants that can be designed! Rather than rubber stamp large scale industrial CPS water guzzling applications to consume our PUBLIC LANDS and resources! Do NOT authorize BLM land for industrial use without NOTIFYING residents in the surrounding counties of your intentions as many of us own property adjacent to BLM land and do NOT want to donate it to line the pockets of the entrepreneurs and money mongers! Check out the proposed Hualapai Solar-340MW-CSP-wet cooled-Kingman, Az area project! Jack Ehrhardt, Director of the Hualapai Tribal Nation, Department of Planning and Economic Development has written a letter dated 08/24/09 regarding this abomination to the Dept of Energy-Western Area Power Administration. This project is slated for Peach Springs! NZ Legacy is currently seeking "Special Use Permits" to study erection of a 500MW Wind/Solar Plant in Navajo County, AZ encompassing 58 sections or 1.2 million acres! The BLM should coordinate their efforts with the Arizona Department of Environmental Quality (ADEQ) and the Arizona Department of Water Resources (ADWR). The BLM needs to refrain from authorizing or trading OUR PUBLIC LAND for the financial benefit of a few-- at the expense of MANY and our FUTURE ENVIRONMENTAL RESOURCES!
Respectfully, Eleanor A. Clark, M.D.

The Great Spirit created Man and Woman in His own image. In doing so both were created as equals. Both depending on each other in order to survive. As a respect was shown for each other in doing so, happiness and contentment was achieved then, as it should be now.

The connecting of the Hair makes them one person; for happiness or contentment cannot be achieved without each other.

The Canyons are represented by the purples in the middle ground, where the people were created. These canyons are Sacred, and should be so treated at all times.

The Reservation is pictured to represent the land that is ours, treat it well.



The Reservation is our heritage and the heritage of our children yet unborn. Be good to our land and it will continue to be good to us.

The Sun is the symbol of life, without it nothing is possible - plants don't grow - there will be no life - nothing. The Sun also represents the dawn of the Hualapai people. Through hard work, determination and education, everything is possible and we are assured bigger and brighter days ahead.

The Tracks in the middle represent the coyote and other animals which were here before us.

The Green around the symbol are pine trees, representing our name Hualapai - PEOPLE OF THE TALL PINES -

Hualapai Tribal Nation
Department of Planning & Economic Development
P.O. Box 179/941 Hualapai Way, Peach Springs, Arizona 86434
Phone (928) 769-2216 Ext. 104 Fax (928) 769-1063
hualapaiplanning@citlink.net

Comments; Department of Energy-Western Area Power Administration-Phoenix Arizona, August 24-09

Re: Hualapai Solar-340 megawatt –concentrated solar-wet cooled- Kingman Arizona area

Traditionally the Tribe has always been conscientious environmental stewards of their ancestral land and this includes the whole Hualapai Valley that this project is proposed in. The impacts and Cultural Concerns of the Power Plant are described by the Hualapai Tribe T.H.P.O.

Environmental and long term impacts to this style of project are also a concern. While solar energy is the absolute best energy source for meeting Federal mandates and State Renewable Energy Portfolio Standards, the water consumption required in this full wet cooled power plant is irresponsible to approve when dry cooled or hybrid technology is available to use with minimal energy production loss. All Federal Agencies including the Hualapai Tribe are required to use B.A.C.T., Best Available Current Technology including L.E.E.D., Leadership Energy Environmental Design, in deploying new capital projects. The Hualapai Tribe has exceeded L.E.E.D. in many cases and continues to excel in complying with responsible Environment Design and local Environmental stewardship.

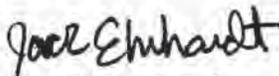
The United States Congress requested of U.S. Department of Energy a, "Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation". Please reference this whole 24 page report , page 5 last paragraph "Air cooling [dry] and wet/dry hybrid cooling systems offer highly viable alternatives that could reduce the total water usage of steam-generating CSP Plants by 80 to 90% at a penalty in electricity cost in the neighborhood of 2 to 10% ,depending on plant location and other assumptions." The document is designed to enlighten and empower agencies to understand that we can embrace the new solar technology and still be responsible stewards to our Natural Resources, including the protection of the unnecessary waste of our valuable

underground water resources .Please require this applicant to use the Department of Energy's recommendations in Air cooling technology that are part of current water conservation measures. By not requiring them to be dry cooled is like allowing a new car to be built without a catalytic converter because it will get better gas mileage. We simply do not do that anymore. Please recognize that in the Mohave County General Plan, policy requires dry cooling for power plants within its County and it violates some Arizona State law to give approval action against a County Plan. All energy projects when looked at from and especially from a N.E.P.A. perspective have this responsibility.

The Hualapai Tribe has asked the applicant to participate in a regional area transmission interconnect meeting to consider best benefits for all new planned projects in the area, including and especially renewable projects. Four new projects are proposed in the immediate area including the Hualapai Tribes proposed 150 megawatt wind farm. We have not heard back from them on this and believe it is significantly important to have this regional collaborative planning to consider joint cost saving and good regional long range energy development planning. We request these meeting for this planning be part of the approval process and be administered by W.A.P.A with reasonable accountability and benefits marked.

We thank you for the opportunity to give this input and look forward to the exciting new times in this paradigm shift to new clean renewable energy development .

Respectfully Submitted


Jack Ehrhardt Director

Thank you for your comment, Helena Bongartz.

The comment tracking number that has been assigned to your comment is SolarM60205.

Comment Date: September 13, 2009 22:37:54PM

Solar Energy Development PEIS

Comment ID: SolarM60205

First Name: Helena

Middle Initial:

Last Name: Bongartz

Organization:

Address: PO Box 695

Address 2:

Address 3:

City: Twentynine Palms

State: CA

Zip: 92277

Country: USA

Email: mojavefriend@gmail.com

Privacy Preference: Don't withhold name or address from public record

Attachment: Solar Energy Development PEIS Comments.pdf

Comment Submitted:

Helena Bongartz

PO Box 695

Twentynine Palms, CA 92277

mojavefriend@gmail.com

Before committing a beautiful and unique American landscape to the proposed energy development that will destroy its character forever, all aspects of these projects should be studied with reference to existing alternatives such as local energy production, for example, grid tied systems, and the benefits they provide. Will the BLM be conducting such studies which would include the cost benefit analysis of all alternative energy options? These studies should include all alternatives available as well those under development and a consideration of whether some of the proposed projects utilize technologies which are inefficient, out of date, or soon to be out of date. What are the side effects of these projects? The following comments address some of these issues.

Aesthetics/Visual Resources:

What impact will the proposed energy facilities have on the unbroken and unspoiled vistas of slopes, basins, mountains and lake beds that are the unique qualities of this part of the Mojave Desert? What effect will they have on the uniquely dark night skies? What impact will they have on the vegetation which is unique to the Mojave? These areas are appreciated not only by residents but also by visitors from around the United States and other parts of the world. They are also important for the free recreational opportunities they provide to those who wish to enjoy the peace they offer. And the experience of a landscape largely unaffected by any development whatsoever. What effect would the proposed energy facilities have on the aesthetic and visual quality of these areas? What impact will there be on our annual displays of desert wildflowers and our ability to see and enjoy them?

Biological Resources:

Within the proposed study area are populations of endangered and threatened species as well as other wildlife and plants. What impact will the proposed facilities have on

the systems such as water and soil and travel corridors that support these? There are rare dune and other land formations within or adjacent to the study areas, what would be the affect on these?

Cultural Resources:

Throughout the area under study there are cultural resources that must be respected. What steps would be taken to identify and protect them? These include but are not limited to those associated with American Indian Tribes. Many parts of this area were homesteaded. These homesteads are a part of our country's cultural heritage and should be protected. The area is also the home of many artists for whom the Mojave Desert provides inspiration. The benefit of their work is passed on to Americans who live here and who do not, forming a cultural link that is vital to connecting people with the unique qualities of this area. How can this be mitigated? There have also been significant paleological finds in this area. How would the use of the land for energy production impact the ability to make further important studies of this aspect of our past?

Environmental Justice:

What would the impact be on those who live in the Mojave Desert? Studies need to address the potential negative economic impact on residents. What is the economic impact from the industrialization of the desert on homes, air and water quality, health of residents, and wildlife and to the dark skies and quiet that are the hallmarks of life here? These issues need to be carefully studied. What would be done to mitigate the financial hardship that this damage causes? What have been the impacts both economic and environmental on communities adjacent to energy production facilities such as those proposed throughout the United States?

Hazardous Materials/Hazardous Wastes:

This seems a critical area of concern both with regard to our water and our air and ground. The desert is a dry and windy area, with annual heavy flooding washing runoff across the areas of the proposed facilities. The impact of industrial pollutants and hazardous wastes resulting from both present and all potential future activities including worst case scenarios needs to be analyzed. Impacts should be studied for their lifelong potential harm.

Land Use:

Within the proposed areas are recreation opportunities, ground and surface water, aquifers, paleontological sites, agriculture, tourism, and geological monuments. What would the impact of the proposed facilities be on these?

Noise:

My question is to what extent the level of noise from any and all associated activities will destroy the quiet that is a hallmark of the desert and to what extent it is possible to mitigate this noise. The desert is a silent place. To what degree would the level of noise be monitored? What system would be established to monitor and control noise? What system would be put in place to allow residents effective response to unacceptable levels of noise? What study would be done to determine what an acceptable level of noise is from the physical, psychological and aesthetic points of view? Stress is a major negative health factor. What studies have been conducted to address this health issue? How does noise affect the health and habitat of wildlife?

Public Health and Safety:

What about air quality? What would the effect of additional dust and other pollutants contribute be on the quality of air in the desert. The most precise possible measurements should be used, PM 2.5.

Recreation:

The open areas of the desert provide excellent recreational opportunities for those wishing to experience the desert in its unaltered and pristine state. To what degree would the proposed projects diminish or eliminate the potential for such enjoyment? It is also the case that travelers who visit the desert travel through the proposed energy development areas while making their journey through the Mojave Desert. What effect would the proposed projects have on tourism in this area? What studies have been conducted with the Department of the Interior regarding visitors traveling between Joshua Tree National Park, the Mojave National Preserve and Death Valley National Park and along Historic Route 66.

Socioeconomics:

What will the effect of energy production development in the desert be on the value of homes and property and on the real estate market in general in the areas effected?
What have studies shown to be the result on home values in similar situations?

Transportation:

What is the cost both in dollars and impact on the environment of the roads that will need to be built or modified to support these projects? What effect will the increase of traffic and attendant pollutants have on the quality of life and experience of the desert? What will the impact be on nonhuman dwellers of the desert?

Utilities and Infrastructure:

How would the proposed energy development plans affect existing and proposed utilities and infrastructure, including telecommunications, energy transmission and production, underground pipelines? What new utilities would be constructed and how would they impact our air quality and water (supply, quality)? What impact would they have on our views and how would they affect wildlife corridors and habitats?

Water Resources:

Water is an area of great concern. How would the proposed expansion affect the water supply? What programs would be implemented to monitor the water table and to reimburse residents who may be forced to deepen their wells? What programs would be implemented to monitor the quality of the water and what would be done to address adverse impacts on that quality? How would we be assured that access to our water would continue as at present? What steps would be taken to insure the continued quality and availability of water in the existing aquifers? How would water currently available for wildlife be affected, both in quantity and quality?

It is my understanding that the questions I have asked will be addressed in the Environmental Impact Statement. I hope to be informed at each step of this process according to the provisions of the National Environmental Policy Act. My contact information is at the top of the first page of this letter and I repeat it here:

Helena Bongartz

P.O. Box 695

Twentynine Palms, CA 92277

mojavefriend@gmail.com

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60206.

Comment Date: September 13, 2009 22:41:58PM
Solar Energy Development PEIS
Comment ID: SolarM60206

First Name: [Withheld by requestor]
Middle Initial: [Withheld by requestor]
Last Name: [Withheld by requestor]
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment:

Comment Submitted:

If the plan is to only allow 10MW and larger installations I oppose it strongly. These are "public lands". It should allow smaller projects down to say 100 kW (or smaller). This would allow smaller funding groups and entrepreneurs to participate. This could be a tremendous source of funding for PV projects and encourage innovation. More important is the issue of fair and equitable access to these public resources. Issues of the grids ability to sync, store and transmit them should not be a consideration for use of public lands. (That needs to be solved, but not by restricting the size of PV projects on public lands). This would appear to be another attempt by the large industries/utilities to monopolize and control our public lands and resources. It could be seen as another case of the government giving existing large industries an unfair advantage over startups and smaller players in the industry.

I am a retired VP of a 12 Billion dollar company with a strong interest in PV projects.

Thank you for your comment, Kevin Emmerich.

The comment tracking number that has been assigned to your comment is SolarM60207.

Comment Date: September 13, 2009 23:46:20PM
Solar Energy Development PEIS
Comment ID: SolarM60207

First Name: Kevin
Middle Initial: R
Last Name: Emmerich
Organization: Basin and Range Watch
Address: P.O. Box 70
Address 2:
Address 3:
City: Beatty
State: NV
Zip: 89003
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Rare Mammals for Nevada Solar Areas:

Hoary bat (*Lasiurus cinereus*)- Pahrnagut Valley and Clark County. Potential for Delamar, Dry Lake, Dry Lake North. We have seen this species in Oasis Valley, Nye County, so may be potential on Amargosa Valley, Goldpoint, and Millers.

Townsend's big-eared bat (*Corynorhinus rafinesquii*)- potential on all sites.

Kit fox (*Vulpes macrotis*)- all sites.

Desert pocket mouse (*Chaetodipus penicillatus*)- Dry Lake, in Clark County.

Brush mouse (*Peromyscus boylii*) - Dry Lake.

For the Amargosa/Big Dune Areas and Lida site, the following rare plants should be at stake: *Arabis shockleyi* Shockley rockcress

Astragalus beatleyae Beatley milkvetch
Astragalus funereus black woollypod
Astragalus serenoii var. *sordescens* squalid milkvetch
Calochortus striatus alkali mariposa lily
Castilleja martinii var. *clokeyi* Clokey paintbrush
Camissonia megalantha Cane Spring suncup
Centaurium namophilum spring-loving centaury
Cordylanthus tecopensis Tecopa birdsbeak
Cryptantha tumulosa New York Mountains catseye
Cymopterus ripleyi var. *ripleyi* Ripley biscuitroot
Cymopterus ripleyi var. *saniculooides* sanicle biscuitroot
Entosthodon planoconvexus planoconvex entosthodon
Eriogonum concinnum Darin buckwheat
Eriogonum contiguum Amargosa buckwheat
Gilia nyensis Nye gilia
Gilia ripleyi Ripley gilia
Hulsea vestita ssp. *inyoensis* Inyo hulsea
Ivesia arizonica var. *saxosa* rock purpusia
Lathyrus hitchcockianus Bullfrog Hills sweetpea
Penstemon albomarginatus white-margined beardtongue
Penstemon arenarius Nevada dune beardtongue
Penstemon fruticiformis ssp. *amargosae* Death Valley beardtongue
Penstemon pahutensis Pahute Mesa beardtongue
Perityle intricata delicate rockdaisy
Phacelia beatleyae Beatley scorpion plant
Phacelia mustelina weasel phacelia
Sclerocactus polyancistrus hermit cactus

For the Riverside East area these rare species are at stake: **BIOLOGICAL RESOURCES:**

Special-status plant species observed in the project area:

- **FOXTAIL CACTUS:** A federal Category 2 candidate and a California Native Plant Society (“CNPS”) 1B species.
*Category 2 = information is currently being collected to see if the species should be listed as threatened or endangered.
*1B species = Plants rare, or endangered in California and elsewhere.
- **CALIFORNIA BARREL CACTUS:** A BLM Sensitive species observed within the dump’s footprint, near access roads, and along the rail line.
- **OROCOPIA SAGE:** A federal Category 2 candidate and a CNPS List 1B, observed along the rail line.

Special-status Wildlife species occurring in the vicinity of the project:

- **DESERT PUFFISH:** A federal and state listed endangered species. Observed approximately 1/4 mile south of the Eagle Mountain railroad trestle in a tributary of Salt Creek, and earlier surveys report the species is present throughout Salt Creek. Studies indicate that the best pupfish habitat in the area begins approximately 1 mile below the rail trestle and extends upstream to the headwaters of the tributary. Of particular interest is that this species could be wiped out with the planned construction/repair of the railroad. It is virtually impossible to relocate this species because each pool is minerally unique in composition - Personal conversation with National Park Service in Death Valley.
- **COMMON CHUCKWALLA:** A federal Category 2 species occurring at the project site and moderate occurrence along the rail line
- **FLAT-TAILED HORNED LIZARD:** This species has been proposed for federal listing as threatened and is a California Species of Special Concern. The species occurs in the vicinity of the rail line near Ferrum Junction.
* California Species of Special Concern = When encountered, should be reported to the Department, and for which impacts may be considered significant under CEQA.
- **DESERT TORTOISE:** This species is federal and state listed as threatened. Tortoise have been observed north of I-10 in the Eagle Mountain study area, the Chuckwalla Bench north of the Chocolate Mountains, and on the railroad. The Eagle Mountain railroad and parts of Eagle Mountain road cut through the Chuckwalla Unit of Critical Habitat for desert tortoise. The impacts to this species is not only from train and truck traffic. Ravens historically are attracted to dumps, and ravens prey on juvenile tortoise. It is expected that predation on the desert tortoise will increase. (Personal conversation with Park ecologist). A recent report by Dr.

Richard Knight of the University of Colorado describes the Park's Pinto Basin as the most pristine raven habitat in all of the Mojave desert. He regards Joshua Tree National Park as a unique habitat with unaltered raven densities. There are a number of mitigation measures to decrease the impacts to the desert tortoise, however the effectiveness of some of the mitigation strategies are unproven. For more information regarding mitigation and impacts to the desert tortoise see the comments made by Dr. Stebbins, Professor emeritus U.C. Berkeley.

- **NORTHERN HARRIER:** A California Species of Special Concern. This species is considered to occur seasonally along the rail line, and may seasonally forage in habitat at the project site and along access roads
- **SHARP-SHINNED HAWK:** A California Species of Special Concern. Likely to migrate in the vicinity of the project in the fall and spring, and may winter in any part of the project area. The species may also seasonally forage in habitat at the project site and along the rail line.
- **COOPER'S HAWK:** A California Species of Special Concern. Most parts of the project area are within the year-round ranges, although the central part of the rail line passes through an area of winter-range only.
- **GOLDEN EAGLE:** A California Species of Special Concern. None were identified during the surveys for the project, however the species is highly likely to occur in any portion of the project area. Note: Larry & I have observed these beauties several times in this area
- **PEREGRINE FALCON:** Is a federal and state listed endangered species with a low to moderate probability to occur at the project site, access roads, and rail line.
- **CALIFORNIA BLACK RAIL:** A federal Candidate 2 candidate and is state listed as threatened. Have been observed in the Salt Creek area north of the rail line, and do occur within one mile of the project area.
- **YUMA CLAPPER RAIL:** A federally listed endangered species and state listed threatened species, observed in the Salt Creek area north of the rail line.
- **WESTERN BURROWING OWL:** A federal Category 2 candidate species and a California Species of Special Concern, with a moderate likelihood of occurrence at the project site, access roads, and rail line.
- **BLACK-TAILED GNATCATCHER:** Considered a California Special Animal by CDFG, and observed near Kaiser & Eagle Mountain Roads and on the project site.
* California Special Animal = an animal fully protected by the state.
- **LECONTE'S THRASHER:** A federal Category 2 candidate and California Species of Special Concern, observed near Kaiser & Eagle Mountain Roads and could nest in habitat at the project and along the rail line.
- **LOGGERHEAD SHRIKE:** A California Species of Special Concern that is expected to occur throughout the project area.
- **YELLOW WARBLER:** A California Species of Special Concern observed in the townsite and the Chuckwalla Bench Area of Critical Environmental Concern ("ACEC").
- **YELLOW-BREASTED CHAT:** A California Species of Special Concern observed in the townsite and expected to occupy habitats throughout the project area.
- **CALIFORNIA LEAF-NOSED BAT:** A federal Category 2 candidate and a California Species of Special Concern who uses the Kaiser Mine as a winter roost. There have been no other winter roosts located during air searches over the Orocopia, Chuckwalla and Coxcomb Mountains.
- **TOWNSEND'S BIG-EARED BAT:** A federal Category 2 candidate and a California Species of Special Concern. Maternity roost of this species was observed in the mine adit during 1990 surveys, however subsequent surveys did not identify this species, possibly indicating that the roost has been abandoned. If the species is present, it is likely to forage in nearby areas, including near access roads & rail line and areas closer to the mine.
- **CALIFORNIA MASTIFF BAT:** A Category 2 candidate and a California Species of Special Concern. None were identified in the 1990 survey, but suitable habitat is present, and the species is listed as one that could occur at the project site (Brown, 1990). The entire project area is within the range of the species.
- **PALLID BAT:** A California Species of Special Concern was captured in a mist net over a mine pit pond during the 1990 surveys, and guano was found in two adits west of the project site. The species is likely to forage in areas near access roads and rail line, and it is known to forage over pond water, which forms from standing water after a rainfall in the bottom of the east pit.
- **AMERICAN BADGER:** A California Species of Special Concern identified at the project site and near Kaiser Road. The species is highly likely to occur along the rail line.

- YUMA MOUNTAIN LION: A Category 2 candidate and California Species of Special Concern. The EIR/EIS states it's probability of occurrence is unknown. However in 1995 and 1996 mountain lions have been observed at the Eagle Mountain townsite, and several farms in the Desert Center/Eagle Mountain area.

- NELSON'S BIGHORN SHEEP: A California Special Animal observed at the project site, and several locations along the Eagle Mountain railroad.

Biodiversity is the concept that all components of ecological systems, both living and nonliving, are interconnected in a hierarchical continuum, and that changes in the diversity at any level in that hierarchy can have effects at other levels (CEQ, 1993). The Council on Environmental Quality ("CEQ" 1993), has identified several primary threats to biodiversity, including:

- Physical alteration of ecosystems from resource exploitation and changing land use including habitat destruction, degradation and fragmentation;

- Pollution, which can have direct lethal or sublethal effects, or can degrade habitat through such factors of eutrophication, acidification, or thermal pollution;

- Overharvesting of populations, which results in disruption of interconnections within and/or between species, thus affecting ecosystem function;

- Introduction of exotic species, which can eliminate native species through predation, competition, or disease transmission, thus altering interconnections between species and changing ecosystem function; and

- Disruption of natural processes, which can occur when land management procedures change ecosystem dynamics through such practices as fire suppression or changes in water flow regimes.

For the Pisgah Area the following resources are at stake:

1. The report admits the site is located in a planning area for Mojave ground squirrel, but carries out no surveys to detect them. They did not see any during other work, so they must not be there?

2. Desert tortoise: they only surveyed one third of the site with a presence-absence survey over two years (one year a serious drought), finding a certain number during surveys, then adding other tortoises encountered during other activities, to get a count of live tortoises seen. Then they claim a population estimate of "70 to 127" tortoises. You cannot get an accurate or even plausible population estimate with this type of survey. They should carry out line-distance sampling methods, as they probably under-estimated the population, which may skew mitigation measures.

The habitat is considered to be capable of maintaining a viable, stable population, yet another large chunk of tortoise habitat will be destroyed and all tortoises translocated (to a yet-to-be-determined location). We want to know the details of how much land will be bought for mitigation and translocation, and where? We question putting funds into a "habitat conservation fund," mentioned in the report-- this could mean education, not actual land preservation. Not good enough.

3. There is a questionable bird listed on the bird surveys, California thrasher, which is endemic to California coastal chaparral and not in open creosote desert scrub. This must be a mis-identification, and makes me wonder what the quality of biologists was that were hired.

4. Mojave fringed-toed lizard: they found one lizard on a sandy habitat patch. The project site is next to an ACEC specifically made to protect this lizard, as well as a rare penstemon (also found on the project site). They will try to avoid construction on this habitat patch but admit it will be impacted by the fencing of the project site and disturbance of the surrounding area. Thus all connectivity of both sand flow and lizards will be cut-off, isolating this population as an island subject to increased potential for extirpation and no re-colonization. For mitigation of habitat disturbed, they only say that "compensatory mitigation for tortoise habitat will also benefit" the Mojave fringe-toed lizard. This is ridiculous, as tortoise and fringe-toed lizard habitat are usually quite different. Different habitat suitable for the lizard, i.e., sand areas, needs to be purchased (ideally).

5. In the executive summary they claim the site is disturbed. But in the Biological Resources Technical Report, they say, "the SES Assessment area" consists of "large areas of generally undisturbed habitat."

6. The executive summary says much vegetation will be left on the project site. But the Biological report says impacts will be "significant," with new paved roads, unpaved "access routes" to each Suncatcher, so roads will be everywhere. An unknown number of culverts, diversion ditches, and berms will be installed in flood crossing areas. Brush will be trimmed down to 3 feet around each group of Suncatchers in strips of 75 feet-wide vegetation bands between rows of Suncatchers, while alternate bands of 75-foot wide strips will be "bladed", which we assume means all vegetation will be removed. So alternating bands of cleared dirt will be 75 feet wide across the site. The report admits "these narrow (approximately 74 feet wide) strips of vegetation are expected to have minimal residual biological value associated with them." A perimeter fence will then be built.

7. They claim no waters of the U.S were found, yet they say they will have to construct an artificial channel to direct floods away from the Main Services Complex building site on the northeastern portion of the area.

8. Rare plants: Loss of the population of White-margined beardtongue penstemon will be considered "significant as a result of the proposed Project." They say they will collect seeds and cuttings of the rare plants for "propagation and relocation" as mitigation, but this has not worked for some plant species at the Ivanpah site. This needs to be tested prior to approving the site. They say compensatory tortoise habitat will benefit the rare plants-- an assumption.

9. Bighorn sheep- the project northeastern corner cuts across the Cady Mountain herd permanent use area. In addition, an access road that conservationists use to maintain guzzlers will be impacted apparently, and the report says that access will be maintained. But this is a problem that may come up more and more as other areas are developed with renewables.

10. Evaporation ponds will be built, with the potential for high salinity and toxic amounts of minerals such as selenium building up. No mention is made of possible deaths to such common desert birds as Mourning doves drinking. Covers should be required to protect birds.

11. The report admits that future cumulative impacts could be giant, and if all the numerous renewable projects pending on BLM land in the area are allowed to build, then 138,600 solar project acres and 51,900 wind project acres will be developed, having "significant" impact on tortoise, fringe-toed lizard, bighorn sheep, and rare plant species. No future mitigation proposal is discussed.

12. The Catellus land parcels within the project site will not be developed, but surrounding them with development isolated them into small islands of habitat with increased loss of connectivity and higher rates of local extinction. If these lands were purchased by Wildlands Conservancy and given to BLM to protect them, they are not being protected by this development.

13. Archaeology: more thorough surveys should be carried out, as this area may have important sites. Newberry Cave Pleistocene fossil megafaunal site is about 20 miles away.

Thank you for your consideration,

Sincerely,

Thank you for your comment, Kelly Wade.

The comment tracking number that has been assigned to your comment is SolarM60208.

Comment Date: September 14, 2009 00:07:04AM
Solar Energy Development PEIS
Comment ID: SolarM60208

First Name: Kelly
Middle Initial:
Last Name: Wade
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment: SolarEIS Letter-9.12.2009.doc

Comment Submitted:

Kelly S. Wade
[REDACTED]

September 12, 2009

To whom it may concern,

I am writing this letter to comment on the seven areas in Nevada being considered for large utility scale solar energy plants. My family has a grazing permit in the East Mormon Mountain range that encompasses the proposed 7418 acres in the Gourd Spring portion of the allotment. This particular area happens to contain the only source of live water actually located on the entire allotment and is also the best part of the allotment for spring feed. This permit has been in the stewardship of only three families in the last 90 plus years all of which during that time ran in common as partners and shared the responsibilities of managing and maintaining the allotment at times through some horrendous circumstances such as fire, drought, and various other environmental situations. Removing or even disturbing this much area on this allotment would have a tremendous impact on the sustainability of existing AUM's, as it is barely able to sustain it with this area included. This allotment is an example of the work and dedication it takes to maintain the grazing and sustainability for not only livestock but any and all other wildlife that rely on the improvements and maintenance of the permit that the permittee provides. The water alone is a painstaking undertaking that takes a lot of work to maintain as the main source of water is pipe fed approximately 26 miles from a spring and then has to be hauled by truck to troughs throughout the rest of the allotment to maintain even grazing while also providing water for all other wildlife in areas that normally would not have it. I would hate to see all of the hard work be for nothing if the proposed area is taken away as it would negatively affect the entire allotment.

I am in agreement with the Lincoln County Commission's recommendations of other more suitable areas such as the South Delamar and Vidler areas. I'm sure there are other areas that fit the criteria and not affect negatively any existing land users be it livestock, wildlife, or camping and other recreational use. I would also agree that any solar project no matter where the area being considered, would cause No Net Loss of Grazing AUM's. There should have to be compensation to any affected Grazing Permittee's if this is to go through. It is imperative that any and all affected Grazing Permittee be involved in all aspects of planning of these solar projects.

It is amazing to most from outside this state that anything could survive in the desert that we live in especially now with the water situation the way it is, however through much hard work from the many that utilize and maintain these lands it is possible, barely, and any disturbance to areas that are able to support and sustain would be wrong. I am not opposed to the development and advancement of more renewable energy sources of any kind, I am all for it, I just hope that all public concerns are considered before these areas are approved.

Thank you for your time,
Kelly S. Wade
[REDACTED]

Thank you for your comment, Patrick Gloeckner.

The comment tracking number that has been assigned to your comment is SolarM60209.

Comment Date: September 14, 2009 00:22:40AM
Solar Energy Development PEIS
Comment ID: SolarM60209

First Name: Patrick
Middle Initial: J
Last Name: Gloeckner
Organization: Lytle Ranches, Flyinghranch
Address: hc-74 box 237
Address 2:
Address 3:
City: Pioche
State: NV
Zip: 89043
Country: USA
Email: flyinghranch@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: SolarEnergypeisdrylake.doc

Comment Submitted:

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

RE: Comments to the Solar Programmatic Environmental Impact Study

To Whom It May Concern:

I am protesting your proposed Solar Energy Study Area located in North Dry Lake Valley in Lincoln County Nevada.

I have grazing and water rights in this use area which is within the Wilson Creek Allotment. We, my wife and her father run about 400 head of cattle on this use area from Nov. 1st to May 1st every year. This use area is vital to our operation and your proposed Solar Energy Study Area takes up more than 75 % of it. We have already lost a one mile strip on the east side and the whole length of the use area, to a Utility Corridor in which we didn't even get the chance to voice our opinions on. With the Solar Study Area and the Utility Corridor, will end a business that has been in existence for over a 100 years.

There are some alternative sites to the North Dry Lake area and the Wilson Creek and Simpson allotments that will have less impact to a viable operation. The Ely Spring allotments Sheep and Cattle, is an allotment that has just been sold and its owners welcome a Solar Energy Study Area. We propose you move your proposed site to the south, in the Ely Springs allotments.

In conclusion, we do not have anything against Solar Energy and we think that a Solar Energy Power Plant will bring a few jobs into our county, but let us work together and put these proposed sites in the least impacted areas we can come up with. Let us ranch and produce power at the same time.

Thanks
Pat Gloeckner
Lytle Ranches
Hc-74 box 237
Pioche, Nevada 89043
Home: 775-962-5493
Cell: 775-962-1011
flyinghbranch@yahoo.com

Thank you for your comment, Rosemary Ford.

The comment tracking number that has been assigned to your comment is SolarM60210.

Comment Date: September 14, 2009 06:41:27AM
Solar Energy Development PEIS
Comment ID: SolarM60210

First Name: Rosemary
Middle Initial: H
Last Name: Ford
Organization:
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

The BLM projects proposed for south of Alamogordo have not embraced a larger view of the impact of the area or the community. In fact, the area designated as the Red Sands is incorrect. The proposed land is a grasslands and home to a diverse population of animals and plants. It is leased by cattle ranchers who make their lively hoods by grazing this lands and is the best lands on their ranches. The ranchers also protect and care for this land as if it were their own. it is not a wastelands.

Also, the government has taken much land in this area during the past 60 years; it would be prudent for this government land to be used for this solar power project. Government land can be used for multipurposes, and using this land for solar power would demonstrate prudence and effective effective decision-making processes at the government level. Instead, more land for a singular purpose. is taken away from the public and established ranches.

This proposal is ill-conceived as it does not know the ecology of the landscape or the humans who will be impacted. It does not demonstrate an effort to use land already confiscated by the US government and removed from ranching and public use.

Sincerely,

Rosemary Ford

Thank you for your comment, Matthew Wunder.

The comment tracking number that has been assigned to your comment is SolarM60211.

Comment Date: September 14, 2009 09:29:48AM
Solar Energy Development PEIS
Comment ID: SolarM60211

First Name: Matthew
Middle Initial:
Last Name: Wunder
Organization: New Mexico Department of Game and Fish
Address: PO Box 25112
Address 2:
Address 3:
City: Santa Fe
State: NM
Zip: 87504
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: 12810 Solar PEIS.doc

Comment Submitted:

The original and signed copy of the attached document will follow in the mail. It was sent from our office on Friday Sept 11th but may have a post mark of Friday Sept 14th.

GOVERNOR
Bill Richardson



**DIRECTOR AND SECRETARY
TO THE COMMISSION**
Tod Stevenson

Robert S. Jenks, Deputy Director

STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

One Wildlife Way
Post Office Box 25112
Santa Fe, NM 87504
Phone: (505) 476-8008
Fax: (505) 476-8124

Visit our website at www.wildlife.state.nm.us

For information call: 505/476-8000

To order free publications call: 1-800-862-9310

STATE GAME COMMISSION

Jim McClintic, Chairman
Albuquerque, NM

Sandy Buffett, Vice-Chairman
Santa Fe, NM

Dr. Tom Arvas, Commissioner
Albuquerque, NM

Alfredo Montoya, Commissioner
Alcalde, NM

Kent A. Salazar, Commissioner
Albuquerque, NM

M.H. "Dutch" Salmon, Commissioner
Silver City, NM

Leo V. Sims, II, Commissioner
Hobbs, NM

11 September 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

Re: Notice of Availability of Maps and Addition Public Scoping for Solar Energy Development PEIS; NMDGF Project No.12810

To Whom It May Concern:

In response to the Federal Register Notice dated 30 June 2009, the New Mexico Department of Game & Fish (Department) has reviewed the maps and supplemental information relative to the PEIS. The US Department of Energy (DOE) and Bureau of Land Management (BLM) are preparing this PEIS to evaluate utility-scale solar energy development in six Western states. The agencies will conduct in-depth environmental analysis of 24 solar energy study areas for the purpose of determining whether such areas should be designated as Solar Energy Zones, specific locations determined best suited for large-scale production of solar energy. Applications for development received after 30 June 2009 for lands inside the Solar Energy Study areas will be subject to the Record of Decision (ROD) for the Solar PEIS and any alternative procedures developed by BLM for non-competitive and competitive processes. Three of the study areas are located in New Mexico.

Utility-scale solar energy facilities in general offer little opportunity, once sited, for minimization of adverse effect to other resource values. For this reason, the Department recommends that compensatory mitigation be considered for all unavoidable losses of quality wildlife habitat whether on or off of Solar Energy Zones. Both the Afton study area and the Oro Grande area south of Red Sands contain stands of native tobosa grass in draws or swales, which should be avoided if possible and mitigated if not avoidable. We also recommend avoidance of ephemeral drainages or draws with dense woody vegetation, which serve as valuable songbird nesting habitat. If impacts to large blocks of intact native habitat cannot be avoided, minimize fragmentation by siting any solar development at the edge, rather than in the middle of the area. Project-specific environmental reviews should include consideration of the impact on hydrologic balance (local surface drainage).

Mason Draw

The Department recommends that Mason Draw be withdrawn from consideration as a Solar Energy Zone. We make this recommendation due to the presence of large areas of intact native grassland habitat of the Chihuahua Semi-Desert Grasslands type, a key habitat identified in the New Mexico Comprehensive Wildlife Conservation Strategy (CWCS). Some areas of woody plant invasion existing on the Mason Draw have good potential for habitat restoration. This recommendation comes directly from a prioritized conservation action in the CWCS which is to:

“Work with public and private land managers and the energy industry to encourage energy development in a manner that preserves the integrity and functionality of Chihuahuan semi-desert grasslands and restores disturbed sites.”

Mason Draw also supports populations of antelope, quail and doves, and is considered a popular and high-quality hunting recreational resource located near the population center of Las Cruces.

Afton

The Department recommends that the Afton study area is suitable for designation as a Solar Energy Zone. It consists almost entirely of mesquite coppice dune habitat, a degraded habitat type resulting at least in part from long-term impacts of excessive grazing pressure. There is very little potential for restoration as most of the soil has been blown away and there is little seed source left. Dona Ana County is currently in non-attainment status for air quality due to dust; dust management by a solar facility operator on the Afton may contribute to air quality improvement. Hunting activity is low and commercial developments already exist in the area.

Red Sands

Red Sands receives considerable recreational use. It is in near proximity to population centers in Alamogordo, El Paso and Las Cruces. Opportunities exist for big game, small game and furbearers. It is also highly popular for ATV and motorcycle users, and hosts an annual motorcycle endurance race which attracts 150-200 contestants from several states. OHV safety training is also held on the area. The BLM Tri-County Resource Management Plan considers Red Sands for possible designation as a Special Recreational Management Area. Red Sands may be suitable for a Solar Energy Zone, due to extensive surface disturbance. However we would recommend the BLM consider the implementation of Instruction Memorandum (IM) No. 2008-204 to require compensatory mitigation for loss of recreational opportunity and wildlife habitat. IM No. 2008-204 allows for the use of off-site mitigation where impacts of the proposal cannot be mitigated to an acceptable level onsite and the authorization as submitted would not be consistent with land use plan decisions or other important resource objectives.

Thank you for the opportunity to respond to this National Environmental Policy Act scoping notice. If there are any questions, please contact Rachel Jankowitz at 505-476-8159, or rjankowitz@state.nm.us.

Sincerely,

Matthew Wunder, PhD
Chief, Conservation Services Division

cc: Ecological Services Field Supervisor, USFWS
Pat Mathis, SW Area Habitat Specialist, NMGF
George Farmer, SE Area Habitat Specialist, NMGF

Thank you for your comment, Les Starks.

The comment tracking number that has been assigned to your comment is SolarM60212.

Comment Date: September 14, 2009 09:59:19AM
Solar Energy Development PEIS
Comment ID: SolarM60212

First Name: Les
Middle Initial: C
Last Name: Starks
Organization:
Address: 15981 Snow Creek Road
Address 2:
Address 3:
City: Whitewater
State: CA
Zip: 92282
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

To Whom It May Concern,

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

1. The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- * Degradation of water resources from concentrated solar power
- * Impacts to visual resources
- * Impacts to flora and fauna
- * Impacts to Federal/State Threatened and Endangered Species
- * Impacts to cultural sites
- * Impacts to Native American values
- * Impacts to private property values
- * Limiting access to public lands

2. The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.

3. An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

Thank you for your consideration,

Sincerely,
Les Starks

Thank you for your comment, Guillermo DeHerrera.

The comment tracking number that has been assigned to your comment is SolarM60213.

Comment Date: September 14, 2009 11:20:47AM
Solar Energy Development PEIS
Comment ID: SolarM60213

First Name: Guillermo
Middle Initial: A
Last Name: DeHerrera
Organization: Private Citizen
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment: DeHerrera PEIS Comments Solar Energy Development Antonito Colorado (Sep 09).pdf

Comment Submitted:

See attached comments in PDF format consisting of 7 pages.

**Bureau of Land Management and DOE
Comments to the PEIS
For Solar Energy Development in
Antonito, Colorado and the San Luis Valley, USA**

**By
Guillermo DeHerrera**

Introduction:

In the American West there are old sayings that in simple ways tell the story. For Solar Energy Project Development in the San Luis Valley there is such an appropriate old saying, 'you have to strike when the iron is hot,' which is a must for branding calves with a hot iron. In the United States today there is tremendous interest in renewable energy and a multitude of government incentives for such projects. The heightened interest by the American people and the public policy and incentives created by the new Obama administration are driven by the global financial crisis, price of oil nearing peak supply, turmoil in the Middle East, and the need to move America to new energy sources and away from foreign oil.

However there are limitations to the market opportunities, so as the market for solar energy heats up, it would be smart to 'strike when the iron is hot'. What this means for the Bureau of Land Management (BLM) in the rule making process of this programmatic EIS, is that action taken to allow the private sector to utilize these public lands for solar energy development must be swift, with minimal or reasonable regulation adopted in an open process to allow for fair competition. In addition, other measures by federal and state governments will need to be initiated and/or continued for solar energy to be competitive with fossil fuels for commercial power generation.

The following comments are focused on potential projects in the San Luis Valley of Southern Colorado and more specifically on potential solar projects in two BLM parcels located in Conejos County, adjacent to and near Antonito Colorado. The two tracts of BLM-administered land combined are 15,507 acres, identified as Antonito Southeast (9,598 acres) and Los Mogotes East (5,909 acres).

The San Luis Valley (SLV or Valley) an isolated region in Southern Colorado is land rich and cash poor. The SLV a large sub-alpine high altitude valley surrounded by mountains has, since the Spanish first settled here in the 1700 and 1800's, been and still is an agricultural based economy. Agricultural commodities exported in their raw natural state have not brought much wealth to most of the descendants of the early Spanish settlers, although the Mormon and later settlers have reached some economic success in farming and ranching. There remain substantial economic and social disparities between the various ethnic groups and for most people in the San Luis Valley, therefore economic development is always in high demand for this land rich and cash poor community.

The Valley is uniquely suited for this new renewable energy economy obviously because of the many days of high altitude sunshine received annually (approximately 350 days of sunshine at an altitude of 8500 ft), because of the high winds generated by the weather movements coming over the San Juan Mountains (part of the Rocky Mountains dividing the country), and because of the natural geothermal conditions existing in the Valley (See DOE

Geothermal Report on the SLV geothermal potential), but also because the Valley is an isolated area with large tracts of undeveloped public and private lands of low or minimal economic value. A significant portion of the land in the Valley and the surrounding mountains are public lands managed by the US National Forest agency and the Bureau of Land Management (BLM).

This isolation though advantageous in some respects is also a double-edged sword since large amounts of electricity are not needed in these small isolated rural communities, thus power generated needs to be exported long distances to the urban centers of Denver, CO or Albuquerque, NM or farther south to the larger cities in Texas. Therein lays some of the most significant challenges for commercial solar energy generation in the Valley, i.e., lack of or minimal capacity of transmission lines to the markets and competition from solar or wind energy providers closer to the demand.

Solar energy potential (sun and vacant land) is readily available in other nearby Southwestern states of New Mexico, Arizona, Utah, and Texas, states which are closer to large metropolitan areas and large commercial consumers of electricity. Competition exists even within Colorado in other potentially good solar or wind generation areas near larger cities. Due to the limited supply of transmission lines to export power out of the Valley, the limited generation capacity of solar and wind, particularly in non-peak periods, and the transmission problems created by sporadic less than capacity transmission of electricity, the potential commercial solar energy development in Conejos County will be limited initially to the capacity of the existing transmission lines and regional markets with sufficient demand to risk the investment to develop the project and sustain the solar plant.

The most obvious regional consumer of electricity from a potential project in Antonito will be Excel Energy, primarily to fill the demand created by Colorado Government for Excel to meet 20% of its electric generation from renewable energy sources by 2012. This government created demand and state and federal government incentives both with limited expiration dates will require interested parties to act now while the demand exists and the iron (market) is hot. So not only must government (BLM) act quickly, so too must the private sector if these public lands are to be developed into energy producing lands.

Once the project is constructed and the costs are amortized over the life of the equipment, the maintenance and operation and paybacks will be assured due to the low cost of the renewable energy, the sun and wind.

Second or third phases to develop reliable peak demand electricity could involve a natural gas turbine plant (NG is readily available nearby at low cost), or geothermal energy or “renewable firming”. Renewable firming is using solar energy for producing hydrogen by electrolyzing water and dispatching it as power during peak demand. This concept called renewable firming is being considered in several locations in the Southwest. Typically big electrolysis units have an efficiency of about 80% so the power sales have to be at a rate that is premium to cover the inefficiency.

Antonito sits on the south central border of Colorado and New Mexico, so another potential market could be in northern New Mexico as well as northern Colorado. There is currently no planning in place for transmission lines to the south of Antonito, but there is an existing public right of way going south on the old Santa Fe railroad corridor, which tracks were removed during WWII, commonly referred to as “The Chile Line.” There is a lot of interest in rebuilding this rail link to the south, which could also incorporate (possibly) a High

Voltage Overhead Line (HV-OHL). The importance in having alternative or redundant HV electric transmission lines is obviously having redundancy for emergencies, but also to allow for competition to keep electricity rates competitive.

Antonito and the San Luis Valley, as many places in America, sorely need economic development, so I believe you will find the people ready willing and able to accept this new economy based on renewable energy and would welcome the economic development that would follow from this basic industry. Antonito and the Valley have the political will, the community support, obviously the sun and land, and the workforce to make these potential solar projects successful. This may be the competitive advantage for our communities, to be one of the first communities in the region to capture the commercial opportunity provided by these public lands located in our backyards.

‘Sustainable and environmentally friendly’ – the new catch words for today’s businesses – are not new terms for the original Spanish settlers and the people living off the land. The local farmers and ranchers have always protected the land, water and the animals knowing that if you destroy or do not protect your natural resources you would not have a future.

These conservative values are still in place today in the Valley. Today, though, new methods, techniques, and applications for sustainable agriculture and modern technology have allowed improved methods for increasing production without sacrificing the natural resources. The SLV is a region that has abundant natural, clean renewable forms of energy and food production, as such, industries based on sustainable and environmentally friendly values is the best and probably the only way our societies can survive the long term.

To make a solar project viable in Conejos County and Antonito, two things need to come together, builders (in partnership with manufacturers) experienced in the construction of commercial photovoltaic energy plants and investment capital to pay for the construction of the power plants. The technology of photovoltaic solar energy is readily available, with prices coming down sharply due to advancements in technology and oversupply due to the recession, but the startup investment capital will be more difficult to acquire. With regard to both of these needs, interested parties are coming together and preparing for the next step anticipating it will be a short process for the BLM to issue rules and regulations.

There are at least three major issues any large commercial solar project will need to address in order to be successful on these two tracts of public lands or on any of the other parcels under study. They are: 1) there must be a plan to address the shortage of available transmission lines or a government plan to develop in the reasonable future sufficient transmission capacity to allow for the potential export of renewable energy out of the Valley to the consumer/market; 2) developing a competitive economically viable business plan that will convince the decision makers to license the project, including acquiring the financing for capitalization (risk capital), and 3) the in-tariff price or Power Purchase Agreement with Excel Energy for solar generated power. Selecting the right photovoltaic technology is vital, however the selected and proposed technology will be unique to the developer of the Project.

The huge public interest and public policy initiatives are rightly justified and economically viable and sustainable. As a result of this PEIS study and the fast track fashion that government is moving, coupled with the financial incentives for renewable energy projects provided by the Stimulus Law (The American Recovery and Reinvestment Act of 2009, P.L. 111-5), this market opportunity has created some business interest in the commercial development of solar energy in these two tracts of BLM land.

The PEIS effort should continue and rules and regulations issued to allow companies to compete for fast track licensing of the two tracts of land. This new technology and the tremendous human and natural energy potential have certainly motivated me to get involved and likely return to my homeland. Over the last half century, one of the greatest exports from the San Luis Valley has been people; it is now time to bring them home as new jobs and opportunities are created.

In light of the above comments, we as a nation are on the right track when we invest in our future building energy facilities based on renewable energy and build them in our backyards, on our roof tops, or on our public lands, so long as we also as a people conserve the use of energy. Energy usage whether it is based on hydrocarbons, new coal technology, nuclear, or new renewable energy facilities should be conservatively utilized and never wasted. As a nation and as individual families we cannot afford to waste energy.

In the same breath, we all know renewable energy is not yet competitive with market prices for fossil fuels, so to be able to compete in the market place, renewable energy will require government intervention. At the same time, we also know the lost cost of the hydrocarbon based global economy does not account for the environmental damages caused by carbon emissions and does not account for the highly subsidized carbon based energy needing an expensive and large military to stabilize the global price and availability of oil and gas.

Model Solar Plant in the Valley:

The timing appears to be appropriate for commercial solar energy projects in the San Luis Valley, not only due to the Obama Administration Energy Policy and incentives, but also due to Colorado's progressive and aggressive policies for renewable energy. The concept of generating solar energy in the Valley and exporting it to larger urban centers has been shown to be commercially viable and technically sound as was proven by the Alamosa Solar Power Plant. The grid-connected solar plant located north of Alamosa in the center of the Valley is now generating 8.22 MW, enough power for about 1500 homes. It was built by Xcel Energy to meet Colorado's Renewable Energy Standard (RES).

Colorado Resource Planning and Excel Energy Application for Transmission Line:

Recently Excel Energy and Tri-State Generation and Transmission Association (Tri-State), (a regional Electric Cooperative which generates and sells electricity to the Rural Coops) applied to the Colorado Public Utility Commission (PUC) for a Certificate of Public Convenience and Necessity (CPCN) to build a high voltage overhead line from the SLV through the Sangre de Cristo Mountains (on the eastern side of the Valley) to the Eastern Slope of the mountains allowing it to transmit electricity from the Valley by connecting to the large transmission lines and distribution systems of Excel Energy on the Front Range of Colorado. Permitting and licensing of a HV-OHL is always a costly and time consuming process and in this case the rough estimate is it will take 10 years or more before the line is completed, 4 to 5 years of which would be for construction, assuming it gets approved.

This new contemplated HV-OH transmission line (although portions of which may be forced to be placed underground at a higher cost) is necessary for redundancy and to increase the capacity of the existing transmission line coming through the northern side of the Valley (Poncha Pass). This existing line has the capacity for 200 MW, most of which is used for transmission (import) of electricity to the Valley. During sunny days this transmission line

would serve to export surplus power and during non-daylight hours or non-solar generating days, these transmission lines serve to transport (import) power to Valley customers.

The Colorado Legislature passed a law in the 2007 session (Senate Bill 07-100, codified at C.R.S. § 40-2-126) to ensure the adequacy of Colorado's electric transmission infrastructure by requiring utilities to designate Energy Resource Zones (ERZ's) and providing expedited cost recovery for the construction of transmission facilities. The law states that Colorado utilities should continually evaluate the adequacy of electric transmission facilities throughout the state and should be encouraged to promptly and efficiently improve such infrastructure as required to meet the state's existing and future energy needs.

A biennial review is due before 31 Oct of each odd numbered year; the next report is due in 2009. Xcel Energy filed its first report on 31 Oct 07 and issued a second amended informational report on 24 Nov 08 designating the Generation Development Area (GDA) of the San Luis Valley, an ERZ, a priority of High-1, the highest priority. The report states that GDA Zone 4, the SLV, contains the best solar resources in the state and also correlates well with the most concentrated locations for known geothermal production capabilities. Preliminary studies indicate that Excel Energy could accept approximately 200 MW at the San Luis substation, located near Moffat, CO.

San Luis Valley - Comanche 230/345kV Transmission (Zones 4-5)

Description: This project consists of building high voltage transmission lines from the San Luis Valley Substation in south-central Colorado to a new Calumet Substation, near Walsenburg, and then to the Comanche Substation, in Pueblo, Colorado. The project would facilitate 600-1000 MW of potential generation resources in Zones 4 and 5, interconnected at or near the San Luis Valley Substation or the Calumet Substation. The project consists of two basic sections. The first section consists of approximately 93 miles of new, double-circuit 230kV transmission, built from the San Luis Valley Substation to a new Calumet Substation, which would be located approximately six miles north of the existing Tri-State Walsenburg Substation. Calumet would tie into the Walsenburg Substation with 230kV transmission.

Estimated Cost and Schedule: The cost of the project is estimated to be \$130 million, and would take approximately 48-60 months to construct, following authorization to proceed.

Evaluation: This project was identified during system studies of additional generation interconnected at the San Luis Valley Substation, and also through the CCPG Long Range Transmission Planning process. Public Service and Tri-State have agreed to jointly pursue the implementation of this project, including filing companion applications for CPCNs. Numerous transmission alternatives were considered and this project was chosen as the preferred alternative.

Priority: This project was given a High ranking. It is a bulk transmission system upgrade that would allow interconnection of additional generation resources from Zones 4 and 5. Public Service is working with Tri-State to advance this project.

Federal Cash Grant Program for Renewable Energy Property:

The USG Stimulus Law passed in February 2009 created a federal grant program for eligible renewable energy projects. The grant is equal to 30% of the tax basis of the system cost for projects placed in service in 2010 and 2011 or on which construction has commenced in 2009

or 2010 for equipment that will be placed in service after 2010. This is the first time that the federal government will give outright cash grants to subsidize renewable energy and there is no limit on the number of projects that are eligible for the grants.

The Stimulus Law designated the US Department of Treasury (Treasury) to administer the program. While the Stimulus Law contained the statutory authorization for the program, Treasury need to issue guidelines for applications before a request could be made. In mid-July 2009, Treasury issued the guidelines for the program (the Program Guidance). Further, Treasury opened the system for applications on 31 July 09.

Simply put, the program provides that if an owner of commercial real estate or a project developer installs renewable energy equipment in the next two and a half years or starts construction on a project, the federal government of the United States will pay 30% of the cost of the equipment and installation costs (once it is placed in service). This applies, for example, to onsite solar installations in commercial applications. (Residential is not eligible.)

This federal grant is on top of any state grants or incentives that may be available. In other words, if a business has been contemplating making use of renewable energy or has been trying to develop a project, there is now a unique two and a half year window to take advantage of unprecedented federal government support. On 01 Sep 09, the US Treasury Department and the Department of Energy announced the first awards under Section 1603 of the Stimulus law. The announcement says:

Treasury, Energy Announce \$500 Million in Awards for Clean Energy Projects
Initial Round of Cash Assistance for Wind, Solar Projects in Eight States Will Create Jobs, Increase Development

“WASHINGTON– Marking a major milestone in the effort to spur private sector investments in clean energy and create new jobs for America’s workers, Treasury Secretary Tim Geithner and Energy Secretary Steven Chu today announced \$502 million in the first round of awards from an American Recovery and Reinvestment Act (Recovery Act) program that provides cash assistance to energy production companies in place of earned tax credits. The new funding creates additional upfront capital, enabling companies to create jobs and begin construction that may have been stalled until now.”

Competition from Coal and Critical Overview of Renewable Energy in America:

With due regard to the limited two and a half year window for federal credits described above, there is of course the 20% RES capacity limitation of Excel, both of which make it imperative to fast track the process for licensing these two tracts of BLM land to allow private businesses to compete. As things are going now with the all of the projects planned in Colorado, it will not be long before Xcel reaches its capacity to absorb renewable energy and fills the need for renewable energy credits.

There is no question the market is hot and, although greatly subsidized and government driven, the demand is great, but there is competition from low cost abundant coal with new cleaner power generating plants and other renewable energy providers, already well established. In addition to the limited time frame for incentives and competition, investors have to consider the back of the neck concern over the continuing instability of global and US financial markets, particularly as the US Government continues to become more indebted using government bonds to finance the debt and take on new debt. Of course there are also

Guillermo DeHerrera
14 September 2009

Amman Jordan
Antonito Colorado

the technical limitations of generating power only when the sun shines or the wind blows, yet as consumers we expect/demand power from the utility company 24/7, so therein lays another great challenge to solar and renewable energy in addition to the competition from coal.

The Navajo Nation, the largest Indian Tribe in the North America, located in Window Rock Arizona near the Four Corners of Colorado, Utah, Arizona and New Mexico, a few years ago announced the construction of a new highly efficient coal burning power plant. Here is the headline summary of the Announcement dated 07 September 2007.

“The Desert Rock project is a 1,500 MW super-critical, low-sulfur, coal-fired power plant that includes Best Available Control Technology (BACT) to minimize plant emissions, improve plant efficiency and reduce water consumption. According to the U.S. Environmental Protection Agency, when built, Desert Rock will have the lowest emissions of any coal-fired power plant in the U.S., including a 15-to-20 percent reduction in carbon dioxide emissions.

The project will also be hybrid-air-cooled reducing water use by 80 percent. In addition, Desert Rock has committed to financially support additional emission reduction programs at regional energy projects and to reduce mercury emissions by a minimum of 80 percent.

Desert Rock will be constructed in a remote location near the coal fuel source. Both units are expected to reach substantial completion in late 2012 and early 2013. Upon completion, Desert Rock will generate enough energy to power approximately one million homes.”

Conclusion:

Therefore, unless the market or government accounts for the true costs of fossil fuels, whether low cost coal or foreign oil, with whatever mechanisms are used, government initiated or market created, renewable energy cannot in today’s market compete with coal or natural gas generated power without government intervention. Renewable Energy costs of development continue to come down and new technologies are often discovered, which may result in a dependable new energy economy, however, Renewable Energy to survive the long term will require continued government and public support for R&D, subsidies, effective legislation, and support for initiatives such this PEIS process.

There is not much more to say except to say, as the old timers said, ‘you need to strike while the iron is hot.’ As the world becomes more interdependent, yet the financial markets become riskier and more volatile, the way to ensure financial security and stability for future generations is to focus on the important functions that sustain life, Food, Energy, Environment and the Tribe (Your People), FEET.

/s/ Guillermo A. DeHerrera

Guillermo A. DeHerrera
Attorney at Law
Representing himself

Currently working on the Reconstruction of Iraq with an Iraqi Construction Company primarily focused on the construction of Power Plants and Oil Projects. Currently expatriate status living in Amman Jordan. Born and raised in Antonito Colorado with property holdings in Conejos County and permanent residence in Aurora Colorado.

Thank you for your comment

The comment tracking number that has been assigned to your comment is SolarM60214.

Comment Date: September 14, 2009 11:26:59AM
Solar Energy Development PEIS
Comment ID: SolarM60214

First Name: [Withheld by requestor]
Middle Initial:
Last Name: [Withheld by requestor]
Organization: Big Pine Paiute Tribe
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email:
Privacy Preference: Withhold name and address from public record
Attachment: bppt_peis_scoping.pdf

Comment Submitted:



BIG PINE PAIUTE TRIBE OF THE OWENS VALLEY
Environmental Department
Big Pine Indian Reservation

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Dear Preparers,

Subject: Comments on Solar Energy Development Programmatic EIS

The Big Pine Paiute Tribe of the Owens Valley (Tribe) is a federally recognized Tribe located in Owens Valley, California. The Tribe is committed to the preservation of American Indian cultural resources, religious practices, and sacred lands as well as the responsible stewardship of natural resources. Thank you for the opportunity to provide comments during this scoping process for the Solar Energy Programmatic Environmental Impact Statement concerning BLM lands in six southwestern states.

Tribal Consultation Process

A notice was released in the Federal Register on June 30, 2009. The Tribe's first formal notice was via letter received from the BLM California Desert District Manager, dated July 1, 2009. The Tribe requests a copy of the Draft EIS as soon as it is released.

Comments on Scoping Maps

The Tribe encourages the BLM to focus evaluations for possible solar development on lands recently disturbed and to avoid lands showing no evidence of recent disturbance. Although it was difficult to discern (from the documentation provided) the exact criteria used for identifying lands for further study, the level of previous disturbance does not appear to be a criterion, and this is unfortunate. Known restrictions (e.g. designated wilderness or critical habitat for an endangered species) were used to lower the land's suitability or even omit it from further consideration, but it appears an assumption was made along these lines: If the details of a particular resource on a given area of land are unknown, then we assume there may *not* be any noteworthy or valuable resources. In reality, the reverse should be the rationale. If there is no known history of disturbance for an area, then it should be presumed intact and the goal should be to preserve it intact. For BLM lands, therefore, recently disturbed areas not of historic significance, such as mined sites, abandoned farm fields, rail yards, towns, or airfields (etc.) should be given higher priority for development than undisturbed areas. If it is learned that BLM lands are generally minimally disturbed or undisturbed, then BLM lands are probably not the

priority desert lands for further study for solar development. Certainly, disturbed desert lands do exist, they simply may be on private or other lands (e.g. military).

One BLM Planning Criterion states, “**Environmental protection and energy production** are both desirable and necessary objectives of sound land management practices and are not to be considered mutually exclusive priorities” (quoted from <http://solareis.anl.gov/eis/rmps/index.cfm>). The statement is problematic, because it can invoke many interpretations, some undesirable and unnecessary. The Tribe and many in the public have trusted the Federal Government with protecting our public lands for the long term and not leasing them to private, for-profit corporations for activities that, while perhaps beneficial to the public in some ways over the relative short term, actually degrade landscapes and resources for hundreds to thousands of years. By protecting the environment, the BLM protects the ability of the natural landscape to provide goods and services to the earth and all living organisms. With global climate change, our reliance on those goods and services is likely to increase. The Tribe feels protection of most all public lands should be a higher priority.

The information provided during the scoping process for this PEIS gives the misleading impression that the lands presented in the maps are the complete extents of lands to be considered for solar development in the six-state area. However, it is known that other areas are currently being studied or have been studied and are further along in the process to construct solar power facilities. For example, a site known as Ivanpah, has been evaluated, but it does not appear on the maps for this PEIS. It is unclear whether new sites, not highlighted in these maps, may be considered for evaluation at a later date. Either everything should be included in this PEIS, or a long, clear description of what is and isn't included, and why, should be presented. This is important for the public to understand the implications of full solar development on BLM desert lands, thus the extent of potential cumulative impacts.

The areas shown on the map for this PEIS are generally located outside the areas considered our Tribal homelands. It is our understanding that all Native Americans throughout the regions presented on the maps will provide specific knowledge on cultural resources to be considered. Even though the maps do not include our region, an important issue in our area has been export of water to fuel distant economies and energy generation. Taking resources from one area to develop resources in another should be avoided. It is imperative that availability of sufficient water resources is evaluated very early in the process. In addition, access to and the availability of any and all other necessary resources beyond insolation and transmission lines should be considered and any impacts associated with use of water and other resources for future solar facilities should be thoroughly evaluated. It is probable that many of the lands identified on the current maps need to be removed due to lack of feasible water supply or for other resource limitations.

The PEIS should make it clear that second tier/ site specific cultural and environmental analyses will still need to be intense once specific areas are identified for further study. The PEIS provides an overview, and not necessarily many details; the details deserve systematic scrutiny and evaluation.

General Comments

If utility-scale solar is developed on BLM lands throughout the west, there will be impacts. Priorities should be first to avoid as many adverse impacts as possible. Secondly, resource impacts should be minimized if they are deemed necessary and steps should be taken as soon as possible to restore areas and ameliorate impacts. Finally, if sites cannot be fully restored, plans should be in place to compensate for the lost resources, goods, services, and values. The Tribe recommends a fund for mitigation be established for each developed site, and that considerable thought be given to the long-term and currently unquantifiable impacts such development will cause.

The PEIS should perform a thorough evaluation of royalties. Here, a royalty should be defined as the share of the profit paid to the grantor. Because the grantor for public (BLM) lands is the public, decide which public most deserves royalties. It could easily be argued that Native Americans who used resources on these lands long before solar development was anticipated should be the first to be considered for royalty agreements. Many Tribes throughout the desert region are now recognized as sovereign nations.

Sincerely,



Virgil Moose
Tribal Chairperson

Thank you for your comment, Donna Charpied.

The comment tracking number that has been assigned to your comment is SolarM60215.

Comment Date: September 14, 2009 11:31:38AM
Solar Energy Development PEIS
Comment ID: SolarM60215

First Name: Donna
Middle Initial: J
Last Name: Charpied
Organization: Citizens for the Chuckwalla Valley
Address: PO Box 397
Address 2:
Address 3:
City: Desert Center
State: CA
Zip: 92239
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: CCV PEIS solar comments.doc

Comment Submitted:

CITIZENS FOR THE CHUCKWALLA VALLEY

PO BOX 397

DESERT CENTER CA 92239

(760) 987-1363

stopthedump@yahoo.com

"DON'T WASTE THE DESERT"

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

September 14, 2009

Via Internet : <http://solareis.anl.gov/involve/comments/index.cfm>

RE: PEIS, Solar Energy Development

To Whom It May Concern,

The Citizens for the Chuckwalla Valley ("CCV"), a grass-roots organization made up of residents of Eagle Mountain/Desert Center, Native Americans, and local environmental activists, was formed in 1990 to prevent the World's largest garbage dump from being built across the street from the Eagle Mountain elementary school, and on the doorstep of Joshua Tree National Park. We have since expanded our mission to include other potentially damaging proposals and actively participate in the decision making process for proposals that include water storage projects, power generating projects, and other projects that have the potential to harm desert communities and Joshua Tree National Park.

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- Degradation of water resources from concentrated solar power
- Degradation of air quality
- Impacts to visual resources
- Impacts to flora and fauna
- Impacts to Federal/State Threatened and Endangered Species

- Impacts to cultural sites

- Impacts to Native American values
- Impacts to private property values
- Limiting access to public lands
- The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.
- An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

We incorporate, as though fully contained herein, the comments submitted by the Alliance for Responsible Energy Policy ("AREP"), <http://www.allianceforresponsibleenergypolicy.com> and the comments submitted by the Basin and Range Watch, <http://www.basinandrangewatch.org>. Our comments will focus on the siting of projects in the Chuckwalla Valley located in eastern Riverside County, California.

A complete analysis needs to be conducted on the cumulative impacts from all past, present and foreseeable future projects in the Chuckwalla Valley. The Department of the Interior ("DOI"), and the DOE is guilty of violating environmental justice laws by continuing to site and approve environmentally harmful projects in Eagle Mountain/Desert Center. There is a wholesale assault on this area by energy/utility companies, garbage/sewage mongers, and mercenaries.

We will begin with a little background. Eagle Mountain/Desert Center is located about 50 miles east of Indio and about 50 miles west of Blythe. It is a community that is surrounded like a horseshoe by Joshua Tree National Park Wilderness, and targeted for some of the most unsustainable boondoggles to roll down I - 10. Proposed projects will degrade air and water quality, deplete underground aquifer, increase global warming, result in an irretrievable commitment of natural resources, and negatively impact the Crown Jewel of our desert, Joshua Tree National Park.

In 1936, Joshua Tree (JoTr) National Monument was established by Presidential proclamation, to protect and preserve the area's historic, prehistoric, and scientific features, including the natural resources of the Colorado and Mojave deserts. In 1976 JoTr was given federal wilderness designation. In 1977 it received Class I Wilderness airshed status. In 1984, it was designated a World Biosphere reserve. In 1994, JoTr's status as a nationally significant area was reaffirmed by Congress when they designated it a National Park and added 234,000 acres to the Park and designated an additional 163,000 acres as wilderness.

From 1987 until present residents, desert activists, grassroots organizations, and national environmental organizations worked together to prevent the world's largest garbage dump from being built at the defunct Kaiser iron ore mine at Eagle Mountain. The plan is to transport and deposit 20,000 tons of garbage from Los Angeles to Eagle Mountain on trains and trucks for the next 117 years. This project

has been mired in litigation. On September 20, 2005 Federal District Judge Robert Timlin ruled in favor of environmentalists, however the Government and the Polluters appealed the decision to the 9th Circuit Court of Appeals. The case was heard December 6, 2007 and we await the ruling, (for more information on the dump see www.ccae.org and click Desert Community.)

The Eagle Crest Energy Company ("ECEC") intends to utilize the Eagle Mountain mine site to produce electricity. This project received its preliminary permit in March 2005 from the Federal Energy Regulatory Commission ("FERC"), and has recently filed a license application. The plan is to pump ground water from designated water wells in the Chuckwalla Valley to the massive east pit at Kaiser's old mine to be stored until low peak energy times when the water will be pumped to Kaiser's Central Pit. When electricity demands are at peak times, the water in the central pit is released through monstrous tunnels (built under the dump) heading to the east pit, where very large underground turbines will spin, creating electricity. The initial filling of the east pit will require 8 billion gallons of water, and take two years or more of constant pumping to fill. This project will exacerbate the aquifer's overdaft condition to depletion. Where will water come from for all of these projects, i.e. world's largest dump, hydro-electric pumped storage project, and tens of thousand of acres of solar panels? It has been proposed that Kaiser Ventures will supply water for OptiSolar's project (now Solar One). The problem with this is, the Kaiser well proposed for use, is on trespass on Public lands, and was once used for the mine's millsite. However since Kaiser went bankrupt and gave up all mining permits for the dump, that well is no longer for a millsite, and Kaiser illegally pumps water to the townsite now. If this well is used for the dump and solar panel projects, it will start to deplete the water resources of Joshua Tree National Park, as well as the Chuckwalla Basin's aquifer.

Preliminary studies conducted in the past indicate that there will be significant environmental impacts to the local community as well as the Park. Citizens have voiced strong concerns with the project's potential impacts to the environment and the local residents who depend on the desert's natural resources. For more information see: <http://www.eaglemountainenergy.us/index.html>. This project proclaimed as "green energy", will actually use more energy than it creates and, has been on the books since 1991.

And now to make it a true environmental justice trifecta, Secretary of Interior Salazar has designated and put on the fast track, a very large area of public lands in the Chuckwalla Valley as solar sacrifice zones (see <http://solareis.anl.gov>). In the upper Chuckwalla Valley alone, 30,543 acres being targeted for solar fields. To fast track these projects leads the public to believe that there has been a predetermined decision made to approve and construct these projects, completely infects the public process, and violates the National Environmental Policy Act (NEPA). The State of California has developed the California Environmental Quality Act, and the Federal Government developed the Council on Environmental Quality with the Environmental Impact Study the vehicle which the public may articulate its concerns. The reason for these

environmental documents is to provide decision-makers with all of the available information to ensure a knowledgeable decision is rendered. There needs to be separate environmental review for each of the 24 sites that are being targeted. To do less only shows the DOI's and DOE's desire to by-pass any meaningful discussion for each project involved, and sweep any problems under the rug. Further, The National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. § 4331(2)(c), requires all agencies of the federal government to prepare an environmental impact statement for all major projects significantly affecting the quality of the human environment. The solar projects proposed in the Chuckwalla Valley meet this criteria and separate environmental studies are required by law.

Let's get one thing straight right here. EVERYBODY wants independence from fossil fuels. The energy policies being adopted by the Obama Administration and elected officials are misguided. Taking ratepayers and tax payers off our knees to the foreign and American oil corporations only to put us on our knees to foreign and American "renewable energy" corporations does nothing to solve the "control" problem. Instead of giving away our precious public lands for a song and a dance, and then giving recovery funds to corporations, make legislation to assist homeowners, property owners, and businesses to obtain recovery money to install rooftop solar, thin film solar, micro-windmills to make us all truly energy independent. It would not cost more and will result in an economic engine boosting our economy with jobs. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Thousands of acres of solar panels are proposed to be built next to Joshua Tree National Park wilderness areas next to the mouth of the Pinto Basin and along the base of the Coxcombs. It is interesting to read news articles describing the locations of solar sacrifice zones.

One account they are "east of Joshua Tree National Park", when in fact some are dangerously close to its southeast boundary. We collaborated with our colleagues from the Basin and Range Watch and created a web page of images and text that memorializes the natural resources of the Chuckwalla Valley and Joshua Tree National Park. We incorporate the images and information of the website page, <http://www.basinandrangewatch.org/ChuckwallaValley1.html>, as though fully contained herein, and make it a part of the Public Record.

Do these people in power not know where these areas are, or do they consciously deceive a heretofore trusting public? Our legislators ought to be approving legislation such as AB 811, reinstate Feed In Tariffs, and work with their constituents to become energy independent. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Recognizing the importance the National Park system is to the American people, Interior Secretary Ken Salazar has announced that his department is temporarily barring the filing of new uranium mining claims on about 1 million acres near the Grand Canyon, an Obama administration official said. (AP 7/20/09)

In the late 1990's President Clinton halted a gold mine outside Yellowstone National Park saying that "...our National Parks are more valuable than gold...".

We ask, "Is Joshua Tree National Park less valuable than faux renewable energy projects and garbage"?

The Pinto Basin in Joshua Tree National Park is home to the healthiest tortoise populations in California. Currently there are no polluting facilities that impact their health. Conversely, the Chuckwalla Bench Area of Critical Environmental Concern has realized a 90% decline in tortoise populations and necropsies have shown toxics in their internal organs. CCV have documented tortoise activity, burrows, scat, and tortoise themselves roaming the Upper Chuckwalla Valley in the areas proposed for solar projects. There is a land bridge across the Upper Chuckwalla Valley that begins inside the Pinto Basin and travels across the Valley along the Coxcombs to the McCoy's. Removal of this land bridge will have significant negative impacts to the tortoise and other wildlife depending upon it for survival. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

In a conversation with OptiSolar's Wayne Hoffman, CCV learned that they plan to utilize the defunct private railroad owned by Kaiser Resources (still under federal litigation) to transport equipment to construct their project, which has since been sold to Solar One. An

existing, deactivated 52-mile rail line leading from the Salton Sea to Eagle Mountain, along with a right-of-way along that rail line, and the associated upgrades of the rail line and right-of-way should also be considered part of the Solar One project. The rail line and right-of-way pass through an established area of critical habitat for the desert tortoise and desert pupfish, threatened species under the ESA. They also traverse the Chuckwalla Bench Area of Critical Environmental Concern (ACEC), which was designated as such because it contains a significant population of tortoise. Because Solar One includes this rail line in their project which would have adverse impacts on the desert tortoise and Desert Pupfish, BLM is required to enter into consultation with the U.S. Fish and Wildlife Service ("FWS") under Section 7 of the ESA.

What are the cumulative impacts from transporting solar equipment and the transportation of 20,000 tons of garbage daily with regards to traffic congestion, air quality impacts from more trains in an area that boasts of a Class I airshed, and how will additional train trips affect the continued existence of the desert tortoise and desert pupfish? Currently this private railroad is in complete disrepair and will cost up to \$200 million dollars to bring back to fit repair. Will our tax dollars be used to reconstruct a private railroad?

BIOLOGICAL RESOURCES: Complete analysis of the impacts to these biological resources need to be conducted singularly and cumulatively with past, present, and foreseeable future projects.

Special-status plant species observed in the project area:

- FOXTAIL CACTUS: A federal Category 2 candidate and a California Native Plant Society ("CNPS") 1B species.
*Category 2 = information is currently being collected to see if the species should be listed as threatened or endangered.
*1B species = Plants rare, or endangered in California and elsewhere•

•CALIFORNIA BARREL CACTUS: A BLM Sensitive species observed within the access roads, and along the rail line.

- OROCOPIA SAGE: A federal Category 2 candidate and a CNPS List 1B, observed along the rail line.

Special-status Wildlife species occurring in the vicinity of the projects:

- DESERT PUPFISH: A federal and state listed endangered species. Observed approximately 1/4 mile south of the Eagle Mountain railroad

trestle in a tributary of Salt Creek, and earlier surveys report the species is present throughout Salt Creek. Studies indicate that the best pupfish habitat in the area begins approximately 1 mile below the rail trestle and extends upstream to the headwaters of the tributary. Of particular interest is that this species could be wiped out with the planned construction/repair of the railroad. It is virtually impossible to relocate this species because each pool is minerally unique in composition - Personal conversation with National Park Service in Death Valley.

- COMMON CHUCKWALLA: A federal Category 2 species occurring at the project sites and moderate occurrence along the rail line

- FLAT-TAILED HORNED LIZARD: This species has been proposed for federal listing as threatened and is a California Species of Special Concern. The species occurs in the vicinity of the rail line near Ferrum Junction.

- * California Species of Special Concern = When encountered, should be reported to the Department , and for which impacts may be considered significant under CEQA.

- DESERT TORTOISE: This species is federal and state listed as threatened. Tortoise have been observed in the Chuckwalla Valley, north of I-10 in the Eagle Mountain area, the Chuckwalla Bench north of the Chocolate Mountains, and on the railroad. The Eagle Mountain railroad and parts of Eagle Mountain road cut through the Chuckwalla Unit of Critical Habitat for desert tortoise. The impacts to this species is not only from train and truck traffic. Ravens historically are attracted to dumps, and ravens prey on juvenile tortoise. It is expected that predation on the desert tortoise will increase. (Personal conversation with Park ecologist). A recent report by Dr. Richard Knight of the University of Colorado describes the Park's Pinto Basin as the

most pristine raven habitat in all of the Mojave desert. He regards Joshua Tree National Park as a unique habitat with unaltered raven densities. There are a number of mitigation measures to decrease the impacts to the desert tortoise, however the effectiveness of some of the mitigation strategies are unproven.

- NORTHERN HARRIER: A California Species of Special Concern. This species is considered to occur seasonally along the rail line, and may seasonally forage in habitat at the project site and along access roads

- SHARP-SHINNED HAWK: A California Species of Special Concern. Likely to migrate in the vicinity of the projects in the fall and

spring, and may winter in any part of the project areas. The species may also seasonally forage in habitat at the project sites and along the rail line.

- COOPER'S HAWK: A California Species of Special Concern. Most parts of the project areas are within the year-round ranges, although the central part of the rail line passes through an area of winter-range only.

- GOLDEN EAGLE: A California Species of Special Concern. The species is highly likely to occur in any portion of the project area. Note: Members of CCV have observed these beauties several times in this area.

- PEREGRINE FALCON: Is a federal and state listed endangered species with a low to moderate probability to occur at the project site, access roads, and rail line. Members of CCV have observed in the project areas.

- CALIFORNIA BLACK RAIL: A federal Candidate 2 candidate and is state listed as threatened. Have been observed in the Salt Creek area north of the rail line, and do occur within one mile of the project area.

- YUMA CLAPPER RAIL: A federally listed endangered species and state listed threatened species, observed in the Salt Creek area north of the rail line.

- WESTERN BURROWING OWL: A federal Category 2 candidate species and a California Species of Special Concern, with a moderate likelihood of occurrence at the project site, access roads, and rail line.

- BLACK-TAILED GNATCATCHER: Considered a California Special Animal by CDFG, and observed near Kaiser & Eagle Mountain Roads.

- * California Special Animal = an animal fully protected by the state.

- LECONTE'S THRASHER: A federal Category 2 candidate and California Species of Special Concern, observed near Kaiser & Eagle Mountain Roads and could nest in habitat at the project and along the rail line.

- LOGGERHEAD SHRIKE: A California Species of Special Concern that is expected to occur throughout the project areas.

• YELLOW WARBLER: A California Species of Special Concern observed in the townsite of Eagle Mountain and the Chuckwalla Bench Area of Critical Environmental Concern ("ACEC").

• YELLOW-BREASTED CHAT: A California Species of Special Concern observed in the townsite and expected to occupy habitats throughout the project areas.

• CALIFORNIA LEAF-NOSED BAT: A federal Category 2 candidate and a California Species of Special Concern who uses the Kaiser Mine as a winter roost. There have been no other winter roosts located during air searches over the Orocopia, Chuckwalla and Coxcomb Mountains.

• TOWNSEND'S BIG-EARED BAT: A federal Category 2 candidate and a California Species of Special Concern. Maternity roost of this species was observed in the mine adit during 1990 surveys, however subsequent surveys did not identify this species, possibly indicating that the roost has been abandoned. If the species is present, it is likely to forage in nearby areas, including near access roads & rail line and areas closer to the mine.

• CALIFORNIA MASTIFF BAT: A Category 2 candidate and a California Species of Special Concern. Suitable habitat is present, and the species is listed as one that could occur at the project site (Brown, 1990). The entire project area is within the range of the species.

• PALLID BAT: A California Species of Special Concern was captured in a mist net over a mine pit pond during the 1990 surveys, and guano was found in two adits west of the project site. The species is likely to forage in areas near access roads and rail line, and it is known to forage over pond water, which forms from standing water after a rainfall in the bottom of the east pit.

• AMERICAN BADGER: A California Species of Special Concern identified at the project site and near Kaiser Road. The species is highly likely to occur along the rail line. Members of CCV have observed this species a number of times in project areas.

• YUMA MOUNTAIN LION: A Category 2 candidate and California Species of Special Concern. Mountain lions have been observed at the Eagle Mountain townsite, and several farms in the Desert Center/Eagle Mountain area.

• NELSON'S BIGHORN SHEEP: A California Special Animal observed at the project site, and several locations along the Eagle Mountain railroad.

Biodiversity is the concept that all components of ecological systems, both living and nonliving, are interconnected in a hierarchical continuum, and that changes in the diversity at any level in that hierarchy can have effects at other levels (CEQ, 1993). The Council on Environmental Quality ("CEQ" 1993), has identified several primary threats to biodiversity, including:

- Physical alteration of ecosystems from resource exploitation and changing land use including habitat destruction, degradation and fragmentation;

- Pollution, which can have direct lethal or sub lethal effects, or can degrade habitat through such factors of eutrophication, acidification, or thermal pollution;

- Over harvesting of populations, which results in disruption of interconnections within and/or between species, thus affecting ecosystem function;

- Introduction of exotic species, which can eliminate native species through predation, competition, or disease transmission, thus altering interconnections between species and changing ecosystem function; and

- Disruption of natural processes, which can occur when land management procedures change ecosystem dynamics through such practices as fire suppression or changes in water flow regimes.

To conclude the section on Biological Resources, it is clear that the impacts to wildlife will range from moderate to extreme. The proposed dump, if goes to fruition, will bring in 20,000 tons of garbage a day for a century. This is garbage to us, but a source of food for animals. This process will inevitably create additional sources of nutrition for animals to exploit. In the desert where resources are scarce, even a small amount of enrichment is highly attractive to animals and is all that is required to alter wildlife behavior. (Personal conversation with Park ecologist). To compound the problems, there is a proposal to construct a hydroelectric pump-storage plant at the same site. This proposal will introduce a huge source of water that is currently scarce in the desert region. The entire ecosystem in and around the project site, and Joshua Tree National Park, will be thrown out of kilter, should either of these projects go forward, and the solar projects will compound the impacts by reducing the habitat for animals to live and forage for food.

Representatives from solar projects inappropriately declare that the tortoise will find shade and make homes under the solar panels. This is pure, unadulterated hogwash! The temperature of the ground will be magnified by the panels, not cooled ! The ground temperature could get as high 140°F, add mirrors to that and it will increase

exponentially. Nothing would be able to live under them, much less a tortoise. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Is scraping the desert bare really the answer to global warming, or just more corporate welfare, giving developers free land, free money and in Solar One's case, tax payer/ratepayer dollars to buy the solar panels they make and sell to themselves? We say "no". In fact researchers are finding that the desert is sucking up carbon at rates they never imagined.:

"...Researchers have found that Nevada's Mojave Desert, square meter for square meter, absorbs about the same amount of CO₂ as some temperate forests. The two sets of findings suggest that deserts are unsung players in the global carbon cycle. "Deserts are a larger sink for carbon dioxide than had previously been assumed," says Lynn Fenstermaker, a remote sensing ecologist at the Desert Research Institute (DRI) in Las Vegas, Nevada, and a coauthor of a paper on the Mojave findings published online last April in Global Change Biology.

The effect could be huge: About 35% of Earth's land surface, or 5.2 billion hectares, is desert and semiarid ecosystems. If the Mojave readings represent an average CO₂ uptake, then deserts and semiarid regions may be absorbing up to 5.2 billion tons of carbon a year--roughly half the amount emitted globally by burning fossil fuels, says John "Jay" Arnone, an ecologist in DRI's Reno lab and a co-author of the Mojave paper...". (Science 13 June 2008: Vol. 320. no. 5882, pp. 1409 - 1410 DOI: 10.1126/science.320.5882.1409).

There needs to be a complete analysis of how much carbon will not be absorbed due to denuding the desert for solar panel development, and how much carbon will be added to the environment from the necessary transmission lines?. To wit:

On April 17th, the Environmental Protection Agency released a list of the top 5 toxic gases being emitted that "endanger public health and welfare". One of these gases is sulfur hexafluoride, also known as SF₆. Here is what the EPA says about SF₆:

"With a global warming potential 23,900 times greater than CO₂ and an atmospheric life of 3,200 years, one pound of SF₆ has the same global warming impact of 11 tons of CO₂."

As it turns out, the most common use for SF6 worldwide is as an insulator in high voltage equipment that transmits electricity!

Also, an analysis of which alternative will meet the objective of curbing global warming; hundreds of thousand of denuded acres in the desert OR rooftop solar and micro windmills? Studies that have been conducted suggest that the Joshua Tree National Park's signature tree, the Joshua Tree may be nonexistent in the Park due to air pollution from flows from Los Angeles, Riverside, and Coachella Valley. How will the proposed solar projects not accelerate this phenomenon? Not one acre of public

lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

For the past three years, National Park Service at Joshua Tree National Park has maintained and operated an air quality monitoring system within close proximity to Eagle Mountain. Data collection began in May 2006 with a collection interval of 180 days (October). The 180 day cycle continued 2007, 2008 and is now collecting data for a fourth 2009 session. The impetus for the data collection beginning in 2006 was to collect baseline ozone data in anticipation of operations for both the Eagle Mountain hydroelectric project and the dump. The data collection point is located on Park property, 6 miles northeast of the proposed dump and hydro projects, as well as proposed solar projects. In Summary the "Final Validated" data collected in 2006 and 2007 at 85ppb standard indicated respectively only two days of violation of the eight hour standard. The 2008 and 2009 (work in progress) are at the new NAAQS of 75 ppb and are presented here. If the older standard of 85 ppb were applied, one day in 2008 and zero days in 2009 would show a violation of the eight hour standard. All data indicate that during the summer months when ozone levels are at their highest, the eastern portion of the Park is substantially less impacted by high levels of ozone than the entire western portion of the Park. Maintaining this high level of air quality is paramount to NPS, environmentalists, desert residents, and the Clean Air Act. This information is from comments to the Federal Energy Regulatory Commission regarding the proposed hydroelectric project, dated August 17, 2009. We request what air quality impacts will be visited on the Park and the community of Desert Center/Eagle Mountain singularly and cumulatively including past, present, and reasonably foreseeable future projects.

Groundwater: To calculate groundwater usage several significant groundwater users must be included. The below list includes a non-

comprehensive list of water users and potential water users in the Chuckwalla Valley:

Farms in Chuckwalla Valley (Jojoba, grapes, row crops)
Chuckwalla State Prison
Ironwood State Prison
City of Blythe
Corn Springs palms/ponds/row crops/fish farm
Fish Farms on Kaiser and Rice Road
Residents at Lake Tamarisk
Golf Course @ Lake Tamarisk
Winter visitors @ Lake Tamarisk
Eagle Crest Energy Company
Eagle Mountain dump
Chuckwalla Valley Raceway

The solar projects are not feasible because there simply is not enough water to sustain the project as well as historic water users in the Chuckwalla Valley.

Solar panels for large centralized photovoltaic installations are getting cheaper, but are at best 10% efficient in converting solar to electrical energy. Solar thermal installations are comparably inefficient, and require even more water than photovoltaic plants. All grid-connected solar developments require conversion of DC to AC for transmission on the existing grid, entailing a 16% loss of energy—plus another 7 - 9% loss in transmission. Solar panels degrade over time, beginning with an almost instant loss of 2-3% of output, followed by anywhere from 0.5 to 3% annual degradation of energy output. For a 20% efficient panel, a 3%/year loss of output reduces the output to 11.5% in 20 years.

The materials for these installations will need to be replaced over relatively short periods of time. It is certain that some, if not many, such installations will be abandoned. Guaranteed (bonded) reclamation of such sites must be a front-end cost for approving any installation. This should include putting up the money, prior to development, sufficient to pay for restoration of the land to an ecologically functioning state. The lessons from inadequate bonding of mining and wind energy enterprises must be employed, and all routes of escape, like corporate bankruptcy, from the obligation to restore the land should be closed.

There is a more-than-ample supply of platforms for solar installations that do not require any additional land consumption, and have minimal transmission requirements: roof-top developments in urban areas. These avenues should be explored before any centralized power plants in remote areas are considered.

Lastly, over 6,000 acres of jojoba were planted in Desert Center/Eagle Mountain in the early 1980's. The BLM gave away land at \$2.50 an acre under the Desert Land Entry Program, which has since been discontinued. Hundreds of acres of ironwood forests and dry wash woodlands were developed with jojoba, now abandoned. What will be the impacts be to the environment (i.e. soil erosion, flooding etc.) when the remaining ironwood forests and dry wash woodlands are scraped away for solar?

Jojoba, a renewable natural resource, was included in the 98th Congress Report 98-109, CRITICAL AGRICULTURAL MATERIALS LIST. The Report states, in part, "...Congress recognizes the need of a domestic industry or industries for the production and manufacture from native agricultural crops of products other than rubber which are of strategic and industrial importance but for which the Nation is now dependent upon foreign sources, that such activities would benefit the economy, the defense, and the general well - being of the Nation, and that additional research efforts in this area should be undertaken or continued and expanded...". Former Congressman Al McCandless (R Palm Springs) was responsible for adding jojoba to the critical agricultural materials list. Jojoba plantings need to be part of the Alternative Actions section of the environmental documents. Members of CCV are experts in the field and will be happy to provide further information. This plant is native to the area, and the infrastructure is already in place to re-start the industry, thus providing an

alternative energy source from the region you desire to develop alternative energy projects.

Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Respectfully Submitted,

Donna Charpied

Donna Charpied Executive Director, for
Citizens for the Chuckwalla Valley

Donna Charpied, Executive Director
Citizens for the Chuckwalla Valley
PO Box 397
Desert Center CA 92239
(760) 987-1363

stopthedump@yahoo.com

<http://www.basinandrangewatch.org/ChuckwallaValley1.html>

"Don't Waste The Desert"

CC: Interested Parties

Thank you for your comment, Donna Charpied.

The comment tracking number that has been assigned to your comment is SolarM60216.

Comment Date: September 14, 2009 11:33:26AM
Solar Energy Development PEIS
Comment ID: SolarM60216

First Name: Donna
Middle Initial: J
Last Name: Charpied
Organization: Citizens for the Chuckwalla Valley
Address: PO Box 397
Address 2:
Address 3:
City: Desert Center
State: CA
Zip: 92239
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: CCV PEIS solar comments.doc

Comment Submitted:

CITIZENS FOR THE CHUCKWALLA VALLEY

PO BOX 397

DESERT CENTER CA 92239

(760) 987-1363

stopthedump@yahoo.com

“DON'T WASTE THE DESERT”

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

September 14, 2009

Via Internet : <http://solareis.anl.gov/involve/comments/index.cfm>

RE: PEIS, Solar Energy Development

To Whom It May Concern,

The Citizens for the Chuckwalla Valley ("CCV"), a grass-roots organization made up of residents of Eagle Mountain/Desert Center, Native Americans, and local environmental activists, was formed in 1990 to prevent the World's largest garbage dump from being built across the street from the Eagle Mountain elementary school, and on the doorstep of Joshua Tree National Park. We have since expanded our mission to include other potentially damaging proposals and actively participate in the decision making process for proposals that include water storage projects, power generating projects, and other projects that have the potential to harm desert communities and Joshua Tree National Park.

The plans for a Programmatic Environmental Impact Statement (PEIS) appear to be fast tracking the release of certain, environmentally sensitive public lands and opening them to solar energy development. The Bureau of Land Management (BLM) and Department of Energy (DOE) need to consider the consequences of freeing up so much public land for only one use. This whole process needs to move at a slower pace in order to identify issues and impacts that will arise if this land is developed. Please consider the following issues:

The potential for specific negative impacts to each of the 24 study areas should be clearly explained. The maps fail to identify any local issues for the regions involved. These would include:

- Degradation of water resources from concentrated solar power
- Degradation of air quality
- Impacts to visual resources
- Impacts to flora and fauna
- Impacts to Federal/State Threatened and Endangered Species

- Impacts to cultural sites

- Impacts to Native American values
- Impacts to private property values
- Limiting access to public lands
- The BLM and DOE should be scheduling public scoping meetings for communities near each of the 24 areas that are being considered for this proposal.
- An Environmental Impact Statement should be written for each one of the 24 tracts of land considered in this proposal.

We incorporate, as though fully contained herein, the comments submitted by the Alliance for Responsible Energy Policy ("AREP"), <http://www.allianceforresponsibleenergypolicy.com> and the comments submitted by the Basin and Range Watch, <http://www.basinandrangewatch.org>. Our comments will focus on the siting of projects in the Chuckwalla Valley located in eastern Riverside County, California.

A complete analysis needs to be conducted on the cumulative impacts from all past, present and foreseeable future projects in the Chuckwalla Valley. The Department of the Interior ("DOI"), and the DOE is guilty of violating environmental justice laws by continuing to site and approve environmentally harmful projects in Eagle Mountain/Desert Center. There is a wholesale assault on this area by energy/utility companies, garbage/sewage mongers, and mercenaries.

We will begin with a little background. Eagle Mountain/Desert Center is located about 50 miles east of Indio and about 50 miles west of Blythe. It is a community that is surrounded like a horseshoe by Joshua Tree National Park Wilderness, and targeted for some of the most unsustainable boondoggles to roll down I - 10. Proposed projects will degrade air and water quality, deplete underground aquifer, increase global warming, result in an irretrievable commitment of natural resources, and negatively impact the Crown Jewel of our desert, Joshua Tree National Park.

In 1936, Joshua Tree (JoTr) National Monument was established by Presidential proclamation, to protect and preserve the area's historic, prehistoric, and scientific features, including the natural resources of the Colorado and Mojave deserts. In 1976 JoTr was given federal wilderness designation. In 1977 it received Class I Wilderness airshed status. In 1984, it was designated a World Biosphere reserve. In 1994, JoTr's status as a nationally significant area was reaffirmed by Congress when they designated it a National Park and added 234,000 acres to the Park and designated an additional 163,000 acres as wilderness.

From 1987 until present residents, desert activists, grassroots organizations, and national environmental organizations worked together to prevent the world's largest garbage dump from being built at the defunct Kaiser iron ore mine at Eagle Mountain. The plan is to transport and deposit 20,000 tons of garbage from Los Angeles to Eagle Mountain on trains and trucks for the next 117 years. This project

has been mired in litigation. On September 20, 2005 Federal District Judge Robert Timlin ruled in favor of environmentalists, however the Government and the Polluters appealed the decision to the 9th Circuit Court of Appeals. The case was heard December 6, 2007 and we await the ruling, (for more information on the dump see www.ccae.org and click Desert Community.)

The Eagle Crest Energy Company ("ECEC") intends to utilize the Eagle Mountain mine site to produce electricity. This project received its preliminary permit in March 2005 from the Federal Energy Regulatory Commission ("FERC"), and has recently filed a license application. The plan is to pump ground water from designated water wells in the Chuckwalla Valley to the massive east pit at Kaiser's old mine to be stored until low peak energy times when the water will be pumped to Kaiser's Central Pit. When electricity demands are at peak times, the water in the central pit is released through monstrous tunnels (built under the dump) heading to the east pit, where very large underground turbines will spin, creating electricity. The initial filling of the east pit will require 8 billion gallons of water, and take two years or more of constant pumping to fill. This project will exacerbate the aquifer's overdaft condition to depletion. Where will water come from for all of these projects, i.e. world's largest dump, hydro-electric pumped storage project, and tens of thousand of acres of solar panels? It has been proposed that Kaiser Ventures will supply water for OptiSolar's project (now Solar One). The problem with this is, the Kaiser well proposed for use, is on trespass on Public lands, and was once used for the mine's millsite. However since Kaiser went bankrupt and gave up all mining permits for the dump, that well is no longer for a millsite, and Kaiser illegally pumps water to the townsite now. If this well is used for the dump and solar panel projects, it will start to deplete the water resources of Joshua Tree National Park, as well as the Chuckwalla Basin's aquifer.

Preliminary studies conducted in the past indicate that there will be significant environmental impacts to the local community as well as the Park. Citizens have voiced strong concerns with the project's potential impacts to the environment and the local residents who depend on the desert's natural resources. For more information see: <http://www.eaglemountainenergy.us/index.html>. This project proclaimed as "green energy", will actually use more energy than it creates and, has been on the books since 1991.

And now to make it a true environmental justice trifecta, Secretary of Interior Salazar has designated and put on the fast track, a very large area of public lands in the Chuckwalla Valley as solar sacrifice zones (see <http://solareis.anl.gov>). In the upper Chuckwalla Valley alone, 30,543 acres being targeted for solar fields. To fast track these projects leads the public to believe that there has been a predetermined decision made to approve and construct these projects, completely infects the public process, and violates the National Environmental Policy Act (NEPA). The State of California has developed the California Environmental Quality Act, and the Federal Government developed the Council on Environmental Quality with the Environmental Impact Study the vehicle which the public may articulate its concerns. The reason for these

environmental documents is to provide decision-makers with all of the available information to ensure a knowledgeable decision is rendered. There needs to be separate environmental review for each of the 24 sites that are being targeted. To do less only shows the DOI's and DOE's desire to by-pass any meaningful discussion for each project involved, and sweep any problems under the rug. Further, The National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. § 4331(2)(c), requires all agencies of the federal government to prepare an environmental impact statement for all major projects significantly affecting the quality of the human environment. The solar projects proposed in the Chuckwalla Valley meet this criteria and separate environmental studies are required by law.

Let's get one thing straight right here. EVERYBODY wants independence from fossil fuels. The energy policies being adopted by the Obama Administration and elected officials are misguided. Taking ratepayers and tax payers off our knees to the foreign and American oil corporations only to put us on our knees to foreign and American "renewable energy" corporations does nothing to solve the "control" problem. Instead of giving away our precious public lands for a song and a dance, and then giving recovery funds to corporations, make legislation to assist homeowners, property owners, and businesses to obtain recovery money to install rooftop solar, thin film solar, micro-windmills to make us all truly energy independent. It would not cost more and will result in an economic engine boosting our economy with jobs. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Thousands of acres of solar panels are proposed to be built next to Joshua Tree National Park wilderness areas next to the mouth of the Pinto Basin and along the base of the Coxcombs. It is interesting to read news articles describing the locations of solar sacrifice zones.

One account they are "east of Joshua Tree National Park", when in fact some are dangerously close to its southeast boundary. We collaborated with our colleagues from the Basin and Range Watch and created a web page of images and text that memorializes the natural resources of the Chuckwalla Valley and Joshua Tree National Park. We incorporate the images and information of the website page, <http://www.basinandrangewatch.org/ChuckwallaValley1.html>, as though fully contained herein, and make it a part of the Public Record.

Do these people in power not know where these areas are, or do they consciously deceive a heretofore trusting public? Our legislators ought to be approving legislation such as AB 811, reinstate Feed In Tariffs, and work with their constituents to become energy independent. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Recognizing the importance the National Park system is to the American people, Interior Secretary Ken Salazar has announced that his department is temporarily barring the filing of new uranium mining claims on about 1 million acres near the Grand Canyon, an Obama administration official said. (AP 7/20/09)

In the late 1990's President Clinton halted a gold mine outside Yellowstone National Park saying that "...our National Parks are more valuable than gold...".

We ask, "Is Joshua Tree National Park less valuable than faux renewable energy projects and garbage"?

The Pinto Basin in Joshua Tree National Park is home to the healthiest tortoise populations in California. Currently there are no polluting facilities that impact their health. Conversely, the Chuckwalla Bench Area of Critical Environmental Concern has realized a 90% decline in tortoise populations and necropsies have shown toxics in their internal organs. CCV have documented tortoise activity, burrows, scat, and tortoise themselves roaming the Upper Chuckwalla Valley in the areas proposed for solar projects. There is a land bridge across the Upper Chuckwalla Valley that begins inside the Pinto Basin and travels across the Valley along the Coxcombs to the McCoy's. Removal of this land bridge will have significant negative impacts to the tortoise and other wildlife depending upon it for survival. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

In a conversation with OptiSolar's Wayne Hoffman, CCV learned that they plan to utilize the defunct private railroad owned by Kaiser Resources (still under federal litigation) to transport equipment to construct their project, which has since been sold to Solar One. An

existing, deactivated 52-mile rail line leading from the Salton Sea to Eagle Mountain, along with a right-of-way along that rail line, and the associated upgrades of the rail line and right-of-way should also be considered part of the Solar One project. The rail line and right-of-way pass through an established area of critical habitat for the desert tortoise and desert pupfish, threatened species under the ESA. They also traverse the Chuckwalla Bench Area of Critical Environmental Concern (ACEC), which was designated as such because it contains a significant population of tortoise. Because Solar One includes this rail line in their project which would have adverse impacts on the desert tortoise and Desert Pupfish, BLM is required to enter into consultation with the U.S. Fish and Wildlife Service ("FWS") under Section 7 of the ESA.

What are the cumulative impacts from transporting solar equipment and the transportation of 20,000 tons of garbage daily with regards to traffic congestion, air quality impacts from more trains in an area that boasts of a Class I airshed, and how will additional train trips affect the continued existence of the desert tortoise and desert pupfish? Currently this private railroad is in complete disrepair and will cost up to \$200 million dollars to bring back to fit repair. Will our tax dollars be used to reconstruct a private railroad?

BIOLOGICAL RESOURCES: Complete analysis of the impacts to these biological resources need to be conducted singularly and cumulatively with past, present, and foreseeable future projects.

Special-status plant species observed in the project area:

- FOXTAIL CACTUS: A federal Category 2 candidate and a California Native Plant Society ("CNPS") 1B species.
*Category 2 = information is currently being collected to see if the species should be listed as threatened or endangered.
*1B species = Plants rare, or endangered in California and elsewhere•

•CALIFORNIA BARREL CACTUS: A BLM Sensitive species observed within the access roads, and along the rail line.

- OROCOPIA SAGE: A federal Category 2 candidate and a CNPS List 1B, observed along the rail line.

Special-status Wildlife species occurring in the vicinity of the projects:

- DESERT PUPFISH: A federal and state listed endangered species. Observed approximately 1/4 mile south of the Eagle Mountain railroad

trestle in a tributary of Salt Creek, and earlier surveys report the species is present throughout Salt Creek. Studies indicate that the best pupfish habitat in the area begins approximately 1 mile below the rail trestle and extends upstream to the headwaters of the tributary. Of particular interest is that this species could be wiped out with the planned construction/repair of the railroad. It is virtually impossible to relocate this species because each pool is minerally unique in composition - Personal conversation with National Park Service in Death Valley.

- COMMON CHUCKWALLA: A federal Category 2 species occurring at the project sites and moderate occurrence along the rail line

- FLAT-TAILED HORNED LIZARD: This species has been proposed for federal listing as threatened and is a California Species of Special Concern. The species occurs in the vicinity of the rail line near Ferrum Junction.

- * California Species of Special Concern = When encountered, should be reported to the Department , and for which impacts may be considered significant under CEQA.

- DESERT TORTOISE: This species is federal and state listed as threatened. Tortoise have been observed in the Chuckwalla Valley, north of I-10 in the Eagle Mountain area, the Chuckwalla Bench north of the Chocolate Mountains, and on the railroad. The Eagle Mountain railroad and parts of Eagle Mountain road cut through the Chuckwalla Unit of Critical Habitat for desert tortoise. The impacts to this species is not only from train and truck traffic. Ravens historically are attracted to dumps, and ravens prey on juvenile tortoise. It is expected that predation on the desert tortoise will increase. (Personal conversation with Park ecologist). A recent report by Dr. Richard Knight of the University of Colorado describes the Park's Pinto Basin as the

most pristine raven habitat in all of the Mojave desert. He regards Joshua Tree National Park as a unique habitat with unaltered raven densities. There are a number of mitigation measures to decrease the impacts to the desert tortoise, however the effectiveness of some of the mitigation strategies are unproven.

- NORTHERN HARRIER: A California Species of Special Concern. This species is considered to occur seasonally along the rail line, and may seasonally forage in habitat at the project site and along access roads

- SHARP-SHINNED HAWK: A California Species of Special Concern. Likely to migrate in the vicinity of the projects in the fall and

spring, and may winter in any part of the project areas. The species may also seasonally forage in habitat at the project sites and along the rail line.

- COOPER'S HAWK: A California Species of Special Concern. Most parts of the project areas are within the year-round ranges, although the central part of the rail line passes through an area of winter-range only.

- GOLDEN EAGLE: A California Species of Special Concern. The species is highly likely to occur in any portion of the project area. Note: Members of CCV have observed these beauties several times in this area.

- PEREGRINE FALCON: Is a federal and state listed endangered species with a low to moderate probability to occur at the project site, access roads, and rail line. Members of CCV have observed in the project areas.

- CALIFORNIA BLACK RAIL: A federal Candidate 2 candidate and is state listed as threatened. Have been observed in the Salt Creek area north of the rail line, and do occur within one mile of the project area.

- YUMA CLAPPER RAIL: A federally listed endangered species and state listed threatened species, observed in the Salt Creek area north of the rail line.

- WESTERN BURROWING OWL: A federal Category 2 candidate species and a California Species of Special Concern, with a moderate likelihood of occurrence at the project site, access roads, and rail line.

- BLACK-TAILED GNATCATCHER: Considered a California Special Animal by CDFG, and observed near Kaiser & Eagle Mountain Roads.

- * California Special Animal = an animal fully protected by the state.

- LECONTE'S THRASHER: A federal Category 2 candidate and California Species of Special Concern, observed near Kaiser & Eagle Mountain Roads and could nest in habitat at the project and along the rail line.

- LOGGERHEAD SHRIKE: A California Species of Special Concern that is expected to occur throughout the project areas.

• YELLOW WARBLER: A California Species of Special Concern observed in the townsite of Eagle Mountain and the Chuckwalla Bench Area of Critical Environmental Concern ("ACEC").

• YELLOW-BREASTED CHAT: A California Species of Special Concern observed in the townsite and expected to occupy habitats throughout the project areas.

• CALIFORNIA LEAF-NOSED BAT: A federal Category 2 candidate and a California Species of Special Concern who uses the Kaiser Mine as a winter roost. There have been no other winter roosts located during air searches over the Orocopia, Chuckwalla and Coxcomb Mountains.

• TOWNSEND'S BIG-EARED BAT: A federal Category 2 candidate and a California Species of Special Concern. Maternity roost of this species was observed in the mine adit during 1990 surveys, however subsequent surveys did not identify this species, possibly indicating that the roost has been abandoned. If the species is present, it is likely to forage in nearby areas, including near access roads & rail line and areas closer to the mine.

• CALIFORNIA MASTIFF BAT: A Category 2 candidate and a California Species of Special Concern. Suitable habitat is present, and the species is listed as one that could occur at the project site (Brown, 1990). The entire project area is within the range of the species.

• PALLID BAT: A California Species of Special Concern was captured in a mist net over a mine pit pond during the 1990 surveys, and guano was found in two adits west of the project site. The species is likely to forage in areas near access roads and rail line, and it is known to forage over pond water, which forms from standing water after a rainfall in the bottom of the east pit.

• AMERICAN BADGER: A California Species of Special Concern identified at the project site and near Kaiser Road. The species is highly likely to occur along the rail line. Members of CCV have observed this species a number of times in project areas.

• YUMA MOUNTAIN LION: A Category 2 candidate and California Species of Special Concern. Mountain lions have been observed at the Eagle Mountain townsite, and several farms in the Desert Center/Eagle Mountain area.

• NELSON'S BIGHORN SHEEP: A California Special Animal observed at the project site, and several locations along the Eagle Mountain railroad.

Biodiversity is the concept that all components of ecological systems, both living and nonliving, are interconnected in a hierarchical continuum, and that changes in the diversity at any level in that hierarchy can have effects at other levels (CEQ, 1993). The Council on Environmental Quality ("CEQ" 1993), has identified several primary threats to biodiversity, including:

- Physical alteration of ecosystems from resource exploitation and changing land use including habitat destruction, degradation and fragmentation;

- Pollution, which can have direct lethal or sub lethal effects, or can degrade habitat through such factors of eutrophication, acidification, or thermal pollution;

- Over harvesting of populations, which results in disruption of interconnections within and/or between species, thus affecting ecosystem function;

- Introduction of exotic species, which can eliminate native species through predation, competition, or disease transmission, thus altering interconnections between species and changing ecosystem function; and

- Disruption of natural processes, which can occur when land management procedures change ecosystem dynamics through such practices as fire suppression or changes in water flow regimes.

To conclude the section on Biological Resources, it is clear that the impacts to wildlife will range from moderate to extreme. The proposed dump, if goes to fruition, will bring in 20,000 tons of garbage a day for a century. This is garbage to us, but a source of food for animals. This process will inevitably create additional sources of nutrition for animals to exploit. In the desert where resources are scarce, even a small amount of enrichment is highly attractive to animals and is all that is required to alter wildlife behavior. (Personal conversation with Park ecologist). To compound the problems, there is a proposal to construct a hydroelectric pump-storage plant at the same site. This proposal will introduce a huge source of water that is currently scarce in the desert region. The entire ecosystem in and around the project site, and Joshua Tree National Park, will be thrown out of kilter, should either of these projects go forward, and the solar projects will compound the impacts by reducing the habitat for animals to live and forage for food.

Representatives from solar projects inappropriately declare that the tortoise will find shade and make homes under the solar panels. This is pure, unadulterated hogwash! The temperature of the ground will be magnified by the panels, not cooled ! The ground temperature could get as high 140°F, add mirrors to that and it will increase

exponentially. Nothing would be able to live under them, much less a tortoise. Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Is scraping the desert bare really the answer to global warming, or just more corporate welfare, giving developers free land, free money and in Solar One's case, tax payer/ratepayer dollars to buy the solar panels they make and sell to themselves? We say "no". In fact researchers are finding that the desert is sucking up carbon at rates they never imagined.:

"...Researchers have found that Nevada's Mojave Desert, square meter for square meter, absorbs about the same amount of CO₂ as some temperate forests. The two sets of findings suggest that deserts are unsung players in the global carbon cycle. "Deserts are a larger sink for carbon dioxide than had previously been assumed," says Lynn Fenstermaker, a remote sensing ecologist at the Desert Research Institute (DRI) in Las Vegas, Nevada, and a coauthor of a paper on the Mojave findings published online last April in Global Change Biology.

The effect could be huge: About 35% of Earth's land surface, or 5.2 billion hectares, is desert and semiarid ecosystems. If the Mojave readings represent an average CO₂ uptake, then deserts and semiarid regions may be absorbing up to 5.2 billion tons of carbon a year--roughly half the amount emitted globally by burning fossil fuels, says John "Jay" Arnone, an ecologist in DRI's Reno lab and a co-author of the Mojave paper...". (Science 13 June 2008: Vol. 320. no. 5882, pp. 1409 - 1410 DOI: 10.1126/science.320.5882.1409).

There needs to be a complete analysis of how much carbon will not be absorbed due to denuding the desert for solar panel development, and how much carbon will be added to the environment from the necessary transmission lines?. To wit:

On April 17th, the Environmental Protection Agency released a list of the top 5 toxic gases being emitted that "endanger public health and welfare". One of these gases is sulfur hexafluoride, also known as SF₆. Here is what the EPA says about SF₆:

"With a global warming potential 23,900 times greater than CO₂ and an atmospheric life of 3,200 years, one pound of SF₆ has the same global warming impact of 11 tons of CO₂."

As it turns out, the most common use for SF6 worldwide is as an insulator in high voltage equipment that transmits electricity!

Also, an analysis of which alternative will meet the objective of curbing global warming; hundreds of thousand of denuded acres in the desert OR rooftop solar and micro windmills? Studies that have been conducted suggest that the Joshua Tree National Park's signature tree, the Joshua Tree may be nonexistent in the Park due to air pollution from flows from Los Angeles, Riverside, and Coachella Valley. How will the proposed solar projects not accelerate this phenomenon? Not one acre of public

lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

For the past three years, National Park Service at Joshua Tree National Park has maintained and operated an air quality monitoring system within close proximity to Eagle Mountain. Data collection began in May 2006 with a collection interval of 180 days (October). The 180 day cycle continued 2007, 2008 and is now collecting data for a fourth 2009 session. The impetus for the data collection beginning in 2006 was to collect baseline ozone data in anticipation of operations for both the Eagle Mountain hydroelectric project and the dump. The data collection point is located on Park property, 6 miles northeast of the proposed dump and hydro projects, as well as proposed solar projects. In Summary the "Final Validated" data collected in 2006 and 2007 at 85ppb standard indicated respectively only two days of violation of the eight hour standard. The 2008 and 2009 (work in progress) are at the new NAAQS of 75 ppb and are presented here. If the older standard of 85 ppb were applied, one day in 2008 and zero days in 2009 would show a violation of the eight hour standard. All data indicate that during the summer months when ozone levels are at their highest, the eastern portion of the Park is substantially less impacted by high levels of ozone than the entire western portion of the Park. Maintaining this high level of air quality is paramount to NPS, environmentalists, desert residents, and the Clean Air Act. This information is from comments to the Federal Energy Regulatory Commission regarding the proposed hydroelectric project, dated August 17, 2009. We request what air quality impacts will be visited on the Park and the community of Desert Center/Eagle Mountain singularly and cumulatively including past, present, and reasonably foreseeable future projects.

Groundwater: To calculate groundwater usage several significant groundwater users must be included. The below list includes a non-

comprehensive list of water users and potential water users in the Chuckwalla Valley:

Farms in Chuckwalla Valley (Jojoba, grapes, row crops)
Chuckwalla State Prison
Ironwood State Prison
City of Blythe
Corn Springs palms/ponds/row crops/fish farm
Fish Farms on Kaiser and Rice Road
Residents at Lake Tamarisk
Golf Course @ Lake Tamarisk
Winter visitors @ Lake Tamarisk
Eagle Crest Energy Company
Eagle Mountain dump
Chuckwalla Valley Raceway

The solar projects are not feasible because there simply is not enough water to sustain the project as well as historic water users in the Chuckwalla Valley.

Solar panels for large centralized photovoltaic installations are getting cheaper, but are at best 10% efficient in converting solar to electrical energy. Solar thermal installations are comparably inefficient, and require even more water than photovoltaic plants. All grid-connected solar developments require conversion of DC to AC for transmission on the existing grid, entailing a 16% loss of energy—plus another 7 - 9% loss in transmission. Solar panels degrade over time, beginning with an almost instant loss of 2-3% of output, followed by anywhere from 0.5 to 3% annual degradation of energy output. For a 20% efficient panel, a 3%/year loss of output reduces the output to 11.5% in 20 years.

The materials for these installations will need to be replaced over relatively short periods of time. It is certain that some, if not many, such installations will be abandoned. Guaranteed (bonded) reclamation of such sites must be a front-end cost for approving any installation. This should include putting up the money, prior to development, sufficient to pay for restoration of the land to an ecologically functioning state. The lessons from inadequate bonding of mining and wind energy enterprises must be employed, and all routes of escape, like corporate bankruptcy, from the obligation to restore the land should be closed.

There is a more-than-ample supply of platforms for solar installations that do not require any additional land consumption, and have minimal transmission requirements: roof-top developments in urban areas. These avenues should be explored before any centralized power plants in remote areas are considered.

Lastly, over 6,000 acres of jojoba were planted in Desert Center/Eagle Mountain in the early 1980's. The BLM gave away land at \$2.50 an acre under the Desert Land Entry Program, which has since been discontinued. Hundreds of acres of ironwood forests and dry wash woodlands were developed with jojoba, now abandoned. What will be the impacts be to the environment (i.e. soil erosion, flooding etc.) when the remaining ironwood forests and dry wash woodlands are scraped away for solar?

Jojoba, a renewable natural resource, was included in the 98th Congress Report 98-109, CRITICAL AGRICULTURAL MATERIALS LIST. The Report states, in part, "...Congress recognizes the need of a domestic industry or industries for the production and manufacture from native agricultural crops of products other than rubber which are of strategic and industrial importance but for which the Nation is now dependent upon foreign sources, that such activities would benefit the economy, the defense, and the general well - being of the Nation, and that additional research efforts in this area should be undertaken or continued and expanded...". Former Congressman Al McCandless (R Palm Springs) was responsible for adding jojoba to the critical agricultural materials list. Jojoba plantings need to be part of the Alternative Actions section of the environmental documents. Members of CCV are experts in the field and will be happy to provide further information. This plant is native to the area, and the infrastructure is already in place to re-start the industry, thus providing an

alternative energy source from the region you desire to develop alternative energy projects.

Not one acre of public lands should be bladed for solar projects until EVERY ROOFTOP IN CALIFORNIA HAS SOLAR PANELS.

Respectfully Submitted,

Donna Charpied

Donna Charpied Executive Director, for
Citizens for the Chuckwalla Valley

Donna Charpied, Executive Director
Citizens for the Chuckwalla Valley
PO Box 397
Desert Center CA 92239
(760) 987-1363

stopthedump@yahoo.com

<http://www.basinandrangewatch.org/ChuckwallaValley1.html>

"Don't Waste The Desert"

CC: Interested Parties

Thank you for your comment, Pat Flanagan.

The comment tracking number that has been assigned to your comment is SolarM60217.

Comment Date: September 14, 2009 12:20:43PM
Solar Energy Development PEIS
Comment ID: SolarM60217

First Name: Pat
Middle Initial:
Last Name: Flanagan
Organization: Mojave Desert Land Trust
Address:
Address 2:
Address 3:
City: Joshua Tree
State: CA
Zip: 92252
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Cultural Constraints, CDCA, ASM.pdf

Comment Submitted:

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/90
Argonne, IL, 60439 Delivered via electronic mail through the project website.

Re: Scoping Comments on the Solar Energy Study Areas for the Solar PEIS

Please accept these comments on behalf of the Mojave Desert Land Trust. The Land Trust has also signed on to the overall comments and California attachment submitted jointly by The Wilderness Society and the Natural Resources Defense Council. We, however, feel an obligation to offer additional comments on 1) the “light blue” areas in the eastern Mojave Desert, in particular those areas in the Morongo Basin adjacent to the 29 Palms Marine Corp Base including the communities of Twentynine Palms, Wonder Valley, Joshua Tree, and San Bernardino unincorporated county lands, and 2) the lack of meaningful tribal participation at the front end of this large project which could impact, or erase entirely, significant sacred areas.

We are a local land trust with 900 members, using land acquisition, stewardship, and education to protect our desert ecosystem and its cultural and scenic resources. In the past two years we have acquired over 15,000 acres of private land within the desert national parks for transfer to the National Park System.

A cornerstone of our work in the Morongo Basin is the preservation of functioning ecological linkages. Our roadmaps are the South Coast Wildlands reports, in particular the recently released: A Linkage Design for the Joshua Tree – Twentynine Palms Connection. www.scwildlands.org. The cover of the report has been inserted below for your reference. Shape files for are available from Kristeen Penrod kristeen@scwildlands.org.

Our partners in this effort include Joshua Tree National Park and the 29 Palms Marine Base. The Marine Base is concerned that encroachment by sprawl development at their borders will threaten their ability to train. The National Park is concerned that development adjacent to its boundaries will degrade essential habitat values protected as wilderness within their boundaries. The conservation of wildlife linkages will not only relieve encroachment threats but will support the tourist economy and preserve the quality-of-life values important to residents and business in the Morongo Basin. The Department of Defense, the Department of Interior, local cities and San Bernardino County understand the consequences of becoming island of biodiversity in a sea of development and are investing time in planning and allocating financial resources to avoid this possibility.

1. The “light blue” lands in the Morongo Basin and areas south and east of the 29 Palms Marine Base are identified on the SESA map as non-SESA lands under consideration for solar development. There is great confusion by local communities and water districts as to what this means on a map displaying the PEIS SESAs which we are commenting on. In the Morongo Basin, solar development in the non-SESAs would cause unacceptable and irreparable damage to ecological linkages (see map below), military lands, adjacent federal park lands, and visual resources. Any large scale solar development would use scarce and nonrenewable water supplies and jeopardize the economy of the gateway communities in the Morongo Basin. We suggest that areas outside the SESA boundaries be removed from the map and consideration for large scale renewable energy projects. We concur with the

rational presented by the Wilderness Society and NRDC in their comment recommendation “To avoid unacceptable and irreparable damage to areas like Otero Mesa and other lands which are currently identified in the SESA maps as non-SESA lands under consideration for solar development, BLM should identify appropriate SESAs, designate them as SEZs through the PEIS process, and restrict solar development to those SEZs which are included in the Final PEIS and ROD unless and until a need for additional development areas is shown.”

2. In order to assist our work in the Mojave Desert the Land Trust contracted with Russell Kaldenberg of ASM Planning and Research Collaborative to prepare A Constraints Study of Cultural Resource Sensitivity within the California Desert and map. This document identifies and the map indicates the areas of prehistoric and historic cultural sites important to tribes today. The Constraints study is not a complete listing but incorporates BLM ACECs and other locally identified areas.

The report is attached and a low resolution map is shown below. A high resolution map (11MB) can be sent on request. The Center for Biological Diversity has included this information on their map submittal. The following are a partial list of cultural areas which we believe tribal members, if aware, would respond with concerns.

Pisgah: see Constraints map and explanations

This SESA is situated in a rich cultural area surrounding the Mojave River and dry lakes (Troy, and Cronese) which were inhabited in wetter times as far back as 9,000 years or older. This area needs to be thoroughly inventoried.

#55 Troy Dry Lake, east of Newberry Springs, was the subject of work in the 1950s by Ruth D. Simpson. The area, which has no designation, has been partially inventoried, but most has not been surveyed to professional standards. Based upon information from the San Bernardino County Museum and personal field visits (Kaldenberg), the area contains geoglyphs, habitation sites, lithic scatters, rock art, and isolated hearths on both sides of Interstate 40.(Constraints, page 36)

Iron Mountain: see Constraints map and explanations

The Salt Song Trail (not covered in Constraints) incorporates the sacred landscapes and cultural areas of the Nuwuvi, Southern Piute (14 bands) across four states. These landmarks are described in the Nuwuvi Salt Songs and represent ancient villages, gathering sites for salt and medicinal herbs, trading routes, historic sites, sacred areas, ancestral lands and pilgrimages in a physical and spiritual landscape of stories and songs. Bands outside California may have an interest in siting of energy projects and utility corridors. Source: The Cultural Conservancy, San Francisco State University Department of American Indian Studies. The Salt Song Trail Project – contact Philip Klasky pklasky@igc.org (415) 561-6594.

For additional information on the importance of the Iron Mountain and Ward Valley area contact The Native American Land Conservancy, Kurt Russo, Ex. Dir. frkvalues@aol.com, 800-670-6252.

Riverside East: see Constraints map and explanations

#43 and 44 - Palen Dry Lake and Sidewinder Well ACEC. This area is noted in Constraints (Page 3) as one of those dry lakebeds that have so many cultural resources “that the story of the peopling of the Americans could be told from the material remnants of culture found on their shorelines.”

...Archeologists such as John Cook, Dr. Emma Lou Davis, Dennis Gallegos, Judyth Reed, and Eric Ritter surveyed the area and concluded that all of the shorelines contain significant archeological resources associated with stands of fresh water that once filled the lake. The entire area surrounding the dry lakebed is extremely sensitive. Palen Dry Lake’s geographic area of significance is indiscernible from Sidewinder Well and the polygon indicating the geographic extent of the two ACEC is combined on the map accompanying this document. (Constraints, Page 34)

#47 The South McCoy Mountains was proposed as an ACEC but was rejected because Class L designation would seemingly protect the resources. The McCoy Wash Petroglyph Site was documented by Daniel McCarthy and listed in the NRHP as the result of his Master’s thesis project for the University of California, Riverside. A power line forms the western boundary of the archeological complex. The petroglyph site is just inside the McCoy Mountains wilderness Area. This area is extremely sensitive to any ground disturbance. (Constraints, Page 35)

#48 Ford Dry Lake ...potentially import...should be restudied (Constraints, Page 35)

103d. A purported Papago Creation site north of desert Center has been indicated on the map based upon public concern for the location. Research regarding the site needs to be conducted. (Constraints, Page 45)

We appreciate the opportunity provided to make these remarks, especially your willingness to extend the comment period. This letter in no way implies that the Mojave Desert Land Trust is opposed to renewable energy development in the California Desert. We do, however, want to be part of a solution which locates the most appropriate areas for development. We look forward to being a continuing part of the process.

Sincerely,

Pat Flanagan

Resource Advocate
Mojave Desert Land Trust
6393 Sunset Rd.
Joshua Tree, CA 92252
www.mojavedesertlandtrust.org

**A CONSTRAINTS STUDY
OF CULTURAL RESOURCE SENSITIVITY
WITHIN THE CALIFORNIA DESERT**

Prepared for:

Mojave Desert Land Trust
Joshua Tree, California

Prepared by:

Russell L. Kaldenberg, MA, RPA, Principal
ASM Planning and Research Collaborative (PARC)
453 Vandehei Avenue, Suite 140
Cheyenne, Wyoming 82009

July 2008

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
ACKNOWLEDGMENTS.....	iii
PREFACE.....	iv
1. INTRODUCTION AND BACKGROUND	1
THE BASIS FOR THE INFORMATION CONTAINED WITHIN THIS REPORT....	1
WHAT INFORMATION HAS BEEN GLEANED FROM THE CALIFORNIA DESERT PLAN?	1
CERTAIN TYPES OF SITES SHOULD ALWAYS BE CONSIDERED TO BE SIGNIFICANT	2
GENERAL DESCRIPTION OF ARCHAEOLOGICAL RESOURCES CONTAINED WITHIN CDCA	4
SOME IMPORTANT DEFINITIONS TO BETTER UNDERSTAND CULTURAL RESOURCE MANAGEMENT (CRM).....	5
What is a cultural resource?	5
What is Cultural Resource Management (CRM)?	6
What is an historic property?.....	6
What is a cultural landscape?.....	7
What is an Effect Or Affect?	7
What is an undertaking?.....	7
What is the State Office of Historic Preservation (OHP)?	7
What is a Tribal Historic Preservation Officer (THPO)?	8
What is the Advisory Council on Historic Preservation (?).	8
HISTORY OF BLM INVOLVEMENT: WHAT HAS AND WHAT HAS NOT BEEN DONE	8
THE REGULATORY CONTEXT OF CULTURAL RESOURCE MANAGEMENT	12
WHAT HAS TO OCCUR LEGALLY BEFORE A PROJECT CAN BE APPROVED?	19
How Does the Public Become Involved?.....	19
WHAT SHOULD TRIGGER PUBLIC REVIEW OR INVOLVEMENT?.....	21
NATIVE AMERICAN INVOLVEMENT IN THE REVIEW OF PROJECTS UNDER NHPA	21
SPECIFIC SENSITIVE AREAS WITHIN THE CDCA.	22
2. THE IDENTIFICATION AND DESCRIPTIONS OF PLACES THAT MATTER WITHIN THE CDCA	25
IMPERIAL COUNTY	25
INYO COUNTY	28
KERN COUNTY	32
RIVERSIDE COUNTY.....	32

TABLE OF CONTENTS

(continued)

<u>Chapter</u>	<u>Page</u>
SAN BERNARDINO COUNTY	36
SAN DIEGO COUNTY	42
HISTORIC ROUTES AND OTHER LARGE-SCALE FEATURES.....	42
SITES WITHIN THE CDCA LISTED IN THE NRHP	46
3. RECOMMENDATIONS	63
4. SUGGESTED READING	65
APPENDICES.....	73
APPENDIX A. National Programmatic Agreement Document Among the BLM, ACHP, NSHPOs	
APPENDIX B. California Protocol Agreement Document between California BLM and the California SHPO	
APPENDIX C. BLM ACEC Management Plans – Bound Separately	
APPENDIX D. Map – Located inside back cover posket	

ACKNOWLEDGMENTS

Many people and organizations assisted in the completion of this document. My gratitude goes to them. Among those who assisted with the vision of producing such a document are Joan Taylor, Elden Hughes, Buford Crites, representatives and staff of the Mojave Desert Land Trust, and many other members of the environmental community in the California Desert. John Cook, Susan Hector, Don Laylander, Jerry Schaefer, Catherine Wright, Marcia Sandusky, Alice Brewster, Zee Malas, Tyshanna Belcher and Russell Tanner from ASM all played an important part in making certain that this study was completed and met standards demanded by those who practice cultural resource management. Dennis Casebier from the Mojave Desert Heritage and Cultural Association, Goffs, California; Clifford Walker from the Mojave Desert Museum in Barstow, Jay von Werlhof from the Imperial Valley Museum, Dee Schroth and Robin Laska from the San Bernardino County Museum and California Historic Resources Information System (CHRIS), Rolla Queen, Ken Wilson, Sally Murray, Wanda Raschkow and Ruth Musser, from the Bureau of Land Management all gave tremendous support in making certain information was available to complete the study. Thanks to one and all.

PREFACE

Having an inkling of what is culturally important within the state of California is a concept that is long overdue. During over 30 years of working for three departments of federal service, as well as serving on the California Historical Resources Commission as the Governor's representative for Prehistoric Archaeological Resources during the late 1990s, I was always surprised that the public wrote few comments on cultural resource issues. The exception was that the public often commented on issues related to the modification or impacts on historic era buildings, particularly "California Bungalows." In over three years of serving as a political appointee, there was not a single comment by the public to me as a commissioner on any prehistoric cultural resource. Even attempting to recruit such comments failed. It was the historic built environment that often received passionate comments. Since the prehistoric archaeological sites throughout California are scientifically and culturally important, and in they are in danger of being lost, I often wondered why the public chose not to provide comments. I think that much of the reason for this is that the reviewing public is often confused about prehistoric resources; even the terminology used, such as cultural resource or historic property, is not within the mainstream vocabulary of most people.

This is a first attempt at providing the Mojave Desert Land Trust and other environmental organizations with information that will help them decide when and where to best put their scarce resources to work and to comment upon proposed projects that may affect the significant or important heritage values found within the California Desert. This is not all-inclusive but is a building block from which to make those decisions to provide comments on projects, provide input on land exchanges or sales, and be able to work with agency personnel and talk about the preservation or the removal of historic properties that are important to the local communities found within the broad desert of southern California. The information contained within this report primarily focuses on those resources found on the public lands within the California Desert Conservation Area. The Bureau of Land Management (BLM) is responsible for the management of the resources. This is report documenting the Areas of Critical Environmental Concern (ACEC) established because of important cultural resources. It also contains proposed ACECs that for one reason or another were not adopted by the BLM, and information gathered from professional archaeologists, both working for agencies, academia and consulting fields. Lastly, information presented here was gathered from concerned citizens who care about cultural resources as a part of the overall environmental setting.

There is no law that prohibits the planned destruction of the resources as long as a legal process had been adhered to. However, by using the designated process outlined in the laws that are described in this document, I believe that a more meaningful process can be instituted which allows a better analysis of the impact of proposed projects on cultural resources throughout the California Desert. The attached discussion of identified significant places will help decide which cultural resources should be identified as those that should not be disturbed without very careful planning, review, and consideration. In the vernacular sense, the locations

that are presented in this document are “places that matter, and places that count.” If they are lost to future generations our nation will be the poorer.

1. INTRODUCTION AND BACKGROUND

THE BASIS FOR THE INFORMATION CONTAINED WITHIN THIS REPORT

This document serves as the narrative for an overview of the sensitive cultural resources within the California Desert Conservation Area (CDCA). It is called a Constraints Study because the study uses cultural resource information to identify and locate the known constraints of the numerous polygons that have been placed on maps and discussed within the narrative of this report (See Cultural Resources Constraints Map). The polygons do not display exact boundaries of the cultural resources, but are spots on the map where the public should be able to raise questions to decision-makers about consumptive use of the land as it is impacting important historic, prehistoric, or traditional cultural places. This is not an exhaustive study, rather a starting place for the public to begin understanding the importance of some of the cultural heritage sites located within the CDCA.

WHAT INFORMATION HAS BEEN GLEANED FROM THE CALIFORNIA DESERT PLAN?

The draft, final, and amended versions of the California Desert Plan were used extensively in the preparation of this document. Personal knowledge regarding the cultural resources found in and around the California Desert, perusals of personal notes and remembrances, and interviews with knowledgeable archaeologists, historians, ethnographers, and avocationalists who have knowledge that needs to be captured were extensively used. Some of the folks knowledgeable about the issues have passed on, but to the best of my ability, knowledge important to this study has been documented and was used here. Institutional knowledge from people who know the cultural resources in this huge Desert landscape needs to be recorded while it is possible to do so. The first generation of cultural resource managers is retiring; those hired during the early 1970s have information regarding the vast array of cultural resources found within the study area, and much of their knowledge needs to be preserved while it can be. This could be done through an Oral History program; but that is the subject of another study.

This is not a comprehensive look at all of the cultural resources found within the CDCA, but instead a capsule view of cultural resources that are considered to be particularly important. In this context, “important” means that the resources are significant and that they are sensitive to disturbance from projects proposed on or near them. Disturbance is construed to mean any alteration of the physical cultural resource or its setting. Such effects should be examined and carefully analyzed before disturbance of the resource is permitted. Vandalism or unsanctioned disturbance of the resources is not covered in this document, but this should be discouraged through education, inculcation of conservation ethics, and law enforcement action. In terms of federal preservation law, the resources that are covered here are those listed in or eligible for

listing in the National Register of Historic Places (NRHP), which was created in 1966 by the passage of the National Historic Preservation Act (NHPA). California also has a state Register of Historical Resources. In this document, the two registers are considered to be equivalent.

All archaeological, historical, ethnohistoric, or Native American sites mentioned in the following text are considered to be potentially sensitive even if they have not been studied. There are some caveats concerning sensitivity. Intensively used areas that once contained important cultural resources may now contain only vestiges of those resources, but careful consideration is essential, since many archaeological site contexts are three dimensional: sites may be buried or covered with wind-blown dust.

Interstate highways (I-8, I-10, I-15 and I-40) have traversed through sensitive archaeological sites and probably destroyed many of them before consideration of cultural resources was a mandatory part of environmental analysis. Generally, the Interstate Highway System in California extended across many areas near important archaeological sites but, looking at archaeological site maps at the California Historical Resources Information System (CHRIS), it appears as the highways either avoided extremely sensitive sites or destroyed them in the process of construction. so only remnants of the resources are left. There are exceptions: one that is discussed in this document and that has known cultural resources which is traversed by Interstate 40 is the Troy Dry Lake area. There are undoubtedly others.

CERTAIN TYPES OF SITES SHOULD ALWAYS BE CONSIDERED TO BE SIGNIFICANT

All rock art sites are significant, sensitive, and important both to science and to native peoples. There are thousands of these sites within the CDCA; the majority have not been properly documented. Rock art sites include petroglyphs, which are images chiseled into stone; pictographs, which are images painted on rock surfaces (pictographs can also be painted onto petroglyphs, as is evidenced in the Rodman Mountains); rock alignments, which are just as the phrase suggests; geoglyphs, which are rock alignments that make designs that are often abstract; and intaglios, which are geoglyphs formed by tamping the earth repeatedly so the tamping leaves an impression.

An excellent reference to the rock art of the desert is David S. Whitley's 1996 book entitled "A Guide to Rock Art Sites Southern California and Southern Nevada." One would also need to read volumes 1 and 2 of Jay von Werlhof's "Spirits of the Earth" published in 1987 and 2004, for an overview of the significant geoglyphs found throughout the areas of the desert. The geoglyphs located in the Colorado Desert have been listed in the National Register of Historic Places, but those found throughout the remainder of the California Desert have not been listed in the NRHP. This simply means no one has taken the time to fill out the forms to list them. Several geoglyphs have been identified as Areas of Critical Environmental Concern, particularly in Imperial County, and others such as the large geoglyphs in Panamint Valley were transferred to the National Park Service and are managed by Death Valley National Park.

Many riparian areas, springs, and dry lakebeds contain significant cultural resources, or contained them at one time. Not all dry lakebeds are culturally significant; one has to look at each one on a case-by-case basis. There are dry lakebeds that have few extant cultural resources, and others having so many that the story of the peopling of the Americans could be told from the material remnants of culture found on their shorelines. Lake Cahuilla in the Coachella and Imperial valleys, Searles Lake in the Searles Valley, Troy Lake near Barstow, China Lake near Ridgecrest, Palen Lake near Desert Center, and Panamint Lake near Trona are just a few examples of extinct lakes that may be able to assist in telling this story. These geological features also were significant during the historic era, since many contained surface water in the 1800s, which influenced stage routes to be built to them, or mineral deposits, which attracted historic mining interests, or water close to the surface, which attracted early agricultural ventures. An excellent reference on ancient Lake Cahuilla is the Salton Sea Atlas published by ESRI Press in 2002 and its article on the importance of the lake by Dr. Jerry Schaefer.

Often, the older the archaeological site the more it is valued by scientists. Questions of when North America was occupied and by who is an important question scientifically and for the heritage of some Native Americans. Sites to which Native peoples can trace their lineage or ancestry are significant.

Also, I cannot think of a cemetery, either an aboriginal cemetery or one containing people who immigrated here, that is not significant to someone. California Health and Safety Code, Section 7050.5 makes all burial locations a cemetery, subject to California cemetery laws. When encountering a burial, the county Coroner has to be informed and it is up to the Coroner to determine whether the remains are those of a deceased individual or of a crime victim and whether the individual is suspected to be Native American and if the California Native American Heritage Commission should be contacted.

Reviewers should use the present document cautiously. Any ground-disturbing project needs to have the lands within its Area of Potential Effects (APE) examined prior to any decision made about the effect of land disturbance.

The term APE comes from 36 CFR 800 regulations. In 36 CFR 800.4 (a)(1), the regulation states that, as part of the scoping of a project, the APE must be defined. The APE is defined by the agency in consultation with various interested parties, but always including the State Office of Historic Preservation (OHP). It is a geographically identified area where the project may have effects on significant cultural resources, which, for the purpose of compliance with federal cultural resource laws, are called historic properties. An APE may involve a much greater areal extent of land than those identified to be physically disturbed as the result of a proposed project. As an example, a right-of-way for a power line may be 100 feet in width but, considering potential construction and maintenance activities during the life of the project, the APE may be defined as 500 feet or 1000 feet in width. Or, an APE may be considered to be an identified Cultural Landscape encompassing a viewshed which may be an entire valley or

drainage. Just when and where an APE begins and ends is often determined by dialogues among various entities.

If there are questions concerning an APE, or if a project may affect a significant cultural resource (historic property), the user of this document should consult a cultural resource specialist as a first step in understanding how the APE boundaries were determined. The public can then ask what options may be available to recommend modifying the identified APE.

Many of the identified sites that follow will jump out at the reader as being significant. The reader should remember that less than 12 percent of the desert has been inventoried in the last 35 years. At this rate of survey and documentation, it will take nearly 300 years before we can firmly state that we know everything we need to know about the location and distribution of the sensitive cultural resources of the desert.

GENERAL DESCRIPTION OF ARCHAEOLOGICAL RESOURCES CONTAINED WITHIN CDCA

The Federal Land Management and Policy Act (FLPMA) recognized that the California Desert contains irreplaceable cultural resources within its boundaries. The lands identified by Congress were to be managed as the CDCA. During the development of the California Desert Plan, the Bureau of Land Management (BLM) authorized the hiring of specialists to conduct a sample inventory of the public lands and to document and evaluate archaeological and historic resources. Contracts were also funded to conduct archaeological overviews and random sample surveys within most of the California Desert District. Native American cultural resources were also assessed as “sacred sites” and Native American Traditional Areas. In toto, approximately 1 percent of the CDCA was randomly or purposively inventoried by the BLM to plan for the long-term management of these resources. Predicting that another 4 % of the area had been inventoried by various individuals or organizations over the past 50 years, it appears that approximately 5% of the resources were documented in some manner.

The resources that were studied included the following:

- **Prehistoric Native American** resources, that is, those that exist as the result of people leaving evidence of having lived within the CDCA before the first advent of Europeans. Using current archaeological theory, this would date from approximately 12,000 Years Before The Present (BP) until around 1769 A.D. The first known incursion of Spanish into the California Desert was probably that of Melchior Díaz, who crossed the lower Colorado River in 1540, but a substantial presence came only in the late eighteenth century. Father Serra founded Mission San Diego and traveled up California’s west coast in 1769. The Anza expeditions of 1774 and 1775-1776 crossed the Colorado Desert. In 1776 Father Garcés crossed the Mojave Desert and made contact with the indigenous native peoples. In the California deserts, archaeological sites dating to before 1769 are considered prehistoric.

- **Historic-era** resources are considered ethnohistoric if they contain artifacts identified as being primarily from aboriginal cultures but dating to after European contact.
- Artifacts of historic American (European-based culture) are those that date to after 1769, and generally after 1800. There has been some suggestion that Spanish or Mexican miners may have worked gold and silver mines in the California Desert, for instance at Tumco in the Cargo Muchacho Mountains in Imperial County, in earlier times but there is no documented evidence to support these claim.

Prehistoric sites were described during the BLM inventory stage as villages, temporary camps, utilized shelters/caves, milling stations, lithic scatters, quarry sites, pottery loci (scatters), cemeteries, cremation loci, intaglios, rock alignments, petroglyphs, pictographs, trails, roasting pits, isolated finds, cairns, and the catch all, “others”.

Historic sites were classified as towns, camps, homesteads, roads, trails, mines, railroads, graveyards, trash dumps, military sites, and “others”.

By the end of 1980, 14,200 archaeological sites were known, of which 2,903 were documented as a result of the Desert Plan inventory (see Volume D, Final Environmental Impact Statement and Proposed Plan, Appendix VII Cultural Resources and Appendix VIII Native American, September 1980). The BLM felt comfortable that it knew the location of approximately 5 percent of the archaeological sites within the CDCA. Today, the figures vary from 7 to 15 percent. There has been no general inventory of the CDCA since the time of the Desert Plan; most of the inventory work has related to looking for archaeological sites as the result of proposed projects such as power lines, pipelines, wind projects, mines, dumps, and other ground-disturbing activities.

SOME IMPORTANT DEFINITIONS TO BETTER UNDERSTAND CULTURAL RESOURCE MANAGEMENT (CRM)

What is a cultural resource?

For the purposes of this document, a cultural resource is an archaeological site or place, an historic site or place, a place important to Native peoples in the California Desert because of its association with the sacred or the traditional, or any place important to Americans as a location containing a vestige of something important to carrying on a vestige of their American culture.

It can be defined as a place with physical manifestations of culture or with intangible resources, such as a landscape where a *creator* discussed in the lore of Native peoples did something, lived, or died. Such places are present within the CDCA. They are identified as “Traditional Cultural Places” or shortened to TCPs.

Some people would say the Integretron, built in the 1950s near Giant Rock in Johnson Valley, San Bernardino County is a special place (although it is not listed here, because it is on private land) and would be considered a traditional cultural resource by people who consider Mr. George Van Tassel, an extraordinary individual and to have been a representative of their point of view regarding extra-terrestrial contacts in the desert.

Still, others may think of the Loskot Meteorite fields near Baker, California, as a cultural resource even though it is not cultural but a physical location. Mt. Shasta, in Northern California and Tecate Peak (Cuchama) along the Mexico/California border, are both physical landmarks that are cultural resources because of their use by people as places that matter to the lives of individuals and/or groups. The Topock Maze, an unusual series of rock alignments near Needles, California could be an important TCP due to the practices which created it and Edom Hill near Palm Springs could be a TCP because it is associated with Coyote Stories which have been important to Cahuilla people.

However, with the above caveat, most people think of a cultural resource as a place such as an archaeological site with physical remains that someone left of their use of the location. That is how agencies and the general public generally treat it.

What is Cultural Resource Management (CRM)?

Cultural Resource Management is a relatively young discipline in the United States. It is essentially, a process of identifying, evaluating and administering (managing) the scarce elements of the cultural heritage. Often equated with archaeology, CRM in fact includes a range of types of feature including, but not limited to: “cultural landscapes, archaeological sites, historical records, social institutions, expressive cultures, old buildings, religious beliefs and practices, industrial heritage, folklife, artifacts [and] spiritual places.”

These resources do not exist in a vacuum, of course. Instead they are situated in an environment where people live, work, have children, build new buildings and new roads, require sanitary landfills and parks, need safe and protected environments. Dr. Thomas F. King has written extensively and very clearly about cultural resource management in a series of books, some of which are identified in the References Section of this study. Instead of calling practitioners of this discipline archaeologists, they are often generically called “Cultural Resource Management Specialists or Cultural Resource Specialists.” Throughout much of the world cultural resource management is a synonym for historic preservation.

What is an historic property?

It is a cultural resource that may be a district, site, building, structure, or object and that is either listed or eligible for listing in the NRHP according to the criteria found within 36 CFR 60. The term relates to the NHPA and is not generally used outside of contexts involving compliance with federal historic preservation laws. It is used in this document as interchangeable with significant cultural resource.

What is a cultural landscape?

Thomas F. King, in his 2007 book entitled “Saving Places That Matter,” defined it as “a broad term embracing a range of landscape types, other times to refer to a landscape that has some kind of special cultural value, such as a battlefield or a landscape associated with the traditions of an Indian tribe or other community.” The landscapes within the California Desert can be as varied as an archaeological sites situated on an alluvial fan, the World War II-era Desert Training Center and associated tank tracks found on the impacted desert pavement, or the archaeological sites associated with the visually identifiable Lake Cahuilla shoreline. There are also landscapes, for example, associated with Route 66, the 20 Mule Team Borax Road, and the Panamint Valley Geoglyphs.

What is an Effect Or Affect?

These two words are always used in federal CRM reports and are linked to federal regulations dealing with reviews under Section 106 of the NHPA. Federal regulations will be discussed later in this document. These terms generally mean that there is an impact to a resource, in this case a cultural resource or historic property. There are many types of effects to cultural resources: effects from noise, impacts on the viewshed, and direct, indirect, or even perceived effects, such as a purported social impact to the property. For landowners there can also be an economic effect to a property caused by an undertaking. The words effect and affect is a homophone pair and are often used interchangeably but incorrectly. Effect is a noun and affect is a verb. Example: “What are the effects of the project to archaeological sites?” How did the project affect the archaeological site?” Had the writers of the regulations stuck with the word impact, describing results of projects to resources would have been much simpler for most people. In the jargon of CRM an action can only affect a historic property listed in or eligible for listing in the NRHP.

What is an undertaking?

This has nothing to do with an undertaker or mortician. It is federal jargon within the Section 106 process of the NHPA that indicates that a land use action is proposed. When the project is approved it is often stated that the undertaking was approved, or Section 106 requirements were completed for the undertaking. It is something the federal agency undertakes or does.

What is the State Office of Historic Preservation (OHP)?

OHP is the state agency, headed by the state official who is designated by the governor, that administers programs under the NHPA. This office must be consulted with under the NHPA in every step of the Section 106 process. The authority of the SHPO is limited to lands within their state. Projects that involve more than one state are generally governed by a Programmatic Agreement document signed by the various involved states, agencies and the Advisory Council on Historic Preservation. The State Historic Preservation Officer is referred as the SHPO (in the western U.S., pronounced “Ship-O”; in the eastern U.S. generally pronounced “Sha-Poh.”

What is a Tribal Historic Preservation Officer (THPO)?

The THPO serves the same function as the SHPO for lands contained within tribal lands. Like SHPOS, THPOS have no regulatory authority outside of their reservation. THPOS often have interest in the cultural resources outside their reservation boundaries because the archaeological sites on lands outside of their reservations can be attributed to the ancestors of members of tribe. The National Park Service designates a tribe as a THPO after the tribe makes an application. The THPO is pronounced as “Thip-O” or “Tip-O.” Several tribes have been approved as THPOS within the CDCA. These include: the Agua Caliente, Big Pine, Bishop, and Timbisha tribes.

What is the Advisory Council on Historic Preservation (?)

It is an independent federal agency established as a result of the NHPA that oversees and issues regulations for Section 106 review. It is also referred to as the Advisory Council or just the Council. The Council negotiates agreement documents on Section 106 undertakings including agency responsibilities to tribes. The Council is advisory and cannot approve or deny a project based upon identified or affected resources. They may only comment on effects of the undertaking.

HISTORY OF BLM INVOLVEMENT: WHAT HAS AND WHAT HAS NOT BEEN DONE

Archaeological inventory and data gathering, artifact collection, the gathering of ethnographic accounts, and some levels of historic preservation have occurred within the greater California Desert since Europeans occupied the deserts. First, the desert was a place to cross to get to the gold fields of California or to the transportation centers along the coast. The accounts of such explorers as Garcés, Jedediah Smith, U.S. Army Captain Carlton, the Anza Expedition and the Manly Party of Death Valley Forty-Niners sparked an interest in the desert due to its desolation and the potential for instant riches.

Miners and homesteaders made their ways and focused their energy on mineral deposits and spring sites. These were the same spring sites that had been occupied by the Native American inhabitants of the land. The aboriginal inhabitants were moved from the most productive lands, leaving their artifacts and their remains, and subsequent technologies were left behind with every episode of land use. By the early 1900s large tracts of the land had gone into private ownership through purchase, homesteading, or railroad grants (alternate sections of land for 20 mi. north and south of the railroad). Communities sprang up to meet the needs of the railroad, agriculture, mining, or recreation. During the 1940s the military used desert lands in order to prepare for World War II. Nearly 2,000,000 acres of land were withdrawn from the Public Lands, which were then administered by the Government Land Office (GLO), the predecessor to the BLM.

With the close of WWII, technology such as the conversion of the Jeep from military to civilian use and the advent of other off-road vehicles such as motorcycles opened up the desert to intense recreation. Some of the recreation, particularly north of Los Angeles, near Barstow, and near El Centro, was considered to be extremely destructive and caused Congress to mandate that BLM administer its lands more effectively. In 1976, FLPMA became the organic act for the BLM, and among other things, it charged the agency to locate and manage archaeological sites for the public benefit.

The first archaeologist hired as a BLM employee was either Herrick “Rick” Hanks who was hired in California or Richard Fike who was hired by the BLM in Utah. The issue has been the subject of a friendly debate between the two for the past three decades. Both “Rick” and “Rich” were hired in 1972. Prior to that, the National Park Service (NPS) approved scientific permits for work on BLM lands. They authorized the only legal archaeology undertaken on public lands by recognized institutions under the American Antiquities Act of 1906. Much illicit collecting and excavation occurred, but the activity was largely unmanaged due to a lack of federal staff.

The earliest systematic archaeological surveys conducted by an organization in the California desert was by the Archaeological Survey Association of Southern California (ASA), which was formed in 1947. Much of ASA’s work was undertaken on the public lands. Sometimes they had permits issued by the NPS, but frequently they did not. They sometimes catalogued, mapped, and wrote about the work they did, but often they did not do so; their interest was in locating and saving the resources, not in what is now called curation. Curation of the artifacts they collected was not systematic.

The ASA archives are now housed as the ASA Foundation (ASF) at SRI in Redlands, California due to the generosity of money willed to the ASA by Ruth DeEte Simpson. Over the past few years, the collections have been made available to scholars, with some stipends to help fund research. As of this writing the ASF plans to dissolve and transfer its collections to the Department of Anthropology at California State University San Bernardino. The long-term challenge of these collections, as is the case with many early archaeological collections, is that the records were not well managed; the documentation of surveys, excavations, and cataloguing of artifacts were inconsistent and often lacked oversight. There will always be information gaps in their archival data because the people responsible for collecting the materials are now deceased and the records are gone; some were lost, others were never completed or retrieved from volunteers, and still others may have been destroyed as a result of a number of calamities such as in a legendary house fire which supposedly burned an inordinate amount of Mojave Desert collections in the 1960s.

When the BLM began staffing for the cultural resource component of the California Desert Plan, they faced almost 100 years of undocumented and haphazard collection of artifacts from sites, nearly 60 years of the NPS issuing permits for scientific investigation, and nearly 30 years of intensive collecting by the ASA and other local archaeological societies, museums, and clubs. The Desert Plan Staff (DPS) had to collect existing data and verify them in the field.

It also had to develop a standardized approach to information collecting and compile it in a useable format. The archaeologists devised a system of randomly placed sample transects; first the transects were quarter mi. squares (160 acres), then the system changed to survey units 1/16 mi. wide and 1 mi. long (80 acres).

This survey work was done before the advent of global positioning systems (GPS), using a compass and, if the surveyors were lucky, a 7.5-minute USGS quad map. Sometimes the maps used were 15-minute quads. Accuracy was “the best one could do under the circumstances.” Transects sometimes fell on inhospitable terrain such as the side of mountains in the Whipple Mountains, or on the dry playa of Palen Lake. Other times as a result of random sampling significant areas such as North Searles Valley, the Sierra Nevada Canyons, or parts of the Lake Cahuilla shoreline were omitted. Less than 5 percent of the California Desert was inventoried, which meant that BLM needed to learn about 95 percent of the landscape.

Many of the publically important or sensitive sites had been known for a long time; Corn Spring, in Riverside County, even had a county historical plaque permanently adhered among the petroglyphs panels. These known resources were a part of the database that was gathered before going into the field. Some spectacular sites were found by using the random sample transects, such as the work done by Eric Ritter, Richard Brook, and their crew in Saline Valley and Ritter’s identification of a standing wickiup and ethnohistoric-era pictographs in the Panamint Mountains.

Largely, though, the work of identifying the wide variety of cultural resources in the desert was to remain to be done during the implementation phase of the California Desert Plan, requiring money, staff, libraries, management plans, and research and management drive. It did not happen that way. American politics changed significantly in 1980, and the funding needed to implement the Plan was not allocated. Instead, a piecemeal approach was undertaken, and to this day, much of the archaeological identification effort relies on staff archaeologists in field offices, working with volunteers and site stewards, documenting archaeological resources, or else it relies on project-specific data collected by archaeologists working on behalf of proponents for projects such as power lines, gas lines, highway expansions, wind energy proposals, or solar energy projects.

The bulk of data in the CHRIS database have been collected as a result of proposed projects. Due to a general lack of federal funding, many of the idealistic goals of the Cultural Resources Element of the California Desert Plan have not been realized. It is not due to any lack of interest on the part of staff archaeologists. There are simply too many projects to review to be a proactive, as the mandates require. Conflicting interests are often at odds in multiple-use agencies such as the BLM or the US Forest Service; many of the decisions are politically driven, as the designation of Areas of Critical Environmental Concern (ACECs) and their boundaries often were. Mining, recreation, energy corridors, grazing issues, and other concerns have sometimes compromised the boundaries of ACECs, which are often modified, based upon public input. An example of an ACEC designation that recognized that much more extensive areas of public land contain archaeological resources is Corn Spring in the

Chuckawalla Mountains, where the area of known archaeological resources is several times larger than the ACEC. The boundary reflects the interplay between multiple-use determinations and the protecting resources during any public process. The recognition of archaeologically sensitivity areas were implied by the designation of ACECs and by the processes which were to occur as the California Desert Plan was implemented. As noted, this did not occur, and the identification process is still in progress nearly more than 35 years after the Department of the Interior recognized the need to identify and protect the desert's cultural resources.

The CDCA planning efforts produced significant archaeological reports edited first by Desert District Archaeologist Eric Ritter and then by Russell Kaldenberg. Nearly 20 volumes of archaeological data were published. These have been reproduced and made available again by Coyote Press of Salinas, California. Key general documents on the results of the work undertaken by the Desert Plan staff include:

- The Draft California Desert Conservation Area Plan Alternatives and Environmental Impact Statement, published in February 1980
- The Final Environmental Statement and Proposed Plan: California Desert Conservation Area, published in September 1980
- The California Desert Conservation Plan 1980, As Amended, published in March 1999

The Plan's discussion of cultural resource significance is found in Volume D, Appendix D, Volume VII, Part 4, which is the section that dealt with Cultural Resource Sensitivity/Significance Determinations. The sections states:

The concept of significance has been used in most laws, directives and regulations pertaining to cultural resource management (see Part 12) and is the key to the Sensitivity Mapping Record (which was developed for use in the Draft Plan) developed by staff. Inasmuch as each archaeological site contains bits and pieces of information that may enhance our understanding of past human activities, each site is potentially significant. However, it is generally accepted that defining significance of an archaeological phenomena requires some frame of reference, problem orientation, or geographic, temporal or other content. In the course of DPS's sensitivity analysis, locations or small regions containing or believed to contain one or a complex of sites were deemed more or less significant following the attached criteria.

The criteria employed in the sensitivity analysis were discussed in form order. Since the criteria were designed for the determination of areas of (1) very high, (2) high, and (3) moderate, low, or unknown cultural resource sensitivity/significance, comments were added which indicated that "because of the nature of the plan and the cultural resource inventories to date, the resources in all cases were given the benefit of the doubt." The approach then was "a liberal evaluation of significance because so much of the desert is simply unknown in terms of prehistoric or historic remains" (Volume VIII, Part 2, pg 32-33).

The criteria used to evaluate sensitivity were by broad desert subregions and were defined by the following criteria:

- 1) site density
- 2) site variance
- 3) site distribution
- 4) site diversity
- 5) site complexity
- 6) uniqueness/rarity of the resource
- 7) current field research interests
- 8) potential scientific use
- 9) aesthetic values for recreation
- 10) integrity of the surrounding environment
- 11) socio-cultural (ethnic) use or concern
- 12) historic-ethnohistoric documentation, which was also called heritage interest.

For example, using criterion 1, site density, a mathematical model based upon the data that were collected found that the highest-ranking geographic subregion was the Anza-Borrego and Yuha areas, because they had the highest site densities. The Southwestern Great Basin, Mojave Basin, eastern Colorado Desert and western Colorado Desert subregions were high, and the lowest rankings based entirely on site density were the central Colorado Desert (generally east of Indio to the Colorado River) and the northeast Mojave (near the Nopah Range).

In order to reach a conclusion as to the significance of resources in the CDCA according the Desert Plan, each of the variables was combined with intuitive and judgmental knowledge of the geographic regions studied and polygons were drawn indicating the areas of significance and sensitivity.

This pioneering effort formed the basic framework for identifying sensitive cultural resources and for managing them. This management framework is still used today to identify and manage the cultural resources of the CDCA. It has withstood the test of time, but as discussed previously, monies have come only sparingly.

THE REGULATORY CONTEXT OF CULTURAL RESOURCE MANAGEMENT

The Antiquities Act of 1906 (34 Stat. 225, 16 U.S.C. 431-433) marked the beginning of American governmental policy concerning historic preservation on public lands. It established that no person may appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument or any object of antiquity on lands owned or controlled by the federal government without permission of the governmental department having jurisdiction over the lands on which such antiquities are located. Criminal penalties in the form of fines and/or imprisonment were established for those found guilty of violating this provision. The act established the authority of the Secretaries of the Interior, Agriculture, and War (now Defense) to issue permits to

qualified institutions for the study of such ruins and collection of materials covered under the act.

The permit system authorized under the 1906 act was substantially revised by the 1979 Archaeological Resources Protection Act (ARPA; Public Law 96-95; 16 U.S.C. 470aa-mm), which defined much more clearly what was meant by archaeological resources, established severer penalties for the illegal removal of resources located on public lands or Indian lands, and in Section 4 refined the definition of who is qualified to obtain a permit for “furthering archaeological knowledge in the public interest.” Permits are issued to qualified individuals and firms to document and evaluate archaeological resources pursuant to the tenets of the NHPA.

The Historic Sites Act of 1935 (49 Stat U.S.C. 666, 16 U.S.C. 461-467) declared “it is national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States.” The Department of the Interior was directed to secure, collate, and survey sites and buildings commemorating or illustrating the history of the United States. This law was the basis for the establishment of the Historic American Buildings Survey/Historic American Engineering Records, the Historic American Landscapes Survey, and the National Historic Landmarks Program. The Act directed tablets to be placed at historic or prehistoric places of national or archaeological significance.

The National Historic Preservation Act (NHPA) (Public Law 89-255, 16 U.S.C. 470, et seq.), as amended more than 20 times, is the foundation for the practice of historic preservation and cultural resources management in the United States. Congress found, among other declarations, that:

- “the spirit and direction of the Nation are founded upon and reflected in its historic heritage:”
- “the historical and cultural foundations of the Nation should be preserved...in order to give a sense of orientation to the American people;”
- “historic properties significant to the Nation’s heritage are being lost...;”
- “preservation...is in the public interest...;”
- “increased knowledge of our historic resources [and] the establishment of better means of identifying and administering them...will improve...planning...;”
- It is necessary for the Federal Government to accelerate its historic preservation programs and activities.
- “It shall be the policy of the Federal Government, in cooperation with other nations and in partnership with the States, local governments, Indian tribes, and private organizations and individuals to...provide leadership in the preservation of the prehistoric and historic resources of the United States...administer federally owned,

administered or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations...contribute to the preservation of nonfederally owned prehistoric and historic resources.” (16 U.S.C. 470, 470-1).

NHPA established the NRHP and the President’s Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers to carry out some of the functions of NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the act directed that “The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.” Section 106 also affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking (16 U.S.C 470f).

36 CFR 800 implements Section 106 of NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally-recognized Native American tribes to identify resources of concern to them; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects. Resolution of adverse effects may require development of agreement documents between consulting and interested parties to an undertaking.

Section 110 outlines the responsibilities of federal agencies to establish programs to identify, record, evaluate, and nominate properties under their jurisdiction to the NRHP. Agencies often develop internal guidance, in concert with the local SHPO and the ACHP, which implements Sections 106 and 110 of NHPA. The BLM has codified its implementation of NHPA in a series of manuals that are identified as 8100-8170.

36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. BLM evaluates the significance of cultural resources identified during inventory phases in consultation with the SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the criteria:

- Criterion A: associated with events that have made a significant contribution to the broad patterns of America’s history
- Criterion B: associated with the lives of persons significant to our past
- Criterion C: embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic value or

represents a significant and distinguishable entity whose components may lack individual distinction

- Criterion D: has yielded or may be likely to yield information important in prehistory or history.

As an example, the BLM in Nevada has facilitated the evaluation of cultural resources by devising state level Manuals with specific as agreed upon guidelines for inventorying and determining the eligibility of prehistoric and historic sites. The guidelines supplement the NRHP criteria for evaluation and provide consistency on BLM lands across the state. These “Cultural Resource Inventory General Guidelines” have been revised to keep pace with current developments in the field of cultural resource management.

BLM in California relies upon the National BLM 8100 Series Manuals and the various State of California Guidelines for Cultural Resources along with a series of agreement documents signed by the California State Director and the California State Historic Preservation Officer. These are supplemented by Instruction Memoranda which are regularly sent to the various Field Offices.

The National Trails System Act of 1968, as amended (16 U.S.C. 1241 et seq.) established a national trails system and provided that federal rights in abandoned railroads may be retained for trail purposes. Emigrant Trails that cross the CDCA include the Old Spanish Trail and the De Anza Trail. These National Historic Trails are managed by the BLM and the National Park Service.

The National Environmental Policy Act of 1969 (NEPA), as amended (P.L. 91-190, 42 U.S.C. 4321-4347 et seq.) was enacted “to declare a national policy which will encourage productive and enjoyable harmony between man and his environment.” Section 101 (42 U.S.C. 4331 (b)) directs the federal government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate federal plans, functions, programs, and resources to the end that the Nation may “preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment which supports diversity, and variety of individual choice.”

The BLM also recognizes the importance cultural resources through FLPMA (sometimes referred to as BLM’s organic act) (PL 94-579, 90 Stat, 2743). FLPMA recognizes the following:

- The public lands (will) be managed in a manner that will protect the quality of scientific, scenic, historical...and archaeological values
- Multiple use means management of the public lands so that they are utilized in the combination that will best meet the present and future needs of the American people...those needs are including but not limited to scientific and historic values

- Areas of Critical Environment Concern may be identified to protect and prevent irreparable damage to important historic, cultural or scenic values (43 U.S. C. 170).
- Title VI of FLPMA, Section 601 (1) states that the California desert contains historical, scenic, archaeological, environmental, biological, cultural, scientific, educational, recreational...resources that are uniquely located adjacent to an area of large population
- Title VI of FLPMA, Section 601 (2) states the California desert environment is a total ecosystem that is extremely fragile, easily scarred, and slowly healed; and that
- (3) the California desert environment and its resources, including certain rare and endangered species of wildlife, plants, and fishes, and numerous archaeological and historic sites are seriously threatened....
- The Cultural Element of the California Desert Plan (1980:22) states “Prehistoric and historic remains within the California Desert are being depleted at a rate which approaches 1 percent per year. Significant losses of paleontological values area are also apparent. These remains represent a national treasure with importance to the public, scientists, Native American, and others. Preservation and protection or proper data recovery is essential.” The element then identifies goals, planned actions and implementation procedures.
- The Native American Element of the California Desert Plan (1980:26) states “Prominent features of the CDCA landscape, wildlife species, prehistoric and historic sites of occupation, worship, and domestic activities, and many plant and mineral resources are of traditional cultural values in the lives of the Desert’s Native people. In some cases these resources have a religious value. Specific sites or regions may be important because of their role in ritual or the mythic origin of an ethnic group. These values will be considered in all CDCA land-use and management decisions.” Goals are then outlined and actions planned and methods of implementation procedures are discussed.

In 1999, the Desert Plan was reprinted. During this time period the Plan Goals were reexamined. The Cultural Resources Element goals were changed from:

- 1) Conduct inventory to the fullest extent possible to broaden the archaeological and paleontological knowledge of the California Desert and to further the achievement of the following goals;
- 2) Protect and preserve to the greatest extent possible representative samples of the full array of the CDCA’s cultural and paleontological resource for the benefit of scientific and socio-cultural use by present and future generations;
- 3) Ensure that cultural and paleontological resources are given full consideration in land use planning and management decisions;

- 4) Manage cultural and paleontological resources so that their scientific and socio-cultural values are maintained and enhanced;
- 5) Ensure that the Bureau's activities avoid inadvertent damage to cultural and paleontological resources; and
- 6) Achieve proper data recovery where adverse impacts may not be avoided,

to:

- 1) Broaden the archaeological and historical knowledge of the CDCA through continuing inventory efforts and the use of existing data. Continue the effort to identify the full array of CDCA's cultural resources,
- 2) Preserve and protect representative sample(s) of the full array of the CDCA's cultural resources,
- 3) Ensure that cultural resources are given full consideration in land use planning and management decisions, and ensure that BLM authorized actions avoid inadvertent impacts;
- 4) Ensure proper data recovery of significant (National Register quality) cultural resources where adverse impacts can [sic] (cannot) be avoided.
- 5) Ensure that paleontological resources are given the consideration in land use planning and in management decisions,
- 6) Preserve and protect a representative sample of the full array of the CDCA's paleontological resources,
- 7) Ensure proper data recovery of significant paleontological resources where adverse impacts cannot be avoided or otherwise mitigated (1999:22).

The American Indian Religious Freedom Act (AIRFA) of 1978 (Public Law 95-341, 42 U.S.C. 2996 and 1996a) establishes the policy of the United States to protect and preserve for the American Indian, Eskimo, Aleut, and Native Hawaiian the inherent right of freedom to believe, express, and exercise their traditional religions. The BLM has a responsibility to Native Americans to ensure compliance with this act.

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA; 32 U.S.C. 3001 et seq.) provides a process for federal agencies to consult with Native Americans for the excavation and/or removal of "cultural items", including human remains, funerary objects, sacred objects, and objects of cultural patrimony. It also provides a process for federal agencies to return cultural items to lineal descendants and culturally affiliated tribes. BLM's 8120 manual guides the process.

The Programmatic Agreement Among the Bureau of Land Management, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers

Regarding the Manner in Which BLM Will Meet its Responsibilities Under the National Historic Preservation Act (BLM's national PA) defines how the BLM will carry out its legal mandates under Sections 106, 110, and 111 (a) of NHPA through the agreed upon mechanisms in the national PA (see Appendix 1).

The State Protocol Agreement Between BLM California and the California State Historic Preservation Office (OHP) describes the means by which the BLM will conduct its cultural resources management program and details the manner in which the California SHPO and BLM California will interact and cooperate to implement the various laws and guidance for historic preservation in California (see Appendix 2).

"America's Priceless Heritage: Cultural and Fossil Resources on Public Lands, California, 2003" is an excellent overview of the BLM's heritage resources in California. It provides a statistical overview through Fiscal Year 2002 of the CRM program accomplishments made on the approximately 17 million acres of public lands administered by the Bureau.

Executive Orders (EO) which are important for managing cultural properties include:

- EO 11593 Protection and Enhancement of the Cultural Environment (May 13, 1971) which directed federal agencies to locate, inventory, nominate and protect federally owned cultural resources eligible for listing in the NRHP and to ensure that their plans and programs contribute to preservation and enhancement of non-federally owned resources. The date to complete the directed tasks was 1973.
- EO 12898 Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994) directed agencies to make achieving environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. This is seen to include analyzing the effects of undertakings on Native Americans' traditional use areas and their cultural resources.
- EO 13006 Locating Federal Facilities on Historic Properties in Our Central Cities (May 21, 1996) encouraged federal facilities to be located within historic buildings or districts rather than constructing new facilities.
- EO 13007 Indian Sacred Sites (May 21, 1996) established access to and ceremonial use of Indian sacred sites by Indian religious practitioners on federal lands. The federal agencies shall avoid adversely affecting the physical integrity of such places and maintain the confidentiality of the sites. A sacred site is defined as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

- EO 13175 Consultation and Coordination with Indian Tribal Governments (November 9, 2000) directs federal agencies to consult with and have government-to-government relationships with Indian Tribes. It also calls for reports to address any changes necessary to accommodate access to and ceremonial use of Indian sacred sites; procedures to implement or proposed to facilitate consultation with appropriate Indian tribes and religious leaders; and the expeditious resolution of disputes related to agency action on Federal lands that may adversely affect access to, ceremonial use of, and physical integrity of sacred sites.

WHAT HAS TO OCCUR LEGALLY BEFORE A PROJECT CAN BE APPROVED?

Section 106 of NHPA, as amended, and 36 CFR 800 must be complied with. This means that before spending any federal money on any project, the agency must conduct a cultural resource analysis which may lead to an on-the-ground inventory to see if any cultural resources are present that may be eligible for inclusion in the NRHP.

This means that any time a project is proposed for any given parcel of land, by any federal agency requiring an expenditure of federal funds, or requiring the issuance of a permit or a license, cultural resources must be considered. A professional archaeologist either working for the agency or under permit to the BLM must examine records maintained at a CHRIS repository and usually those at local museums. Then, based upon the gathered data, usually the specialist has to look at the ground, prepare a report, and evaluate the archaeological sites against the standards set forth in 36 CFR 60 and the BLM 8100 Manuals. The methods of assessing the cultural resources must be in compliance with stipulations agreed to in the Programmatic Agreement Document signed between the BLM and the California SHPO.

The APE, as described earlier, must be identified. It must have boundaries. A CRM Specialist, on behalf of the federal agency, must evaluate any potential historic property, which may be affected as a result of the proposed project. You should keep in mind that the agency only has to evaluate and mitigate the effects of projects related to sites eligible for inclusion in the NRHP. Cultural resources not eligible for listing in the NRHP can be protected through the various guidelines in BLM manuals and codes of federal regulation.

How Does the Public Become Involved?

The public is an important aspect of the project. The regulations state that an agency must consult with the SHPO and Indian tribes; they also state that an agency may consult with a concerned property owner or an organization. The regulations are somewhat murky here, since consultation slows down projects. 36 CFR 800.16(f) states that “Consultation means the process of seeking, discussing, and considering the views of other participants, and where, feasible, seeking agreement with them regarding matters arising in the section 106 process.”

The Secretary's '*Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act*' provide further guidance on consultation.

An interested party, which means a person or any organization that may construe itself as a stakeholder in a proposed undertaking (or project), may have to be consulted with. Or, it may identify itself as a group that wants to be consulted with. The regulations that provide for this opportunity are found at 36 CFR 800.2(c)(5) and again are not as explicit as they might be but they are meant as guidance which is usable by organizations or individuals who have a stake in the outcome of the decision on an undertaking. The regulations state: "Certain individuals and organizations with a demonstrated interest in the undertaking may participate as *consulting parties* due to the nature of their legal or economic relation to the undertaking or affected properties, or their concerns with the undertaking's effect on historic properties." This says that the interested public has a right to know how and what cultural resources will be impacted before a decision is made.

In many cases it would serve the interest of organizations or individuals to request to be Consulting Parties to any action that may adversely affect historic properties. The request should be directed at the local BLM field manager, not to the local archaeologist. The archaeologist is never the decision maker. Sometimes it might be useful to have the request for participation to come from an attorney. Attorney letters seem to get more attention than a letter from the general public.

The request should be respectful but forceful, according to the recommendations of Thomas F. King (see "Saving Places that Matter: A Citizen's Guide to the National Historic Preservation Act," 2007). Becoming a Consulting Party may mean that the party will be signatory to a Memorandum of Agreement that could involve the SHPO as well as the BLM. In general terms, a Consulting Party to the undertaking/action has the authority to terminate the agreement, so everyone involved will want to make certain that all of the agreed conditions of the project regarding historic properties (and also Native American concerns) are implemented. If one party of the Consulting Parties withdraws from the agreement document the entire document becomes null and void and the must be renegotiated before the project can proceed.

In some cases the SHPO will work with the BLM and interested parties closely but will negotiate with the interested public to become a participant in historic preservation as a Concurring Party and not a Consulting Party. The responsibilities are similar with one huge difference. If an individual or organization is invited to become a Concurring Party if they do not sign the agreement document and the Consulting Parties sign the document the agreement is implemented. Also, if a Consulting Party to the agreement decides to withdraw from the agreement, the agreement is still in effect and the agreed upon conditions of the document are not modified.

The difference between a Consulting and a Concurring Party is the level of the involvement allowed to the stakeholder. If a Consulting Party withdraws from the agreement document, the entire MOA is voided by the Consulting Party's action. If a Concurring Party decides they no

longer support the agreed upon approach or wish to terminate their involvement, the document is still in effect and the lead agency does not have to renegotiate the terms of the document.

It is highly recommended that if an interested party desires to fully participate in the process that they write letters to the SHPO and to the BLM early in the process requesting the level of involvement that they are seeking. It is unlikely that either the OHP or BLM will contact anyone asking them to become technically involved. Their workload generally prohibits this type of proactive approach and they might not know who or which organization has a significant level of interest in the project. It is certain that they will not know if the public is interested in the project if they are not contacted through letters or via the telephone.

WHAT SHOULD TRIGGER PUBLIC REVIEW OR INVOLVEMENT?

Any proposal that results in ground disturbance or disruption to an archaeological site or its setting, including Native American religious and cultural values, may be a trigger for public concern and subsequent review. Historically, the public has often not commented on effects to archaeological sites, and sites have been destroyed or seriously impacted because of a lack of public involvement. Sometimes the public feels that archaeological sites are secret and they cannot know about them. Sometimes agencies feel that it is all scientific data that the public would not be concerned with or cannot understand. These assumptions are not correct. The public and organizations that care about resources should be able to understand the effects of any undertaking to cultural resources.

Information concerning the location of archaeological sites are protected from the Freedom of Information Act disclosure under section 9 of ARPA and Section 304 of NHPA, but when archaeological sites are subject to impact as a result of a project supported by agency decisions, the public is a part of the decision-making process and has a right to know that historic properties will be impacted or destroyed and to comment on the project. If the agency refuses to comply with a request to provide data adequate enough to understand where the historic properties are located and what will be impacted, letters to the Keeper of the NRHP and the ACHP stating the concerns of the interested party might be appropriate.

NATIVE AMERICAN INVOLVEMENT IN THE REVIEW OF PROJECTS UNDER NHPA

The use of the terms Native American, Indians or American Indians within this document is meant to be interchangeable. Most of the legislation dealing with Indians issues use the term “Indian” and not Native American. There are exceptions. Before 1871 the United States entered into treaties with the various tribes as though they were independent nations. Since 1871 tribes have been recognized through various other legal means such as legislation,

Presidential proclamations (Executive Orders), or by petitioning to the Acknowledgement branch of the Bureau of Indian Affairs (BIA).

Indian Tribes are specifically mentioned in laws such as ARPA, AIRFA, NAGPRA, and the various Executive Orders dealing with places of importance to American Indians. Most of the laws deal explicitly with “federally recognized Indian Tribes” which are classified by the United States government as being domestic dependent sovereign nations. Out of over 560 recognized tribes in the United States, there are over 100 federally recognized tribes within or adjacent to the state that were its native inhabitants at the time of contact. One of the most unusual is the Modoc Tribe of Oklahoma which was forced from California to Oklahoma in 1873 after the Modoc War. They are California’s only removed tribe.

The CDCA contains over thirty federally recognized tribes. The Timbisha in Death Valley were recognized in 1983 and were landless until they received 7,700 acres of land in 2000 through the Timbisha Homelands Act.

California also has many non-federally recognized Indian people, many of which continue to petition for federal recognition. The Kawaiisu, the Kawaaymii, and the Tejon Indians are just three examples of historical/cultural tribes with ties to the CDCA who have not been granted federal recognition. The federal government generally differentiates between federally recognized and non-federally-recognized tribes in their responsibilities and interaction with them. Some programs of the BIA do not differentiate. For the purposes of cultural resource management, the BLM works with the unrecognized groups also; however, they sometimes fall through the proverbial crack because BLM is a federal agency and non-federally recognized tribes do not appear on lists provided to them by the BIA. The California Native American Heritage Commission provides updated information on the unrecognized tribes as “most likely descendants” for the purposes of cultural resource management and project coordination.

Indian tribes must be consulted, and information must be requested that would assist in making a sound management decision as to whether the project should be approved as designed. Indians do not have to respond, and it is a burden for many of them to do so. Many of the tribes lack staff or resources to respond to the many letters agencies send. Just because they do not respond does not mean they have no interest in the project. However, an agency cannot take into consideration the viewpoints of tribes unless they respond. The ACHP has become more proactive to ensure that agencies give Native Americans lead-time for consultation. There is no established time frame within the CFRs for response by tribes.

SPECIFIC SENSITIVE AREAS WITHIN THE CDCA.

Sensitive areas within the CDCA are those areas and/or cultural resources that are extremely important to science, history, or the values of people who live in or care about the historic values of the CDCA. Again, this listing is not exhaustive, but it is a building block, and new places that count should be added as they are discovered. This list generally excludes locations

within designated wilderness areas, within property managed by the NPS, the Forest Service and the State or County Park System. It also does not include Indian traditional use areas or sacred sites except, as they are common knowledge or have been adopted as an ACEC by the BLM's planning process. Places special to American Indians are generally identified by Indians to a trusted individual and locations can change as a result of spiritual beliefs related to visions or healing ceremonies. Often, unless there is a threat to a particular place, the locations are not revealed to non-Indians.

2. THE IDENTIFICATION AND DESCRIPTIONS OF PLACES THAT MATTER WITHIN THE CDCA

These are areas and/or cultural resources that are extremely important to science, history, or the values of people who live in or care about the cultural history of the CDCA. Again, this listing is not exhaustive, but it is a building block, and new places that count should be added as they are identified. The following are generally alphabetically by county. Exceptions are broad classes of cultural resources that are located throughout the CDCA.

IMPERIAL COUNTY

1. **San Sebastian Marsh (Harpers Well) ACEC** contains remains from Native American occupations and scattered artifacts. Explorer Juan Bautista de Anza visited the area in 1774 when some 400 Native people lived in a single village there and provided water for travelers. The area has also brought “treasure hunters” to the area looking for buried Spanish plunder and the quest for the lost Spanish ship that supposedly sailed into the south end of the Salton Sea and was trapped in the receding waters of Lake Cahuilla.
2. **Coyote Mountains ACEC** in western Imperial County contains very old cultural materials in a dissected wash area to the east of the Coyote Mountains. The area has been heavily impacted by off-highway vehicle (OHV) activity. It is a sensitive cultural area and should be managed as such.
3. **Yuha Basin is an ACEC** in southwestern Imperial County that has been studied for many years by Jay von Werlhof. He considers it to be one of the most important areas to study prehistoric aboriginal occupation in western North America. Trails, geoglyphs, lithic scatters, occupation areas, and historic emigrant trails dot the area. Some fencing has occurred, and a portion of the Yuha Basin has been listed in the NRHP for its geoglyphs as a portion of the Colorado Desert Geoglyph District. A previously unknown geoglyph was located as recently as April 2008.
4. **Indian Pass ACEC** is one of the most significant complexes of surface archaeological sites in the California desert. The location of the cultural resources, in the Chocolate Mountains in eastern Imperial County, has been known for at least 90 years. The archaeological resources include trails, cleared circles, petroglyphs, potsherds, firepits, lithic scatters, tools, and locations that are identified as Quechan trails of dreams, religious locations that are found nowhere else. The area has been threatened by OHV activity, general camping, prospecting, and large-scale mining. Casual use by “snowbirds” can also affect the important cultural resources here.
5. **East Mesa ACEC** is another area linked to ancient Lake Cahuilla. This portion of the Lake Cahuilla shoreline is located north of Interstate 8 and west of the Coachella Canal. Sand and gravel operations have threatened the resources, as has geothermal

development. This area should be considered as a portion of a Lake Cahuilla management plan area.

6. **The Plank Road ACEC.** This area is considered to be eligible for listing in the NRHP and is designated by the BLM as an ACEC due to the historic engineering accomplishments it represents. The Plank Road was one of the first automobile roadbeds used between World War I and the mid 1920s. It is believed to be the only wooden automobile road still existing in the United States. A segment 6.5 mi. long runs through the southern end of the Algodones Dunes. A portion of it has been set aside as a kind of a landmark. Many of the boards have been used in campfires over the years, and it is not certain how much of the resource remains. It warrants another look to see if it has any integrity.
7. **Pilot Knob ACEC** was nominated by the Desert Plan staff to protect archaeological and Native American values located around Pilot Knob, which is a sacred Mountain to the Quechan Indians. Geoglyphs, sleeping circles, trails, and habitation sites are situated within and near this ACEC. Geoglyphs have been listed in the NRHP's Colorado Desert Geoglyph nomination; include the horse geoglyphs immediately west of Pilot Knob.
8. **Golden Basin-Rand ACEC** was set aside to better manage intaglios in eastern Imperial County that are extremely fragile. When the Desert Plan was developed, it was believed that the only way to save these vulnerable resources from destruction was by withdrawing the area from mineral development, fencing the intaglios, and monitor them from the air. The intaglios are also referred to as the Snyder geoglyphs
9. **Tumco Historic Site** was recommended as an ACEC by the Desert Plan staff in order to provide protection for the historic mining district. It is also a ritual area for the Quechan and Cocopa tribes. The ACEC designation was rejected because it was felt that attention would be called to the resources if it were designated.

Today, BLM El Centro has a web site dedicated to Tumco. The web site says that Tumco "is an abandoned gold mining town and is also one of the earliest gold mining areas in California. It has a history spanning some 300 years, with several periods of boom and bust. Gold was first discovered by Spanish colonists as they moved northward from Sonora, Mexico. According to legend, two young boys came into their camp one evening with their shirts filled with gold ore. These muchachos cargados (loaded boys) were the namesake for the Cargo Muchacho Mountains, where the Tumco deposits occur. Following the first discovery of gold, numerous small mines were operated by Mexican settlers for many years. In 1877, the Southern Pacific Railroad completed the Yuma to Los Angeles line of its transcontinental route. With the presence of the mountains, a gold rush into the area began. This initial rush to stake mining claims soon gave way to mining companies that moved into the area purchased claims and developed the mines on a large scale. A 12-mile wood pipeline pumped over 100,000 gallons of water from the Colorado River per day, and the railroad carried mine timbers from northern Arizona for use in the expansive underground workings. Ultimately, over 200,000 ounces of gold was taken from the mines in the area. Tumco

was a typical mining town of its day. Historical accounts talk of rich eastern investors, unscrupulous charlatans and colorful characters in the raucous townsite and the mining boom ultimately leading to financial ruin. The Tumco townsite went through several periods of boom and bust and, although the town site has long been abandoned, gold mining was recently conducted near the western end of this valley. This latest episode in the history of Tumco began in early 1995, when American Girl Mining Joint Venture began operations near the site of some of the early mines in the area. Although little can be seen of Tumco, during the boom time of the 1890's, it supported a population of at least 500 people and the 40 and 100 stamp mills of the mine produced \$1,000 per day in gold." No mention is made of the Native American significance. The Desert Plan states it is an area of significance to Native people.

10. Lake Cahuilla No. 2 ACEC was nominated by the BLM in order to protect two extensive aboriginal habitation sites along the shoreline of ancient Lake Cahuilla in east-central Imperial County. This should be included in an overall area of sensitivity for what is left of the Lake Cahuilla shoreline in Riverside and Imperial counties.
11. **Lake Cahuilla No. 3 ACEC** was nominated in order to protect a very large complex site within what was an undisturbed area of prehistoric sites along the old shoreline of Lake Cahuilla near the ACEC designated as Lake Cahuilla No. 2. This should also be grouped into an overall larger area encompassing what remains of the visible Lake Cahuilla shoreline and its associated artifacts and features.
12. **Lake Cahuilla No. 5 ACEC** was nominated because of its association with ancient Lake Cahuilla. This ACEC is bounded on the west by the All American Canal and developed agricultural fields, on the south by State Route 98, on the north by Interstate 8, and on the east by a utility line. This should also be added to the Lake Cahuilla shoreline sensitivity area as needing special protection.
13. **Lake Cahuilla No. 6 ACEC** was nominated by the Desert Plan staff in order to protect the extensive prehistoric campsites situated along the ancient Lake Cahuilla shoreline. It is located in Imperial County, bounded on the north and west by the All American Canal and on the south by Mexico. This is an area that is significant to local Native American tribes, and a portion of the area was the subject of a cultural landscape analysis in 2002 by Dr. Jamie Cleland.
14. **Southwest Lake Cahuilla Recessional Shoreline National Register District** is located near Salton City on lands withdrawn by the U.S. Navy. The district contains archaeological resources ranging from rock rings and fish traps to habitation sites and was listed in the NRHP in 1999 as a condition of the return of the lands to BLM El Centro management. This is an important array of significant cultural resources and should be carefully protected by the BLM.
15. **Plaster City archaeological sites** were proposed by the Desert Plan staff as being important enough to warrant ACEC designation. The area is composed of alluvial flats with gravel ridges dissected by small washes. The known cultural resource values represent an important aspect of human occupation in the region and are composed of

habitation camps, lithic scatters, and human cremation locations. The area is located south of the town of Plaster City and north of Interstate 8.

INYO COUNTY

16. **Panamint Valley**, north of Trona, is wedged between the Argus Mountains of China Lake Naval Air Weapons Station and the Panamint Mountains which form the western boundary of Death Valley National Park. Much of valley itself and the foothills of the Slate, Argus, and Panamint mountains are managed by BLM. The Desert Protection Act of 1993 transferred the northern portion of Panamint Valley, including Lake Hill Island, north of Highway 178, to the National Park Service. Much of the valley contains geoglyphs and has seen limited study by Dr. Emma Lou Davis, Daniel McCarthy, and Jay von Werlhof, and most recently by Julie Burcell and Judyth Reed. The area also contains cairns, massive lithic quarries and lithic reduction sites, aboriginal trails, trail markers, and 11 easily identifiable landforms in the southern portion of Panamint Valley that were islands when water stood in the lake. These land forms sit due west of the Briggs Gold Mine and are very visible. Recent radiocarbon dates have provided an age of over 4,000 years for one of the sites. Obsidian and yellow chert dominate the lithic materials which are found scattered throughout the valley. These materials were used prehistorically to make stone tools. Historically Panamint Valley was also important. The Manly Party of 1849 traversed it, leaving two of their party in its vicinity. The boom town of Ballarat (where a cemetery containing the remains of Seldom Seen Slim Ferge lies on private property) is situated in Panamint Valley. The 1880s town of Reilly is on its western edge, complete with several dozen rock structures, and the Remi Nadeau Shotgun Road runs most of the length of the valley. James Barnes conducted M.A. research on the townsite of Reilly and at the Anthony Mill ruins in the foothills of the Argus Mountains. The site has been interpreted by the BLM, but most of Panamint Valley has not been inventoried to professional standards. Sentiment exists among some to have the entire valley as far as the China Lake Navy boundary added to Death Valley National Park. The Desert Plan staff recommended that Warm Sulphur Spring and Ballarat be identified as an ACEC. The ACEC would have included the Panamint Stage Station, as well as Post Office Spring. The Stage Station was stabilized and fenced by the National Park Service on behalf of the BLM. The “Chinese Wall” and the townsite of Reilly have also been stabilized by the NPS. The townsite of Ballarat is privately owned. Many of its buildings were made with using tamped earth. Few buildings remain. The Ballarat Cemetery is still in use and contains the burial sites of people such as “Seldom Seen Slim” Ferge.
17. **North Searles Lake**, north of Trona and sandwiched in between the Argus Mountains and the Slate Range, contains some of the best intact Pleistocene/Holocene lake sediments, particularly where the stream flow exited Homewood Canyon and deposited sediments against the Slate Range. Artifacts include geoglyphs, massive lithic reduction

areas, aboriginal trails and rock rings. No formal inventory has ever taken place on BLM lands. Immediately south of the BLM holdings, on China Lake Naval Air Weapons Station, is one of the largest stone cairn complexes known in the Mojave Desert. This complex continues into Pilot Knob Valley and was informally inventoried by Dr. Gerald Smith. Based upon casual observation, it appears as these resources may all be related in time. Kish LaPierre has recently studied the stone cairn complex just off the BLM Searles Lake boundary for a Masters thesis at California State University, Bakersfield. Jim Fairchild has informally noted many sites during his 45 years working with the Searles Valley Minerals Company and as a geologist his interests focus on the distribution of lithics.

18. **The East Front of the Sierra Nevada Mountains in Inyo and Kern Counties.** From Mojave to Lone Pine, nearly every eastwardly draining canyon contains middens that are deep, stratified, rich in artifacts and data, and have been the subject of looting over the past 100 years. Seed grinding sites are visible on many of the large granitic outcrops, containing both bedrock mortars, bedrock metates, and grinding slicks. The Los Angeles Aqueduct and associated transmission lines transit through many of the sites. Many of the sites area also known to contain prehistoric cemeteries. A report by URS, Chico, California, documents several hundred prehistoric sites and evaluates their importance to California prehistory.
19. **Slate Range Geoglyphs.** These may be the highest-elevation geoglyphs in the Mojave Desert and may be contain alignments that are both historic and prehistoric. The vista from the site includes North Searles and South Panamint valleys. The immediate area contains a number of prehistoric aboriginal trails as well as nineteenth and twentieth century mining trails and associated cairns. The entire Slate Range has not been surveyed; however, BLM archaeologists and Dr. David Whitley have done casual inventory. The sites are extremely fragile.
20. **Fish Slough ACEC.** It is a large administrative unit, co-managed by several organizations and government entities. Its primary focus is habitat, with rare fish and unusual vegetation standing out within interesting geological structures, but as it is within the Volcanic Tablelands east of the Sierra Nevada, it also contains Native American petroglyphs and other sensitive archaeological sites. The entire area is a significant feature within the desert landscape.
21. **Surprise Canyon ACEC** is situated adjacent to the Death Valley National Park. It has been the center of significant controversy as to access rights to Panamint City, which is within Death Valley National Park. While the issues surrounding the use of the old road into the Panamint Mining District have overshadowed the other issues, historic mining remains, ethnohistoric archeological sites, and other historic sites are located on both sides of the washed-out road. The area should be considered as significant for historic mining from the 1880-1930s and for Native American pinyon-collecting activities. Pictographs dating to the 1880s are on both sides of the road within the NPS-managed lands, and are also likely to exist within the uninventoried BLM-administered parcels. The entire Panamint Mountains range is significant and needs to be fully analyzed.

22. **White Mountain City ACEC** is located in the foothills of the White Mountains, at the northeast end of Deep Springs Valley. The area contains a large prehistoric village site with petroglyphs and a rock shelter with pictographs. White Mountain City was also a short-lived mining town dating to the late nineteenth century. Remains of stone buildings are still in evidence. Julian Stewart described the petroglyphs in the 1920s.
23. **Rose Springs ACEC** is the archaeological type site for the Rose Springs (Haiwee) Tradition. It was the subject of a doctoral dissertation by Robert Yohe, now at California State University, Bakersfield, and has been excavated both legally and illegally for over a century. The site is a complex containing deep, rich midden resulting from hundreds of years of occupation, burials, and bedrock milling. It is covered with lithic scatters, primarily originating from the Sugarloaf obsidian quarry. Lying east of Highway 395, it has been affected by the construction of the Los Angeles Aqueduct and pumping station. The site should be listed in the NRHP as a place of national archaeological importance.
24. **Fossil Falls ACEC** is both a BLM campground and a site with a high concentration of midden material, trails, and rock art. It was prehistorically connected to the Rose Springs site. Disturbance has occurred to the site through looting, campground construction, and camping use over the past several decades. However, the site is still important, and additional disturbance might affect its overall integrity. It is open to public visitation. The site was listed in the NRHP in 1980.
25. **Great Falls Basin is an ACEC** in the Argus Mountains that was nominated for its wildlife and recreation uses. The area saw significant use by Native Americans and by the Trona Potash Company in the late 1800s and in the 1900s as a source of domestic water. This may be Providence Springs as identified by the Manly party in 1849, water from which saved the lives of the members of the party. It is a significant resource culturally as well as for wildlife. The nearby Indian Joe Spring is in public ownership and it is also significant for its riparian and historic component. Over 3,000 pounds of fruit was collected in June 1917 from Indian Joe Springs.
26. **Salt Creek Hills ACEC** contains prehistoric and historic archaeological sites. It is a large riparian vegetation zone and supports a variety of important wildlife habitat and archaeological properties with midden areas representative of long-term habitation. It was found to be important to Native peoples as well as for its scientific values.
27. **Portuguese Bench** is situated on the eastern flank of the Sierra Nevada west of the Coso Volcanic cones. The sites contain deep midden indicating long-term occupation. They were test excavated in the early 1990s by UCLA and were the subject of a Master's thesis by Dr. Mark Allen. The archaeological sites are very significant to the prehistory of the area.
28. **Amargosa Rings** just south of Shoshone were reported in *Desert Magazine* and by the San Diego Museum of Man as aboriginal rock rings. Debate has occurred over the decades as to whether they were aboriginal or related to borax mining. In either case,

they are significant features on the landscape. Bill Mann discussed them in his books regarding historic sites to visit in the Mojave Desert.

29. **South Owens Lake-Keeler Area** contains prehistoric and ethnohistoric site material including rock cairns that have burials. These burials may be the result of U.S. cavalry and Indian interaction in the late 1800s. This area is particularly sensitive.
30. **Olancha Dunes** was an area that Numic peoples used for gathering plant materials. It is a dune system that is open to unfettered OHV use. As the sands shift, they cover and uncover archaeological materials. A recent inventory by ASM Affiliates found very few archaeological sites. Native peoples of the Great Basin have indicated the area could be significant to their traditions. It may be a Traditional Cultural Property, that is, a place important in group cultural identity, and it should be studied as such.
31. **The Amargosa River ACEC** is located in Inyo and San Bernardino counties. It was set aside by the BLM for wildlife habitat purposes, but also includes riparian related cultural resources and elements of the Tidewater Tonopah Railroad. The archaeological sites range from the earliest era of human occupation about 12,000 years ago to the ethnographic present when Chemeuhevi and Mohave peoples occupied the area.
32. **The Volcanic Cones** are located on the northwest side of China Lake Naval Air Weapons Station, north of Little Lake on the east side of Highway 395. The area includes dense obsidian scatters and habitation sites. The cones left from the volcanic activity are being mined for the commercial rock and pumice contained within them. New obsidian sources, such as the Stewart Obsidian source near the Coso Geothermal facility, are frequently identified by chemical source analysis.
33. **Zinc Hill, Inyo County, near Darwin, California** was proposed for nomination as an ACEC by the Desert Plan Cultural Resources Group. It was not designated as such because it was placed in a Class L designation and it was proposed to be listed in the National Register of Historic Places and for a National Architectural and Engineering Record to be completed for its historic components. There is no evidence that this has happened. The town of Darwin itself is significant historically. The Anaconda Copper Company produced a significant amount of copper ore through the middle of the 20th century. Their historic plant and employee housing is a significant feature on the landscape. The Darwin Cemetery is still used. Among its patrons are Elizabeth Mechem, desert historian, and numerous Native Americans who called the Coso Range their home.
34. **Cerro Gordo** is another mining community nestled in the pinyon juniper forest just west of Saline Valley. The town itself is privately owned but the surrounding landscape is public lands. Historic buildings and a cemetery contribute to its historic setting. The ACEC was set aside to provide protection for historic resources scattered throughout it as well as the biotic community. The Saline Valley Salt Tram is located within the ACEC. One of the associated buildings has been stabilized in the past decade. According to information provided by the BLM, the ACEC was transferred to the National Park Service. The map provided by BLM on the internet looks otherwise.

KERN COUNTY

(See also #18, above.)

35. **The Jawbone/Butterbrecht Canyon ACEC** is nestled against the South Sierra Nevada and extends east into the Joshua Tree woodland zone of the Mojave Desert. The area is considered to be significant to the Kawaiisu Indians who once lived in the area. OHV groups have used the area extensively, as it abuts an OHV Open Area. Still, the area has significant archaeological resources including pictographs, campsites, lithic scatters and historic resources including work camps for the construction of the Los Angeles Aqueduct and Civilian Conservation Corps watering tanks built during the 1930s. A recent report by URS, Chico, California details the significance of the archaeological resources. Other recent work has been conducted by archaeologists from Ancient Enterprises and by students from California State Polytechnic University, Pomona. Archaeological sites continue to be regularly impacted by recreational use.
36. **Last Chance Canyon ACEC** was listed in the NRHP in 1972. It is more than 100 mi.² and is located in the Black Hills, El Paso Mountains, and Last Chance Canyon, east of Highway 14. The site diversity is high, including villages, cryptocrystalline quarries, camp sites, burial areas, rock art sites, lithic scatters, milling stations, stacked stone structure, rock shelters, cremations, and historic mining evidence dating from the 1860s to the 1940s. The area includes resources found within a much larger area, bordered by Red Rock Canyon State Park. In earlier times a petrified forest existed on its western flanks. Recent research by archaeologists Dr. Alan Garfinkle, Alexander Rogers, and Dr. Brian Dillon (UCLA) indicates that the area is one of the most significant in the Mojave Desert. Burro Schmidt's Tunnel is situated in the area and has drawn wide public attention; it is listed in the NRHP as a twentieth century mining site. At the top of El Paso Peak are large rock rings which appear to be related to prehistoric ceremonies. Historic rock hounding activities are notable at some of the opal quarries. The patented Old Dutch Cleanser Mine operated from 1923-1947, quarrying pumicite and seismotite which was used as a household cleaner and as an additive to cement and paint.

RIVERSIDE COUNTY

37. **The Lake Cahuilla Shoreline** (also in Imperial County) is possibly one of the most important archaeological site complexes in the western U. S., but is in danger of being lost. Lake Cahuilla filled much of the Coachella and Imperial valleys intermittently during much of the last 100,000 years, depending upon the growth of the Colorado River's delta near the current communities of Yuma, Arizona and Mexicali, Baja California, and the shifting of the river's lower course. The lake was a key element in the lives of the Cahuilla, Kamia, and Quechan Indians until it finally desiccated around 1700. Associated archaeological features include fish traps (rock alignments made

purposely to harvest fish), trails, rock art, habitation sites, human remains, milling features, beads, agave roasting pit features, and every other kind of artifact one could imagine associated with prehistoric fishing in a freshwater lake surrounded by the Colorado Desert. Housing, transportation corridors, transmission lines, sand and gravel operations, OHV activity, agriculture, military operations, casual recreation, and vandalism have impacted the resources. The land is divided among State of California, private, BLM, Bureau of Reclamation, local irrigation districts, county parks, and urban and rural uses in Mexico. The polygon is mapped to include many associated sites and feature. Much of the old lake bed has been used for agricultural purposes for over a century. Housing developments, geothermal plants and other industrial uses have modified much of the shoreline over the past several decades. Much of this use has destroyed the integrity of the cultural resources associated with the shoreline. Many pieces of the Lake Cahuilla shoreline are extant. Several “spot” ACECs have been set up to attempt to save portions of the shoreline in Imperial County. The Fish Trap Riverside County Park is an important designation for archaeological sites located along the western shore of Lake Cahuilla. There is presently no management plan for this geographic feature and it is timely to have one completed before it is too late.

38. **Whitewater Canyon ACEC**, north of the old trout farm and fish hatchery, contains the Whitewater River and its associated vegetation community. The ACEC also contains Native American collecting, occupation, trail, and ritual sites. Bean has interviewed Cahuilla elders who indicated that Whitewater Canyon was a place of spiritual power. The BLM set it aside as an ACEC because of its diverse vegetative community as well as to recognize it a special place to the Cahuilla. Ethnographer Dr. Lowell Bean has worked with Cahuilla for many decades. He says “Cahuilla values were clearly related to basic environmental and economic circumstances.” Oral interviews conducted by him suggest that Whitewater Canyon was a place of power where vision quests may have taken place and where oral tradition relating to the Cahuilla culture may be recounted in the telling of Cahuilla bird songs. Some archaeological inventory has been conducted within the ACEC as result of the construction of the Pacific Crest Trail. Stashed ceramic ollas and baskets have been recovered from the vicinity of the ACEC.
39. **Dale Lake ACEC**, southeast of Twenty-nine Palms, was nominated as an ACEC, but during the Desert Plan amendment process it was removed as lacking the values needed to sustain it as an ACEC. The lake contains shoreline sites that appear to have been deposited when the lake contained fresh water. This could have occurred intermittently or during the early Holocene, at least 9,000 years ago. The Dale Lake mining area is located nearby and is significant for early twentieth century mining activities.
40. **Patton’s Iron Mountain Divisional Camp ACEC** is one of several temporary campsites associated with preparation for Patton’s assaults during World War II in North Africa and Italy. All of the sites associated with Patton throughout the California, Nevada, and Arizona deserts should be considered to be significant and fragile. Some have little remaining, but the tracks of the heavy armor can be found throughout the desert pavements in eastern Riverside and southeastern San Bernardino counties. Patton’s Iron Mountain Divisional Camp contains sensitive archaeological resources

including the altar [perhaps clarify what this is], parade grounds, and tent foundations, and is memorialized at the George S. Patton Museum at Chiriaco Summit. The site was recently listed in the NRHP.

41. **Corn Spring ACEC**, in the Chuckawalla Mountains, is listed in the NRHP as Corn Spring(s) Archaeological Site as the Gus Lederer Archaeological District to the northeast. Corn Spring is an ACEC identified for prehistoric archaeology and contains a BLM campground. The archaeological resources and the historic sources are primarily on public lands, but some are contained on private lands to the west. The extent of the resources is much greater than the ACEC. Corn Spring was first collected by Malcolm Rogers of the San Diego Museum of Man, and Roger Desautels excavated the site in about 1968 as a result of the installation of the Corn Spring Campground. More recent studies by Dr. Gerrit Fenenga (1979) and Dr. William Clewlow (2002) documented some of the archaeological sites. Sites include aboriginal trails, rock art, historic mining-era foundations, rock rings, lithic scatters, and habitation sites. Rock features include spirit breaks, rock rings, rock “ducks” (also called trail markers), and geoglyphs. Among the outstanding features of the area are the highly discernable aboriginal trails leading into the site.
42. **Painted Canyon in the Mecca Hills** is an area that is important to Cahuilla people, as it is discussed in their origin stories and in their Bird Songs. Dr. Lowell Bean has collected ethnographic information concerning the area. This area should be considered to be culturally significant and might be a Traditional Cultural Property.
43. **Sidewinder Well ACEC**, west of Palen Lake, contains prehistoric habitation sites, mesquite processing sites, and lakeshore sites. It is an ACEC and is one of the rare sites in the central portion of Riverside County, an area that had a low density of occupation due to lack of water and other resources upon which aboriginal populations depended.
44. **Palen Dry Lake ACEC**, north of Desert Center, was proposed as an ACEC for the prehistoric resources located on the eastern side of the lakeshore. Archaeologists such as John Cook, Dr. Emma Lou Davis, Dennis Gallegos, Judyth Reed, and Eric Ritter surveyed the area and concluded that all of the shorelines contain significant archeological resources associated with stands of fresh water that once filled the lake. The entire area surrounding the dry lakebed is extremely sensitive. Palen Dry Lake’s geographic area of significance is indiscernible from Sidewinder Well and the polygon indicating the geographic extent of the two ACEC is combined on the map accompanying this document.
45. **Alligator Rock ACEC**, southwest of Desert Center, contains petroglyphs and quarried materials dating to prehistoric periods. The quarry was also a biface manufacturing site. Lithic specialist Clay Singer located two halves of a bifaces, one at the Alligator Rock Quarry and the other at McCoy Springs more than 20 mi. to the northeast. Rock art at the Kingdom of Zion petroglyphs site, located less than 5 mi. to the east, also warrants protection. The site is listed in the NRHP as the North Chuckwalla Mountains Quarry District and the North Chuckwalla Mountains Petroglyph District

46. **The Mule Mountains ACEC**, southwest of Blythe, contains natural water tanks in lava flows that attracted aboriginal populations. It was designated as an ACEC due to its dense collection of prehistoric features, including trails, geoglyphs, rock art, rock shelters, and a pottery drop. Malcolm Rogers first documented the location in the 1920s. It also has an association with military maneuvers dating from World War II or possibly more recently. The geoglyphs and human trails are embedded in desert pavement. The site was listed as the Mule Tank Discontiguous Archaeological District in the NRHP.
47. **The South McCoy Mountains** was proposed as an ACEC but was rejected because Class L designation would seemingly protect the resources. The McCoy Wash Petroglyph Site was documented by Daniel McCarthy and listed in the NRHP as the result of his Masters thesis project for the University of California, Riverside. A power line forms the western boundary of the archaeological complex. The petroglyphs site is just inside the McCoy Mountains Wilderness Area. This area is extremely sensitive to any ground disturbance.
48. **Ford Dry Lake** was proposed by the Desert Plan staff as a potentially important location of cultural resources. It was proposed as an ACEC but rejected because of a “lack of importance.” Inventories over the past two decades have produced little in the way of significant sites, but it should be restudied. Ephemeral sheep grazing occurred in the area until the late 1990s.
49. **The Sheephole Mountains** are virtually unknown, but it appears to some anthropologists that they are discussed within the salt stories of the Chemehuevi Indians. They form the divide between Bristol and Dale lakes, both of which contain some evidence of the activity of early humans within the California desert.
50. **Big Morongo Canyon** is managed as an ACEC for wildlife. It also contains significant archaeological sites that may also be significant to the Cahuilla Indians. One the largest habitation sites, with rich, black midden, might be the village site of Morongo as described by Alfred Kroeber in the 1920s.
51. **The Santa Rosa/San Jacinto Mountains National Monument** is the backdrop to the Coachella Valley. It was established as a National Monument by an Act of Congress on October 24, 2000 “in order to preserve the nationally significant biological, cultural, recreational, geological, educational, and scientific values found” within its boundaries. The cultural resources found there are important to the Cahuilla Indians and for research and heritage values. Andreas Canyon and the Martinez Rock houses are both listed in the NRHP as being significant historical resources. Habitation sites, food processing sites, lithic scatters, and places special to native peoples should all be considered as eligible for listing in the NRHP.

SAN BERNARDINO COUNTY

(Note: Greenwater Canyon and Clark Mountain ACEC are not discussed here since management was transferred to the National Park Service in 1993.)

52. **The Black Hills** are south of the China Lake Naval Air Weapons Station's Echo Range, north of Blackwater Well, and east of the Twenty Mule Team Route as it leaves Granite Well and heads towards Boron. The area contains hundreds of talus pits that may have been used for game hunting or religious purposes, as well as petroglyphs. Many of the rocks which form the outlines of the pits are pockmarked as if they were pounded to process food or to make noise. This location is unique for the large numbers of talus pits.
53. **Blackwater Well**, northeast of Cuddeback Lake, was rejected during the Desert Plan analysis because it was placed in a Class L management category, which was considered adequate protection. The Blackwater Well Archaeological District is listed in the NRHP for its prehistoric archaeology. Over the last decade, all of the ranching-era buildings and watering sites have been removed. Nothing is left of the association with the Twenty Mule Team route. The archaeological sites, dating to over 2,000 years of age, are very sensitive. A deep rich midden which is attributable to a prehistoric village is located near the intermittent spring site. According to local sources is called Blackwater Well because the water ran through black soil, which is the midden. The 20 Mule Team used the water source at times, but the site was not a location of a permanent station.
54. **The Rodman Mountains ACEC** is southeast of Barstow and south of Newberry Springs. Both an ACEC and a Wilderness designation cover much of the area, which is rich in prehistoric Native American cultural resources, including rock art (petroglyphs and some pictographs), rock rings, geoglyphs, cairns, trails, habitation sites with midden, and rock shelters. The Newberry Cave archaeological site is situated within a designated wilderness area on the north slope of the Newberry Mountains, north of the Rodman Mountains. It is listed in the NRHP.
55. **Troy Dry Lake**, east of Newberry Springs, was the subject of work in the 1950s by Ruth D. Simpson. The area, which has no designation, has been partially inventoried, but most has not been surveyed to professional standards. Based upon information from the San Bernardino County Museum and personal field visits, the area contains geoglyphs, habitation sites, lithic scatters, rock art, and isolated hearths on both sides of Interstate 40.
56. **Von Trigger Springs** has no designation by the BLM, but the area has historically been important to Native Americans in the eastern Mojave Desert. The area contains both private and public lands. Information from the San Bernardino County Museum indicates that the archaeological sites include rock shelters, lithic scatters, village sites, and sites with pictographs and petroglyphs.

57. **The Calico Mountains and Harvard Hill**, east of Barstow, arguably contain some of the oldest archaeological sites in the Mojave Desert. Most of the archaeological sites are lithic reduction areas. The archaeological resources within the Calico Mountains Archaeological District cover much of the Calico Mountains and a portion of Pleistocene Lake Manix. An exact boundary has not been identified as it has often been redefined as inventory occurs. The archaeological sites are listed in the NRHP and as an ACEC and are referred to as the Calico Early Man Site. This is an offensive name to some and is more often referred to as the Calico Mountains Archaeological site or just the Calico site. This site has been excavated for 40 years and is open intermittently to the public. The Lake Mojave Complex is found in this area and contains bifaces and other artifacts that are in excess of 8,000 years old. Harvard Hill may be the eastern boundary of the archaeological district. Impacts are occurring from transmission line corridors, recreation, and natural erosion. Professional archaeological study is occurring in parts of the Calico site and with the collection at San Bernardino County Museum.
58. **The Cronese Lakes** are east of Barstow and west of Baker, on the north side of Interstate 15. The ACEC encompasses much of geographic features. Both West and East Cronese (or Cronise) contain rich midden sites, including sandy deposits that contain fresh water mussel (*Anadonta* sp.) that were present in the Mojave River as it ended its run in Lake Mojave or Silver Lake, north of Baker. The Cronese Lakes were rich environments with water and waterfowl. A dissertation by Dr. Christopher Drover indicated that the area was used in early prehistoric times but also was occupied during contact times in the early to mid 1800s. The area contains burials as well as habitation/exploitation sites. Artifacts include pottery, projectile points, milling implements, lithic reduction remains, and beads. According to archaeologist Malcolm Rogers from the San Diego Museum of Man, a Southwestern Puebloan outlier may have been located here. Rogers proposed that the Anasazi peoples occupied the area while collecting turquoise in nearby Halloran Springs (mostly private lands). Silver lake is within the Mojave National Preserve. The lakes are sometimes filled by the Mojave River during heavy episodes of rain in the San Bernardino Mountains.
59. **The Manix ACEC** is referred to as Bassett Point by archaeologists and paleontologists. It is south of Interstate 15 and north of Newberry Springs. It contains a vestige of some of the earliest archaeological sites in the Mojave Desert, and according to archaeologist Fred Budinger may rival the nearby Calico Hills archaeological district in its antiquity and significance. The site also contains Pleistocene and Holocene era paleontological sites associated with the peopling of America. The BLM has designated a portion of this as an ACEC. The beds of Lake Manix and Lake Mojave traverse a portion of the resource. The CDCA Plan established an ACEC near Manix siding in order to protect paleontological resources. No management plan for this ACEC was ever prepared. Nearby Afton Canyon was established as an ACEC for biological and scenic resources, and it also contains cultural resources.
60. Mesquite Lake ACEC in northeastern San Bernardino County contains significant cultural resources associated with aboriginal use along its shoreline and within the

dunes system. The area has been looted in the past but contains resources that should be protected.

61. Denning Spring ACEC is located in north-central San Bernardino County, sandwiched between Ft. Irwin and Death Valley National Park. A rock shelter was test excavated by Dr. Mark Sutton in the early 1980s. Kaldenberg documented a large serpentine geoglyph within the northern portion of the site. Its location within the Avawatz Mountains helps protect the resource. The geoglyphs should be viewed as being irreplaceable.
62. **The Twenty Mule Team Borax** route began at Harmony Borax Works in Death Valley National Park, traversed over Wingate Pass and through the China Lake Naval Air Weapons Station to the railhead at Boron in the western Mojave Desert. One of the best examples of a freight wagon road in the California desert is found extending from the boundary of China Lake near Granite Springs southwest through Cuddeback Dry Lake and east of the community of Red Mountain. This route was determined eligible for listing in the NRHP in 1968 but is not yet listed. It should either be listed in the NRHP or considered as a National Historic Trail. Southwest of Cuddeback Lake, particularly as the route trends through California City, it is difficult to see since much of the trail has been lost due to heavy vehicle use.
63. **Christmas Canyon ACEC** is located on the east side of the Teagle Wash. It has been the subject of intensive inventory by archaeologists Drs. William Clewlow, David Whitley, Eric Ritter, Emma Lou Davis and Mark Becker as well as Judyth Reed, David Scott, and Russell Kaldenberg. The inventory was based upon work originally done by Sylvia Winslow and Emma Lou Davis in the 1960s. The area contains artifacts embedded in the desert pavement, stacked stone cairns, Indian trails deeply embedded in the pavement, rock shelters, camp sites, and highly patinated artifacts with extremely early dates that might be associated with the peopling of the Americas. The sites extend into the China Lake Naval Weapons Station, Echo Range and are often associated with embayments that existed when Searles Lake contained water. A Master's thesis by Luz Ramirez de Bryson at the University of Wisconsin argued that the area contained water from springs throughout the Holocene Epoch. The ACEC is threatened, because it is adjacent to an OHV Open Area. In 2002 correspondence from the California OHP to the BLM considered all of the archaeological sites to be eligible for listing in the NRHP.
64. **Bedrock Springs is an ACEC** located in the Summit Range on the north edge of the Lava Mountains. It is a relatively small area but possesses an incredible array of archeological resources, including petroglyphs, pictographs, extremely deep midden sites associated with collapsed rock shelters, rock alignments, and milling sites. The major village site has been looted, but BLM did data recovery projects at the site twice in the early 2000s to understand the extent of the looting. The site dated to 2,000 years ago. Faunal materials included bovine (perhaps bison), deer, bird, and fish bones. It has been determined to be eligible for listing in the NRHP.

65. **Steam Well Archaeological District is an ACEC** in the Lava Mountains. It is primarily a rock art site, with milling stations and scatters of prehistoric artifacts. The site was vandalized in the 1960s, but with the help of volunteers the BLM removed much of the spray paint. The site is eligible for listing in the NRHP and is managed as such. It is within a designated Wilderness area.
66. **Squaw Spring ACEC** is now referred to as Red Mountain Spring. The name on maps is considered offensive by the California Native American Heritage Commission and by many Native people. It is a complex of prehistoric archaeological sites situated in a valley and contained on several ridges east of Red Mountain. The district is listed in the NRHP and has recently been extensively mapped and studied by Dr. Mark Allen of California State Polytechnic University, Pomona. Petroglyphs and stacked stone structures are found throughout the district, as well as midden and milling stations. The site complex seems to date from the late prehistoric time period of about 1,000 years ago up until the late 1900s. The foundations of Squaw Spring Well, which supplied water to the gold and silver mines of the tri-cities of Randsburg, Red Mountain [OsDick or Sin City], and Johannesburg, are found along with the prehistoric archaeological sites.
67. **The Black Mountain and Inscription Canyon ACEC** was set aside for the outstanding petroglyphs and rock rings, occupation sites, trial shrines and cairns found throughout this area, as well as the resources contained at Opal Mountain and Milk Dry Lake. The area is listed in the NHRP. The resources are fragile. Inscription Canyon has been significantly vandalized. It was in private ownership until the 1990s. The late Wilson Turner and Gerald S. Smith undertook significant archaeological documentation on behalf of the San Bernardino County Museum through Earthwatch. The late Dr. Robert Heizer assisted in the research in the late 1970s.
68. **The Dead Mountains ACEC** was set aside because of information from the Mohave and Chemehuevi tribes. The range contains significant locations of salt trail songs identified by Robert Laidlaw and Carobeth Laird and also contains sites principally significant to the origin myths of the Mohave tribe and others.
69. **Kramer Hills ACEC** was located on the south side of Highway 58, on both sides of Highway 395. It was removed as an ACEC by a Desert Plan amendment. The area was once rich with aboriginal quarries. Impacts by transmission lines, pipelines, rock hounds, and OHV activities have degraded the resource. Recent work by Dr. William Self and Associates have analyzed the archaeological collections made Al Mohr and Agnes Bierman at the Kramer Hills quarries in the late 1940s as well as other lithic sites within the general vicinity. It may be worth a closer look to determine whether the archaeological sites have integrity of materials or location.
70. **Rainbow Basin and Owl Canyon** are located north of Barstow. Rainbow Basin is a Natural National Landmark and is known for its spectacular geology and fossils. Dr. Mark Sutton has documented some of the archaeology of Owl Canyon. Many of the archaeological resources are lithic scatters and quarries where opal, chalcedony, and agate were found. Fossil Canyon, on the northeast side of Rainbow Basin, contains

unique Coso-style petroglyphs carved into the welded tuft. This small archaeological site is listed in the NRHP. Fossil palm fronds are found within these canyons, as well as mammalian fossils dating to over 20 million years ago.

71. **Crucero is an ACEC** that contains many archaeological sites situated in sandy, windblown dunes and along the old watercourse of the Mojave River, southwest of Baker and east of Barstow. Sites include habitation sites, lithic scatters, milling stations, geoglyphs, and pottery scatters. Aboriginal trials have also been reported from the area. Impacts from OHVs have diminished the quality of the resources but the ever-shifting dunes serve to protect some resources.
72. **Silver Mountain Mines ACEC** was nominated to preserve two silver mines, the Yankee Maid and the Oro Grande. This ACEC is located north of Victorville in an area with scattered public lands.
73. **Juniper Flats ACEC** is situated on the north flanks of the San Bernardino Mountains, close to the boundary of San Bernardino National Forest. The ACEC contains a rich village site, temporary campsites, rock shelters, milling sites, and reported burial areas, and it has been impacted by OHV use and wildfire. Erosion was stabilized as a result of work by the Barstow Field Office archaeologist and the U.S. Forest Service. The site was studied by the late Del Fortner, who produced a monograph about his work at the site.
74. **Black Buttes in Pipes Canyon** is reported to contain important petroglyphs. According to the San Bernardino County Museum, the petroglyphs are situated in Pipes Wash and have not been professionally recorded. The museum staff concluded that all of Pipes Canyon and Pipes Wash might contain extremely significant cultural resources and need inventory and analysis.
75. **The North Slope of the San Bernardino Mountains** contain sites which are scattered much like those in the east-facing canyons of the Sierra Nevada. The entire watershed should be considered to be highly significant until it is adequately inventoried. This includes U.S. Forest Service, BLM, and private lands. Examples of archaeological sites such as the Bobo Springs Maze Petroglyph and the “Willie Boy” Stone Corral indicate that significant sites are present and span the prehistoric and historic periods.
76. **Amboy Crater is a National Natural Landmark (NNL)** and is managed as such by the BLM. It is situated just off Route 66 near Amboy. The San Bernardino County Museum staff indicates that the lava flow has significant archaeological sites. Little archeological survey has been conducted on the BLM-administered portion of the Landmark but archaeological resources are suspected there. A reported obsidian source may be located in or near the NNL.
77. **Lanfair Valley** in the east Mojave Desert contains interspersed public and private lands. The area is largely unsurveyed, but according to the San Bernardino County Museum it has some of the best examples of twentieth century homesteading left in the California desert. The homesteading landscape is considered to be significant, and any

large-scale development should be viewed as potentially impacting the historic-era landscape.

78. **Lost Lake** within the Owl Hole Mountains is squeezed in between Ft. Irwin and Death Valley National Park. The area has not been adequately inventoried, but information recorded by Dr. Emma Lou Davis indicates that the area contains significant cultural resources, including rock alignments and shoreline sites dating to the Paleo-Indian time period.
79. **The Whipple Mountains ACEC**, southwest of Needles, represent one of the most extensively used and concentrated distributions of culturally sensitive resources in the California Desert. This ACEC contains rock shelters, caves, trails, and habitation sites, as well as mythological and religious sites important to the Mohave. Much of the area has been designated as wilderness, which will assist in the preservation of the sites. Archaeological research has been proposed, and a nomination package for the NRHP was prepared by University of Nevada, Las Vegas archaeologists Linda Blair and Jeff Wedding.
80. **Spangler Hills** is adjacent to an OHV open area. It contains prehistoric resources associated with the collection of lithic resources, as well as historic mining sites dating to the late 1800s. The area was proposed for ACEC designation but the BLM did not “anticipate additional degradation of cultural resource values because of the irregular topography and lack of roads” (BLM Volume C, Appendix IV, 1980:63). Recent surveys by Giambastini have found that the area contains more sites than previously reported.
81. **The Baxter Mountain Range** southwest of Barstow in Stoddard Valley once contained quarry sites and seed processing areas with bedrock grinding slicks. It is located in a Class I, or Open Area. Little may be left of the resource, but the area should be viewed as having some significance.
82. **The south end of the Providence Mountains** within the Mojave Desert Preserve contains some of the densest concentrations of archaeological sites within the central portion of the Mojave Desert. Rock shelters containing pictographs and petroglyphs and interspersed habitation sites make this one of the most significant archaeological areas within the California desert. While pressures to develop it are not pronounced as on public lands, it still should be noted as an area with extremely significant resources and development could impact a cultural landscape.
83. **Sunflower Springs** is located in the east Mojave Desert. As with most spring sites in the California desert, it is a significant cultural resource. It is privately owned, with public lands surrounding the site. It should be considered sensitive.
84. **Kingston Mountains ACEC** was set aside for the management of wildlife and botanical resources. The area also contains significant cultural resources in the form of nearly intact archaeological sites. Pygmy agave was harvested here by the local Native American population. Agave roasting pits are ubiquitous in ACEC. A report was

prepared in the 1980s as the result of work undertaken by students from the University of California, Santa Cruz.

85. **Clark Mountain ACEC**, like the Kingston Mountains, was established for the management of plants and animals. It also contains archaeological sites with agave roasting pits. A part of the ACEC was transferred to the NPS as a result of the establishment of the Mojave Desert Preserve.
86. **West Well** was proposed by the BLM cultural resource staff to protect prehistoric cultural values in the Chemehuevi Wash in eastern San Bernardino County near the Colorado River. The area contains large concentrations of rock rings which have been impacted by use. The area was rejected because management was limited to existing roads and trails
87. **The Afton Canyon ACEC** is situated east of Barstow and West of Baker, California. Archaeological resources are dominated by sites representing the late prehistoric period. These sites include habitation areas and cave sites. Extensive studies have been conducted by Dr. Joan Schneider. The Old Government Road crosses through the ACEC, as does the Burlington Northern/Santa Fe Rail line. The ACEC contains a campground and much vegetation restoration has occurred along the banks of the Mojave River as it surfaces in the ACEC.
88. **Halloran Wash ACEC** is located just north of Interstate 15 at the southern end of Shadow Valley in the east Mojave Desert. It was identified as an ACEC due to its significant prehistoric cultural resources which include significant rock art sites (petroglyphs), habitation sites, lithic quarries, and trail segments.

SAN DIEGO COUNTY

89. **Table Mountain ACEC** is within the McCain Valley Management unit of San Diego County. The area is also listed in the NRHP for its significant prehistoric resources. It is also significant to Native Americans, as it was used by the local tribes as a food gathering and cultural site until late in the 1800 or early 1900.
90. **Inkopah ACEC** is partially within the CDCA and within the McCain Valley Management unit. Like Table Mountain, it contains archaeological and cultural resources that are significant scientifically and culturally. The ACEC was not established for its cultural but for other resource sensitivity.

HISTORIC ROUTES AND OTHER LARGE-SCALE FEATURES

91. **The Old Government Road** or the Mojave Trail was used and built by the US Army. Its major period of use was 1860-1880. The majority of it bisects the Mojave National Preserve, but it enters the preserve and exits it on public lands. The route is roughly

220 mi. long, beginning in the east at Fort Mohave and ending near Camp Cady, east of Newberry Springs. The setting is important for this trail, much of which is two wheel ruts. It is one of the most important historic trails in the California desert and needs to be considered as a significant resource. It was originally recommended by the Desert Plan cultural resources staff as an ACEC but was rejected due to manageability concerns.

92. **The Old Salt Lake Trail** is a National Historic Trail managed jointly by the National Park Service and the BLM. This trail went from Santa Fe, New Mexico to Los Angeles. Beginning in 1829, commercial caravans brought goods for trade. Although in the California desert it skirts the East Mojave National Preserve and near Barstow trends through the eastern edge of Ft. Irwin, there are segments of the trail that probably traversed the Preserve. In some places power lines dominate the landscape. The Desert Plan staff proposed Spanish Canyon in the Alvord Mountain as an ACEC but the proposal was rejected since Multiple Use Class M would have served as adequate protection. The wagon ruts that were very visible in the late 1970s have been obscured by OHVs using the area for hill climbs. This trail is of national significance, and its setting should be considered significant.
93. **Route 66** through the California desert from Newberry Springs to near Needles was constructed in 1926 and caught the imagination of the nation as the major east-west automobile route between Los Angeles and Chicago between the 1920s and the 1960s. The setting along the route is important to those who traverse it. Several organizations are interested in the preservation and management of the Route 66 experience. The BLM has exercised leadership in its preservation, as has the County of San Bernardino. The landscape adjacent to Route 66 should be considered to a significant aspect of twentieth century history.
94. **The Bradshaw Trail** from near Blythe to Dos Palmas was an early historic route constructed in 1862. Its 70-mi. route is partially graded and partly requires four-wheel drive. It crosses some archaeological sites in the eastern portion of the route and provides access to historic mining properties along its route. It is a significant resource, and along with other trails in the California desert, its setting is significant. Public concern regarding the Dos Palmas Preserve and its historical ranch house add significance to the connecting trail that now bypasses the preserve.
95. **The Juan Bautista De Anza National Historic Trail** and the parallel Butterfield Stage Route in Imperial County have been designated as a National Historic Trail and are administered by the National Park Service. The route traverses public lands in Imperial County, but often parallels paved roads. In some places it is a horseback and hiking trail. The Butterfield Stage Route parallels much of the DeAnza Trail. It provided access for gold seekers, postal couriers, and the railroad from about 1860 until the end of the nineteenth century. The area was proposed as an ACEC and as an historic trail by the BLM cultural resources staff, but the proposal was rejected due to its course through an OHV open area at Plaster City. Any impact to its setting should be carefully evaluated.

96. **The Manix Basin Aboriginal Trails** were identified and published by avocational archaeologist E. Henry James. They are located northeast of Newberry Springs, between Interstate 15 and Interstate 40 in San Bernardino County. The trails intersect archaeological sites and are often difficult to see unless the light from the sun is at a suitable angle. The trails cross sandy hummocks and open patches of dune blowouts. They compose a changing landscape that has been poorly documented. Information is documented at the San Bernardino County Museum.
97. **Colorado Desert Aboriginal Trails** are found within the desert pavements from the Colorado River to the Coachella Valley in Riverside and Imperial counties. The trails have been studied by Daniel McCarthy and Francis Johnson. They are unmapped, except in so far as they have been documented in the course of archaeological site recordation. Trails are ephemeral, but within the desert pavement they will survive many more decades unless they are disrupted by land alteration or vehicle use. As discussed in connection with Mule Mountains (#45), trails there bisect a trail circle and a geoglyph; they are visible even after heavy vehicle traffic use over the last 60 years. Generally trails also contain stone markers, often called “rock ducks,” and spirit or trail breaks which are a simple line of rocks placed across a trail. While these have not been adequately mapped, they are scattered throughout the Colorado desert, and caution should be used in siting projects or allowing OHV uses. An inventory of the trail systems even if done by air would be an important contribution.
98. **Mojave River Corridor in San Bernardino County.** The headwaters of the Mojave River are within the San Bernardino National Forest. Like many rivers in the West, the headwaters of the Mojave River were dammed for erosion control, flood control, and water conservation. Silverwood Lake was created by the damming of the Mojave River. The Mojave River drains into Pleistocene Silver Lake and Lake Mojave, in the interior of the Mojave Desert near Baker. It drains. It provided a substantial resource for aboriginal populations, including not only fresh water but shellfish, river-dwelling freshwater fish, and animals that were attracted to the water. All along the river’s channel were places that people lived in both the aboriginal and historic times. Camp Cady, an army fortification, is situated where it is because of the proximity of the Mojave River. Much of the land between Silverwood Lake and Newberry Springs is private and has been developed. Some of it is still undeveloped, and public lands along the river should be considered to be sensitive. The entire Mojave River corridor should be considered a cultural landscape from its beginnings to its terminus.
99. **Historic nineteenth- and early twentieth-century ranching complexes** are scattered throughout the CDCA, have been not been completely studied, and are poorly understood. Ranching complexes should be considered to be significant for the purposes of evaluation. Oral histories should be undertaken where possible during any undertaking that affects the associated cultural resource. Eventually they will all be gone, because most of the associated artifacts are perishable.
100. **Historic nineteenth- and twentieth-century mining complexes** associated with the early mineral exploration and development of the CDCA should be considered

significant because many are undocumented. Historic research through county and state mining records and oral histories should be conducted on these complexes scattered throughout the CDCA.

101. **The New and Alamo Rivers** in Imperial County enter the United States from Baja Norte, Mexico. On the American side much of the lands have been subjected to tiling for agricultural purposes for a century. Archaeologist Jay von Werlhof feels that important archaeological sites may still be intact along some of the riverbanks. These include a village located near Brawley, California.
102. **Sites within the Ancient Lake Cahuilla Shoreline Area, Imperial County, California.** Jay von Werlhof has indicated a series of archaeological sites, including fish traps and rock art which are within the band of shoreline sites in Imperial County that have not been previously noted in the archaeological record. These sites are on the east and west side of the Salton Sea and should be noted as significant features on the landscape. The sites should be considered to be fragile and are in need of documentation.
103. **Sites Identified by the Public.** Concerned members of the public have indicated that they have concern for several archaeological sites within the CDCA which are familiar to them due to their intimate knowledge of the California Desert. Several of the sites are within the bounds of National Parks and others were in designated wilderness area. Geoglyphs scattered throughout the desert are not identified for this project except unless they are ACEC's or listed in the NRHP. Sites that have been placed on the map include:
 - a. Coyote Hole Springs near Joshua Tree National Park. This site is primarily on private lands and contains petroglyphs and deposits that appear to be representative of an ethnohistoric era village. There may be interest in the site by tribes.
 - b. Painted Rock, site containing rock art and habitation debris such as lithics is located in the Old Woman Mountains in eastern San Bernardino County and is on private lands owned by a non-profit organization
 - c. Newberry Cave situated near Newberry Springs, San Bernardino County is in designated wilderness. It has been added to the map due to concerns about impacts by projects east of Barstow. The site is also listed in the NRHP. It has been the subject of an excavation report and a Masters Thesis.
 - d. A purported Papago Creation site north of Desert Center has been indicated on the map based upon public concern for the location. Research regarding the site needs to be conducted.
 - e. Geoglyphs along the Colorado River near have been of concern to some members of the public and Tribes for many years. Some of these are listed in the NRHP; others have been determined to be eligible for listing in the NRHP. A polygon north of Blythe has been placed on the map to indicate the location is sensitive.

SITES WITHIN THE CDCA LISTED IN THE NRHP

The following is an annotated list of Archaeological Sites within the CDCA which have been listed in the National Register of Historic Places. All of the listed places are on federal lands unless otherwise noted. The significance of this list is that someone went to the trouble to complete the forms and the sophisticated process to get the place identified, evaluated, reviewed by the agency and the OHP staff, sent to the Keeper of the National Register of Historic Places, reviewed there, published in the Federal Register and then placed on the list maintained by the National Park Service. It is a long but worthwhile process. Most sites identified within the CDCA as being of National Register quality are never listed in the NRHP but determined eligible. Unfortunately most agencies have not kept good records of what sites have been determined to be eligible for listing. Someday such a list may be created, but it will be an incredibly long and complex task. A data retrieval system will have to be devised and old reports located which identify which sites have been so determined.

IMPERIAL COUNTY

Calexico Carnegie Library (added 2005 - **Building** - #05001085)

Also known as **Calexico Public Library**

420 Heber Ave., Calexico

Historic Significance: Event

Area of Significance: Education

Period of Significance: 1900-1924, 1925-1949, 1950-1974

Owner: **Local Gov't**

Historic Function: Education

Historic Sub-function: Library

Current Function: Vacant/Not In Use

Coyote Valley Site (added 1984 - **Site** - #84004083)

Also known as **Site P-15**

Address Restricted, Palo Verde

Owner: **Federal**

Desert View Tower ** (added 1980 - **Site** - #80000801)

SW of Ocotillo, Ocotillo

Historic Significance: Architecture/Engineering

Architect, builder, or engineer: Ratcliffe, M.T., Vaughn, Robert

Architectural Style: Other

Area of Significance: Art

Period of Significance: 1900-1924

Owner: **Private**

Historic Function: Recreation And Culture

Historic Sub-function: Museum

Current Function: Recreation And Culture

Current Sub-function: Museum

Fages-De Anza Trail-Southern Emigrant Road (added 1973 - **District** - #73002252)

Also known as **Anza-Borrogo Desert State Park**

Anza-Borrogo State Park, Borrogo Springs

Historic Significance: Event, Information Potential

Area of Significance: Prehistoric, Historic - Non-Aboriginal, Military, Exploration/Settlement,
Historic - Aboriginal

Cultural Affiliation: Shoshonan, Yuman

Period of Significance: 1499-1000 AD, 1900-1750 AD, 1700-1749

Owner: **Private** , **State**

Historic Function: Landscape, Transportation

Historic Sub-function: Road-Related, Underwater

Current Function: Landscape, Transportation

Current Sub-function: Park, Road-Related, Underwater

Hillside Figure (added 1984 - **Site** - #84004063)

Also known as **Site G-2**

Address Restricted, Palo Verde

Owner: **Federal**

Main Yuha Site (added 1984 - **Site** - #84004114)

Address Restricted, Palo Verde

Owner: **Federal**

North Cargo Muchacho (added 1984 - **Site** - #84004071)

Also known as **Site L-3**

Address Restricted, Palo Verde

Owner: **Federal**

Ocotillo Wells (added 1984 - **Site** - #84004111)

Also known as **Site P-13;322B**

Address Restricted, Palo Verde

Owner: **Federal**

Ogilby Site A (added 1984 - **Site** - #84004074)

Also known as **Site L-6**

Address Restricted, Palo Verde

Owner: **Federal**

Palo Verde Circles and Arrow (added 1984 - **Site** - #84004065)

Also known as **Site G-4**

Address Restricted, Palo Verde

Owner: **Federal**

Pilot Knob 18 (added 1984 - **Site** - #84004079)

Also known as **Site M-6**

Address Restricted, Palo Verde 1

Owner: **Federal**

Pilot Knob Anthropomorphic Figure (M-1) (added 1984 - Site - #84004075)

Also known as **Site M-1**

Address Restricted, Palo Verde

Owner: **Federal**

Pilot Knob Anthropomorphic Figure (M-8) (added 1984 - Site - #84004080)

Also known as **Site M-8**

Address Restricted, Palo Verde

Owner: **Federal**

Pilot Knob Horse (added 1984 - Site - #84004078)

Also known as **Site M-4**

Address Restricted, Palo Verde

Owner: **Federal**

Pilot Knob Lizard (added 1984 - Site - #84004076)

Also known as **Site M-2**

Address Restricted, Palo Verde

Owner: **Federal**

Pilot Knob Ring (added 1984 - Site - #84004077)

Also known as **Site M-3**

Address Restricted, Palo Verde

Owner: **Federal**

Pinto Wash (added 1984 - Site - #84004113)

Also known as **Site P-17**

Address Restricted, Palo Verde

Owner: **Federal**

Quail, The (added 1984 - Site - #84004073)

Also known as **Site L-5**

Address Restricted, Palo Verde

Owner: **Federal**

19 Running Man (added 1984 - Site - #84004069)

Also known as **Site L-1**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-A (added 1984 - Site - #84004082)

Also known as **Site O-1**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-B (added 1984 - Site - #84004084)

Also known as **Site O-2**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-C (added 1984 - **Site** - #84004085)

Also known as **Site O-3**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-D (added 1984 - **Site** - #84004086)

Also known as **Site O-4**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-E (added 1984 - **Site** - #84004087)

Also known as **Site O-5**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-F (added 1984 - **Site** - #84004088)

Also known as **Site O-6**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-G (added 1984 - **Site** - #84004089)

Also known as **Site O-7**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-H (added 1984 - **Site** - #84004090)

Also known as **Site O-8**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-I (added 1984 - **Site** - #84004091)

Also known as **Site O-9**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-J (added 1984 - **Site** - #84004092)

Also known as **Site O-10**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-K (added 1984 - **Site** - #84004093)

Also known as **Site O-11**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 1-L (added 1984 - **Site** - #84004094)

Also known as **Site O-12**

Address Restricted, Palo Verde

Owner: **Federal**

2. The Identification and Descriptions of Places that Matter within the CDCA

Singer Element 1-M (added 1984 - **Site** - #84004095)

Also known as **Site O-13**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 2-A (added 1984 - **Site** - #84004096)

Also known as **Site O-14**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 2-B (added 1984 - **Site** - #84004097)

Also known as **Site O-15**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element 2-C (added 1984 - **Site** - #84004098)

Also known as **Site O-16**

Address Restricted, Palo Verde

Owner: **Federal**

Singer Element R-1 (added 1984 - **Site** - #84004099)

Also known as **Site O-18**

Address Restricted, Palo Verde

Owner: **Federal**

Site G-3 (added 1984 - **Site** - #84004064)

Address Restricted, Palo Verde

Owner: **Federal**

Site L-2 (added 1984 - **Site** - #84004070)

Address Restricted, Palo Verde

Owner: **Federal**

Site L-4 (added 1984 - **Site** - #84004072)

Address Restricted, Palo Verde

Owner: **Federal**

Site M-11 (added 1984 - **Site** - #84004081)

Address Restricted, Palo Verde

Owner: **Federal**

Site M-9 (added 1984 - **Site** - #84004027)

Also known as **AZ-050-0416**

Address Restricted, Palo Verde

Owner: **Private**

Site P-14 (added 1984 - **Site** - #84004112)

Address Restricted, Palo Verde

Owner: **Federal**

Site P-8 (added 1984 - **Site** - #84004106)

Address Restricted, Palo Verde

Owner: **Federal**

Southwest Lake Cahuilla Recessional Shoreline Archeological District * (added 1999 - District - #99001567)**

Address Restricted, Salton City

Historic Significance: Event, Information Potential

Area of Significance: Prehistoric

Cultural Affiliation: Cahuilla, Kumeyaay

Period of Significance: 5000-6999 BC, 3000-4999 BC, 1000-2999 BC, 1000 AD-999 BC, 7500-7999 BC, 7000-7499 BC, 1499-1000 AD, 1500-1599

Owner: **Federal**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Defense, Work In Progress

Current Sub-function: Military Facility

Spoke Wheel Rock Alignment (added 2003 - Site - #03000120)

Also known as **CA-IMP-6988**

Address Restricted, Ocotillo

Historic Significance: Architecture/Engineering, Information Potential

Architectural Style: Other

Area of Significance: Art, Prehistoric

Cultural Affiliation: Kummeyaay Tribe

Period of Significance: 1000-1499 BC, 500-999 BC, 499-0 BC, 499-0 AD, 1000-500 AD, 1499-1000 AD, 1749-1500 AD, 1900-1750 AD

Owner: **Federal**

Historic Function: Religion

Historic Sub-function: Ceremonial Site

Current Function: Other

Stonehead (L-7) * (added 1987 - Site - #87001026)**

Address Restricted, Yuma

Historic Significance: Information Potential

Area of Significance: Prehistoric

Cultural Affiliation: Native American

Period of Significance: 1499-1000 AD

Owner: **Private**

Historic Function: Recreation And Culture

Historic Sub-function: Work Of Art (Sculpture, Carving, Rock Art)

Current Function: Landscape

Current Sub-function: Unoccupied Land

Sweeney Pass Site (added 1984 - Site - #84004028)

Also known as **Site S-1**

Address Restricted, Ocotillo Wells

Owner: **State**

US Inspection Station--Calexico * (added 1992 - Building - #91001749)**

Also known as **US Border Station;Old Customs Building**

12 Heffernan Ave., Calexico

Historic Significance: Architecture/Engineering, Event

Architect, builder, or engineer: U,S. Treasury Department

Architectural Style: Other, Mission/Spanish Revival

Area of Significance: Hispanic, Politics/Government, Architecture

Period of Significance: 1925-1949

Owner: **Federal**

Historic Function: Government

Historic Sub-function: Customhouse

Current Function: Government

Current Sub-function: Customhouse

US Post Office--El Centro Main (added 1985 - Building - #85000125)

Also known as **El Centro Main Post Office**

230 S. 5th St., El Centro

Historic Significance: Architecture/Engineering

Architect, builder, or engineer: Simon,Louis A., Wetmore,James A.

Architectural Style: Beaux Arts, Classical Revival

Area of Significance: Architecture

Period of Significance: 1925-1949

Owner: **Federal**

Historic Function: Government

Historic Sub-function: Post Office

Current Function: Government

Current Sub-function: Post Office

Walter's Camp Linear Figure (added 1984 - Site - #84004068)

Also known as **Site I-1**

Address Restricted, Palo Verde

Owner: **Federal**

Winterhaven Anthropomorph (L-8) * (added 1987 - Site - #87001025)**

Address Restricted, Yuma

Historic Significance: Information Potential

Area of Significance: Prehistoric

Cultural Affiliation: Native American

Period of Significance: 1499-1000 AD

Owner: **Private**

Historic Function: Recreation And Culture

Historic Sub-function: Work Of Art (Sculpture, Carving, Rock Art)

Current Function: Landscape

Current Sub-function: Unoccupied Land

Winterhaven Anthropomorph and Bowknot, L-9 * (added 1985 - Site - #85003429)**

Also known as **L-9**

Address Restricted, Winterhaven

Historic Significance: Architecture/Engineering, Information Potential

Area of Significance: Prehistoric, Art

Cultural Affiliation: Native American

Period of Significance: 3000-4999 BC, 1000-2999 BC

Owner: **Private**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Landscape

Yuha Basin Discontiguous District ** (added 1982 - Site - #82002185)

Address Restricted, Plaster City

Historic Significance: Information Potential

Area of Significance: Prehistoric

Cultural Affiliation: San Dieguito, Malpais

Period of Significance: 1499-1000 AD

Owner: **Local Gov't**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Recreation And Culture

Current Sub-function: Outdoor Recreation

Yuha Schneider Site (added 1984 - Site - #84004107)

Also known as **Site P-9**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Shrine (added 1984 - Site - #84004110)

Also known as **Site P-12**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site A (added 1984 - Site - #84004100)

Also known as **Site P-1**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site B (added 1984 - Site - #84004101)

Also known as **Site P-2**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site C (added 1984 - Site - #84004102)

Also known as **Site P-3**

Address Restricted, Palo Verde

Owner: **Federal**

2. The Identification and Descriptions of Places that Matter within the CDCA

Yuha Site E (added 1984 - **Site** - #84004103)

Also known as **Site P-4**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site F (added 1984 - **Site** - #84004104)

Also known as **Site P-5**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site G-1 (added 1984 - **Site** - #84004105)

Also known as **Site P-6**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site H (added 1984 - **Site** - #84004108)

Also known as **Site P-10;322E**

Address Restricted, Palo Verde

Owner: **Federal**

Yuha Site I (added 1984 - **Site** - #84004109)

Also known as **Site P-11;322-G**

Address Restricted, Palo Verde

Owner: **Federal**

Yuma Crossing and Associated Sites *** (added 1966 - **District** - #66000197)

Banks of the Colorado River, Winterhaven

Historic Significance: Event

Area of Significance: Transportation, Exploration/Settlement

Period of Significance: 1850-1874, 1875-1899

Owner: **Private , State**

Historic Function: Defense, Transportation

Historic Sub-function: Military Facility, Water-Related

Current Function: Recreation And Culture

Current Sub-function: Museum

INYO COUNTY

Archeological Site CA-INY-134 ** (added 2003 - Site - #03000116)

Also known as **Ayer's Rock Pictograph Site; Bob Rabbit's Pictographs**

Address Restricted, Olancha

Historic Significance: Architecture/Engineering, Information Potential

Architectural Style: No Style Listed

Area of Significance: Philosophy, Art, Historic - Aboriginal, Prehistoric, Religion

Cultural Affiliation: Early, Middle, and Late Archaic, Late Prehistoric/Historic, Coso
Shoshone/Kawaiisu/Numic

Period of Significance: 7000-7499 BC, 6500-6999 BC, 1900-1750 AD, 1900-1924

Owner: **Federal**

Historic Function: Agriculture/Subsistence, Domestic, Industry/Processing/Extraction,
Recreation And Culture, Religion

Historic Sub-function: Camp, Ceremonial Site, Processing, Processing Site, Work Of Art
(Sculpture, Carving, Rock Art)

Current Function: Landscape

Current Sub-function: Unoccupied Land

Big and Little Petroglyph Canyons * (added 1966 - Site - #66000209)**

Address Restricted, China Lake

Historic Significance: Architecture/Engineering, Information Potential

Architectural Style: No Style Listed

Area of Significance: Philosophy, Art, Historic - Aboriginal, Prehistoric, Religion

Cultural Affiliation: Early, Middle, and Late Archaic, Late Prehistoric/Historic, Coso
Shoshone/Kawaiisu/Numic

Period of Significance: 7000-7499 BC, 6500-6999 BC, 1900-1750 AD, 1900-1924

Owner: **Federal**

Historic Function: Agriculture/Subsistence, Domestic, Industry/Processing/Extraction,
Recreation And Culture, Religion

Historic Sub-function: Camp, Ceremonial Site, Processing, Processing Site, Work Of Art
(Sculpture, Carving, Rock Art)

Current Function: Landscape

Current Sub-function: Unoccupied Land

Coso Hot Springs * (added 1978 - District - #78000674)**

Address Restricted, Little Lake

Historic Significance: Event, Architecture/Engineering, Information Potential

Architect, builder, or engineer: Unknown

Architectural Style: Other

Area of Significance: Architecture, Religion, Prehistoric, Historic - Aboriginal

Cultural Affiliation: Shoshone, Owens Valley Paiute

Period of Significance: 1499-1000 AD, 1900-1924

Owner: **Private**

Historic Function: Domestic, Recreation And Culture

Historic Sub-function: Camp, Outdoor Recreation

Current Function: Unknown

Coso Rock Art District * (added 1999 - District - #99001178)**

Also known as Big and Little Petroglyph Canyons National Historic Landmark

Address Restricted, China Lake

Historic Significance: Architecture/Engineering, Information Potential

Area of Significance: Art, Prehistoric

Cultural Affiliation: Late Archaic, Middle Archaic, Early Archaic

Period of Significance: 9000-10999 BC, 7000-8999 BC, 5000-6999 BC, 3000-4999 BC, 1000-2999 BC, 1000 AD-999 BC, 500-999 BC, 499-0 BC, 499-0 AD, 1000-500 AD, 1499-1000 AD, 1749-1500 AD

Owner: **Federal**

Historic Function: Agriculture/Subsistence, Domestic, Funerary, Recreation And Culture, Religion

Historic Sub-function: Camp, Ceremonial Site, Multiple Dwelling, Secondary Structure, Single Dwelling, Village Site, Work Of Art (Sculpture, Carving, Rock Art)

Current Function: Defense

Current Sub-function: Naval Facility

Death Valley Junction Historic District ** (added 1980 - District - #80000802)

CA 127 and CA 190, Death Valley Junction

Historic Significance: Event, Architecture/Engineering, Person

Architect, builder, or engineer: McCulloch, Alexander H.

Architectural Style: Mission/Spanish Revival

Historic Person: Becket, Marta

Significant Year: 1926, 1923

Area of Significance: Architecture, Performing Arts, Community Planning And Development, Industry, Transportation, Exploration/Settlement, Commerce

Period of Significance: 1900-1924, 1925-1949

Owner: **Private**

Historic Function: Domestic

Historic Sub-function: Hotel, Single Dwelling

Current Function: Commerce/Trade, Domestic, Education, Recreation And Culture

Current Sub-function: Hotel, Music Facility, Single Dwelling

Death Valley Scotty Historic District ** (added 1978 - District - #78000297)

**Also known as Scotty's Castle & Ranch; Death Valley Ranch
NE of Olancha on CA 72 in Death Valley National Monument,
Olancha**

Historic Significance: Event, Architecture/Engineering

Architect, builder, or engineer: Multiple

Architectural Style: Modern Movement

Area of Significance: Social History, Invention, Prehistoric, Art, Architecture

Period of Significance: 1875-1899, 1900-1924

Owner: **Federal**

Historic Function: Domestic, Domestic

Historic Sub-function: Camp, Hotel, Secondary Structure, Single Dwelling

Current Function: Domestic, Recreation And Culture

Current Sub-function: Museum, Single Dwelling

Eagle Borax Works ** (added 1974 - District - #74000338)

Also known as H.S.-1

Death Valley National Monument, Furnace Creek

Historic Significance: Event

Area of Significance: Industry, Transportation

Period of Significance: 1875-1899

Owner: **Federal**

Historic Function: Industry/Processing/Extraction

Historic Sub-function: Extractive Facility, Manufacturing Facility

Current Function: Landscape

Current Sub-function: Park

Fossil Falls Archeological District ** (added 1980 - District - #80004492)

Address Restricted, Little Lake

Historic Significance: Information Potential

Area of Significance: Prehistoric

Cultural Affiliation: Lake Mojave, Silver Lake, Pinto or Little Lake

Period of Significance: 7000-8999 BC, 5000-6999 BC, 3000-4999 BC, 1000-2999 BC

Owner: **Federal**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Unknown

Harmony Borax Works * (added 1974 - District - #74000339)**

Also known as HS-2

Death Valley National Monument, Stovepipe Wells

Historic Significance: Event

Area of Significance: Industry, Transportation, Commerce

Period of Significance: 1875-1899

Owner: **Federal**

Historic Function: Domestic, Industry/Processing/Extraction

Historic Sub-function: Manufacturing Facility, Single Dwelling

Current Function: Landscape

Current Sub-function: Park

Inyo County Courthouse (added 1998 - Building - #97001664)

168 N. Edwards St., Independence

Historic Significance: Event, Architecture/Engineering

Architect, builder, or engineer: McCombs, William & Paul Daniel, Weeks, William W.

Architectural Style: Classical Revival

Area of Significance: Economics, Politics/Government, Architecture

Period of Significance: 1900-1924, 1925-1949

Owner: **Local Gov't**

Historic Function: Government

Historic Sub-function: Courthouse

Current Function: Government

Current Sub-function: Courthouse

Laws Narrow Gauge Railroad Historic District (added 1981 - District - #81000149)

Also known as Bishop Station;Laws Station

NE of Bishop, Bishop

Historic Significance: Event

Area of Significance: Industry, Historic - Non-Aboriginal, Transportation

Period of Significance: 1875-1899, 1900-1924

Owner: **Local Gov't**

Historic Function: Transportation

Historic Sub-function: Rail-Related

Current Function: Recreation And Culture

Current Sub-function: Museum

Leadfield (added 1975 - District - #75000221)

Also known as H.S.-3

Death Valley National Monument on Titus Canyon Trail, Death Valley

Historic Significance: Event

Area of Significance: Industry

Period of Significance: 1925-1949

Owner: **Federal**

Historic Function: Domestic, Industry/Processing/Extraction

Historic Sub-function: Extractive Facility, Single Dwelling

Current Function: Landscape

Current Sub-function: Park

Manzanar War Relocation Center, National Historic Site * (added 1976 - Site - #76000484)**

**Also known as Manzanar Internment Camp;Manzanar Concentration Camp
6 mi. S of Independence on CA 395, Independence**

Historic Significance: Event

Area of Significance: Asian, Military, Social History

Period of Significance: 1925-1949

Owner: **Local Gov't**

Historic Function: Domestic, Government

Historic Sub-function: Camp, Correctional Facility

Current Function: Vacant/Not In Use

Pawona Witu (added 1975 - District - #75000428)

Also known as South Fork,Bishop Creek

Address Restricted, Bishop

Historic Significance: Information Potential

Area of Significance: Prehistoric, Agriculture, Historic - Aboriginal

Cultural Affiliation: Eastern Mono, Northern Paiute

Period of Significance: 1499-1000 AD, 1749-1500 AD, 1900-1750 AD, 1800-1824, 1825-1849, 1850-1874, 1875-1899

Owner: **Local Gov't**

Historic Function: Agriculture/Subsistence, Domestic, Funerary

Historic Sub-function: Agricultural Fields, Graves/Burials, Village Site

Current Function: Agriculture/Subsistence, Recreation And Culture

Current Sub-function: Agricultural Fields, Outdoor Recreation

Reilly ** (added 2004 - Site - #03001358)

Also known as Anthony Mill Ruins

Address Restricted, Trona

Historic Significance: Event, Architecture/Engineering, Information Potential

Area of Significance: Historic - Non-Aboriginal

Cultural Affiliation: Chinese, Hispanic, Euro-American

Period of Significance: 1875-1899

Owner: **Federal**

Historic Function: Commerce/Trade, Domestic, Industry/Processing/Extraction

Historic Sub-function: Department Store, Extractive Facility, Multiple Dwelling, Secondary Structure, Single Dwelling, Water Works

Current Function: Vacant/Not In Use

16 Saline Valley Salt Tram Historic Structure ** (added 1974 - Structure - #74000514)

N of Keeler between Gordo Peak and New York Butte,

Keeler

Historic Significance: Event, Architecture/Engineering

Architect, builder, or engineer: Unknown

Architectural Style: No Style Listed

Area of Significance: Architecture, Industry, Engineering, Transportation

Period of Significance: 1900-1924, 1925-1949

Owner: **Federal**

Historic Function: Transportation

Historic Sub-function: Rail-Related

Current Function: Recreation And Culture

Current Sub-function: Outdoor Recreation

Skidoo (added 1974 - District - #74000349)

Death Valley National Monument, Wildrose District, Death Valley

Historic Significance: Event

Area of Significance: Industry, Commerce

Period of Significance: 1900-1924, 1925-1949

Owner: **Federal**

Historic Function: Industry/Processing/Extraction

Historic Sub-function: Extractive Facility, Manufacturing Facility

Current Function: Landscape

Current Sub-function: Park

KERN COUNTY

Bandit Rock (added 1975 - **Site** - #75000431)

Also known as **Robbers Roost**

SW of Inyokern near jct. of CA 14 and 178, Inyokern

Historic Significance: Event, Person

Historic Person: Vasquez, Tiburico

Significant Year: 1874

Area of Significance: Social History

Period of Significance: 1850-1874

Owner: **Federal**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Agriculture/Subsistence, Recreation And Culture

Current Sub-function: Agricultural Fields, Outdoor Recreation

Burro Schmidt's Tunnel (added 2003 - **Site** - #03000113)

Also known as **William Henry Schmidt's Tunnel**

Address Restricted, Ridgecrest

Historic Significance: Event, Person

Historic Person: Vasquez, Tiburico

Significant Year: 1874

Area of Significance: Social History

Period of Significance: 1850-1874

Owner: **Federal**

Historic Function: Domestic

Historic Sub-function: Camp

Current Function: Agriculture/Subsistence, Recreation And Culture

Current Sub-function: Agricultural Fields, Outdoor Recreation

Fort Tejon *** (added 1971 - **District** - #71000140)

Also known as **Fort Tejon State Historic Park**

3 mi. NW of Lebec, Lebec

Historic Significance: Event

Area of Significance: Architecture, Military, Transportation, Politics/Government

Period of Significance: 1850-1874

Owner: **State**

Historic Function: Defense

Historic Sub-function: Military Facility

Current Function: Landscape, Recreation And Culture

Current Sub-function: Museum, Park

Last Chance Canyon ** (added 1972 - **District** - #72000225)

Also known as **El Paso Mtns; Black Hills; Indian Wells**

Address Restricted, Johannesburg

Historic Significance: Information Potential

2. The Identification and Descriptions of Places that Matter within the CDCA

Area of Significance: Prehistoric, Historic - Aboriginal
Cultural Affiliation: Pinto-oid, Silverlake, Lake Mojave
Period of Significance: 9000-10999 BC, 7000-8999 BC, 5000-6999 BC, 3000-4999 BC, 1000-2999 BC,
1000 AD-999 BC, 1499-1000 AD, 1749-1500 AD, 1900-1750 AD
Owner: **Federal**
Historic Function: Domestic
Historic Sub-function: Camp
Current Function: Industry/Processing/Extraction, Recreation And Culture
Current Sub-function: Extractive Facility, Outdoor Recreation

Rogers Dry Lake *** (added 1985 - **Site** - #85002816)

Also known as **Muroc Dry Lake**

Edwards Air Force Base, Mojave Desert

Historic Significance: Event
Area of Significance: Military, Other
Period of Significance: 1925-1949, 1950-1974, 1975-2000
Owner: **Federal**
Historic Function: Landscape, Transportation
Historic Sub-function: Air-Related, Conservation Area
Current Function: Landscape, Transportation
Current Sub-function: Air-Related, Conservation Area

Walker Pass *** (added 1966 - **Structure** - #66000210)

60 mi. NE of Bakersfield on CA 178, Bakersfield

Historic Significance: Person, Event
Historic Person: Walker, Joseph R.
Significant Year: 1843, 1845, 1834
Area of Significance: Exploration/Settlement
Period of Significance: 1825-1849
Owner: **Private , Federal**
Historic Function: Transportation
Historic Sub-function: Road-Related
Current Function: Recreation And Culture, Transportation
Current Sub-function: Monument/Marker, Outdoor Recreation, Road-Related

3. RECOMMENDATIONS

This study is seen as a first step in identifying cultural resources in the California Desert that mean something important related to cultural resources. The places identified in this study matter to our heritage and should be protected in some form or another. The simple documentation of the cultural resources within the mapped polygons is the first step in adequately identifying what is there and what will be lost if the resources are not adequately documented, studied, and preserved. The polygons identified here are guides for your review and are not explicit locations for historic properties. No field verification occurred at any of the locations as a result of this study. If a project is proposed in or near any of these locations field visits should take place to identify any cultural resources which might be impacted as a result of ground-disturbing activities.

When projects are proposed the reader should actively review the Constraints map as a first step in identifying cultural resource issues which may exist within a specified geographic area. If cultural resources are identified ask about them. Ask what type of information was gathered and by who. Ask whether NHRP criteria were applied. Ask what impact the project will have on the resources. Ask why the resources cannot be avoided. Carefully review the report written by the agency and whatever documentation is made available from the agency staff or consultant. Learn to use the correct environmental language related to cultural resources. Become an interested party to the action. Ask to become a Consulting or Concurring Party to the process. If you are uncomfortable with the results of the environmental document you can hire a professional archaeologist to review the professional data submitted on behalf of the project proponent and to provide professional feedback to you. This should not be designed to discredit on anyone, but to have the best information you can receive so that you may be well informed. Many professional cultural resource specialists are listed in the Register of Professional Archaeologists (RPA). RPA is a peer-reviewed group and the names of the registered professional archaeologists are available on line. It is easy to use since the register is set up by region (states) and type of expertise the professional claims.

This report only briefly touches on American Indian traditional or spiritual sites. That is beyond the scope of the study. Places identified by native peoples to the BLM many years ago may or may not still be relevant to current tribal members. Many aspects of American Indian religious beliefs are related to individual experiences such as visions or stories related to the land. It is important to ask California Indian people what is important to them. This would have to be done through the use of existing data, some of which was collected by the BLM in the 1970s; other data has been collected by ethnographers, project proponents, agencies, and graduate students. This information should be compiled so that, with permission of tribal members, it could be used to identify places that matter to tribal members and to assist governing jurisdictions to make better land use decisions.

The report is a broad-brush approach to the cultural resources of the CDCA and, unless a cultural resource is pinpointed, such as the Plank Road, it does not contain specific locational

data. This information would be obtained through an archaeological records search from one of the CHRIS facilities called Information Centers or IC's for short. These ICs are located at the University of California, Riverside, Imperial County Museum, San Diego State University, San Bernardino County Museum and the Department of Anthropology at California State University, Bakersfield.

Records searches are an important aspect of knowing exactly what types of cultural resources are located within a specific geographic area and what additional research or inventory needs to be completed to identify the extent of the cultural property.

Cultural resources are fragile. Once they are gone they cannot be regrown or recreated. The people who left the information in the ground are gone; no ethnohistoric sites, no historic farmsteads or gold mines, aboriginal trail system, or paleo Indian site will ever be created again. The sites are subject to vandalism and increasing population pressure. Having a site in a box at a museum or curation facility is important, but not as important as leaving the site where it was found. The best management for cultural resources is, if possible, to keep it intact. This is particularly true of sites that are especially important to people as culturally relevant locations. The collection of information from those living today and the storing of information are particularly important. Losses of cultural resources are permanent.

4. SUGGESTED READING

Cultural Resource Management Sources That Are Useful:

Deloria, Vine Jr. and David E. Wilkins

1999 *Tribes Treaties and Constitutional Tribulations*. Austin, TX: University of Texas Press

Dorochoff, Nicholas

2007 *Negotiating Basics For Cultural Resource Managers*. Walnut Creek, CA: Left Coast Press.

Hardesty, Donald L. and Barbara J. Little

2000 *Assessing Site Significance: A Guide for Archaeologists and Historians*. Walnut Creek, California: Altamira Press.

Hutt, Sherry, Elwood W. Jones and Martin E. McAllister

1992 *Archaeological Resource Protection*. Washington, DC: The Preservation Press

Hutt, Sherry, Caroline Meredith Blanco, Walter E. Stern, and Stan N. Harris.

2004 *Cultural Property Law: A Practitioner's Guide to the Management, Protection and Preservation of Heritage Resources*. Washington, D.C.: American Bar Association.

King, Thomas F.

1998 *Cultural Resource Laws and Practice: An Introductory Guide*. Walnut Creek, California: Altamira Press.

2000 *Federal Planning and Historic Places*. Walnut Creek, California: Altamira Press

2002 *Thinking about Cultural Resource Management: Essays from the Edge*. Walnut Creek, California: Altamira Press.

2003 *Places That Count: Traditional Cultural Properties in Cultural Resource Management*. Walnut Creek, California: Altamira Press.

2005 *Doing Archaeology: A Cultural Resource Management Perspective*. Walnut Creek, California: Left Coast Press

2007 *Saving Places That Matter*. Walnut Creek, California: Left Coast Press

King, Thomas F., Patricia Parker Hickman and Gary Berg

1977 *Anthropology in Historic Preservation*. New York, New York: Academic Press, Inc.

Layton, R. editor

1994 *Conflict in the Archaeology of Living Traditions*. New York: Routledge.

4. Suggested Reading

National Center for Cultural Resources, National Park Service

2002 Federal Historic Preservation Laws. Washington, D.C.

Pevar, Stephen L.

2002 The Rights of Indians and Tribes. Carbondale: Southern Illinois University.

Richman, Jennifer R. and Marion P. Forsyth, editors

2003 Legal Perspectives on Cultural Resources. Walnut Creek, California: AltaMira Press.

Watkins, Joe

2000 Indigenous archaeology: American Indian Values and Scientific Practice. Walnut Creek, California: Altamira Press.

Bureau of Land Management Reports on the California Desert District that are Useful and Available from Coyote Press at www.coyotepress.com

Bean, L.J., S.B. Vane & J. Young

1981 *The Cahuilla and the Santa Rosa Mountain Region: Places and their Native American Association*. Submitted to Bureau of Land Management.

Brooks, R.H., R. Wilson & S. Brooks

1981 *An Archaeological Inventory Report of the Owlshead/Amargosa Mojave Basin Planning Units of the Southern California Desert Area*. Submitted to Bureau of Land Management.

Cook, J.R. and S. Fulmer (eds.)

1981 *The Archaeology of the McCain Valley Study Area in Eastern San Diego County, California: A Scientific Class II Cultural Resource Inventory*. Submitted to Bureau of Land Management.

Coombs, G.B.

1979 *The Archaeology of the Northeast Mojave Desert*. Submitted to Bureau of Land Management.

Coombs, G.B.

1979 *The Archaeology of the Western Mojave*. Submitted to Bureau of Land Management.

Gallegos, D., J. Cook, E.L. Davis, G. Lowe, F. Norris and J. Thesken

1980 *Cultural Resources Inventory of the Central Mojave and Colorado Desert Regions, California*. Submitted to Bureau of Land Management.

Gallegos, D.

- 1980 *Cultural Resources Inventory: East Mesa and West Mesa Regions, Imperial Valley, California--Appendices.*

King, C.D. and D.G. Casebier

- 1981 *Background to Historic and Prehistoric Resources of the East Mojave Desert Region.* Submitted to Bureau of Land Management.

Lyneis, M.M., D.L. Weide and E.V. Warren

- (1980 *Impacts: Damage to Cultural Resources in the California Desert.* Submitted to Bureau of Land Management.

May, R.V.

- 1987 *The Table Mountain Complex [San Diego County, California] as Derived from a Synthesis of 124 Archaeological Sites Clustered in Stratified Biological, Geographical, and Geological Zones.* Authorized by Bureau of Land Management, El Centro.

Norwood, R.H., C.S. Bull & R. Quinn

- 1980 *A Cultural Resource Overview of the Eureka, Saline, Panamint and Darwin Region, East Central California.* Submitted to Bureau of Land Management.

Shackley, M. Steven

- 1984 *Archaeological Investigations in the Western Colorado Desert: A Socioecological Approach.* Submitted to San Diego Gas and Electric.

Stickel, E.G. & L.J. Weinman-Roberts

- 1980 *An Overview of the Cultural Resources of the Western Mojave Desert.* Submitted to Bureau of Land Management.

Warren, C.W., M. Knack & E. von Till Warren

- 1980 *A Cultural Resource Overview for the Amargosa-Mojave Basin Planning Units.* Submitted to Bureau of Land Management.

Weide, M.L. & J.P. Barker

- 1974 *Background to Prehistory of the Yuha Desert Region.* Submitted to Bureau of Land Management.

M.C. Hall & J.P. Barker

- The Prehistory and Management of Cultural Resources in the Red Mountain Area:* Background to Prehistory of the El Paso/Red Mountain Desert Region. And R.L. Kaldenberg and J. Townsend: An Archaeological Protection and Stabilization Plan for the Squaw Spring Well Archaeological District near Red Mountain, California. Submitted to Bureau of Land Management.

4. Suggested Reading

The following publications are available at no charge by simply going to the BLM web site and clicking on the report titles. The web site is

<http://www.blm.gov//heritage/adventures/research/StatePages/PDF/California>

Bean, Lowell John, Sylvia Brakke Vane, and Jackson Young.

1981 *The Cahuilla and the Santa Rosa Mountain Region: Places and their Native American Association*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Busby, Colin I., John M. Findlay, and James C. Bard

1979 *A Culture Resource Overview of the Bureau of Land Management Coleville, Bodie, Benton, and Owens Valley Planning Units, California*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Cook, John R., and Scott G. Fulmer

1982 *The Archaeology of the McCain Valley Study Area in Eastern San Diego County, California. A Scientific Class II Cultural Resource Inventory*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Coombs, Gary B.

1979 *The Archaeology of the Northeast Mojave Desert*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Coombs, Gary B.

1979 *The Archaeology of the Western Mojave*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Davis, Emma Lou, Kathryn H. Brown, and Jacqueline Nichols

1980 *Evaluation of Early Human Activities and Remains in the California Desert*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Garfinkel, Alan P.

1980 *A Cultural Resource Management Plan for the Fossil Falls/Little Lake Locality*. BLM Cultural Resources Publication, Bureau of Land Management, California

Kaldenberg, Russell L. General Editor

1981 *The Prehistory and Management of Cultural Resources in the Red Mountain Area*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Lyneis, Margaret M., David L. Weide, and Elizabeth von Till Warren

1980 *Impacts: Damage to Cultural Resources in the California Desert*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Norwood, Richard H., Charles S. Bull, and Ronald Quinn

1980 *A Cultural Resource Overview of the Eureka, Saline, Panamint and Darwin Region, East Central, California*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Russell, John C., Clyde M. Woods, and Jackson Underwood

2002 *An Assessment of the Imperial Sand Dunes as a Native American Cultural Landscape*. Edaw, Inc. for the California State Office, Bureau of Land Management,. [116 pp, 25 MB PDF--broadband connection recommended)

Stickel, E. Gary, Lois J. Weinman-Roberts, Rainer Berger, and Pare Hopa.

1980 *An Overview of the Cultural Resources of the Western Mojave Desert*. BLM Cultural Resources Publication, Bureau of Land Management, California.

von Till Warren, Elizabeth, Robert H. Crabtree, Claude N. Warren, Martha Knack, and Richard Mc Carty

1981 *A Cultural Resources Overview of the Colorado Desert Planning Units*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Warren, Claude N., Martha Knack, and Elizabeth von Till Warren.

1980 *A Cultural Resource Overview for the Amargosa-Mojave Basin Planning Units*. BLM Cultural Resources Publication, Bureau of Land Management, California.

Weide, Margaret L.

1973 *Archaeological Inventory of the California Desert: A Proposed Methodology*. BLM Desert Planning Program, Bureau of Land Management, California.

Weide, Margaret L., and James P. Barker et.al.

1974 *Background to Prehistory of the Yuha Desert Region*. BLM Desert Planning Program, Bureau of Land Management, California, 1974.

Other Documents, Reports and References That Are Useful:

Codes of Federal Regulations (CFR)

25 CFR Indians (all)

36 CFR National Historic Preservation Act (Parts 60 and 800)

40 CFR Environmental Law and Regulations including the National Environmental Policy Act (Section 1500-1508)

43 CFR Administration, including historic preservation, mining, wilderness, BLM permits, NAGPRA, ARPA, etc.

Desert Plan Documents:

4. Suggested Reading

The Draft California Desert Conservation Area Plan Alternatives and Environmental Impact Statement, published in February 1980

The Final Environmental Statement and Proposed Plan: California Desert Conservation Area, published in September 1980

The California Desert Conservation Plan 1980, As Amended, published in March 1999

The Plan's discussion of cultural resource significance is found in Volume D, Appendix VII, Part 4, which is the section that dealt with Cultural Resource Sensitivity/Significance Determinations.

The Plan's discussion of Native American Resources is found in Volume D, Appendix VIII, Parts 1-5. A map of the Native American Element is found in the Draft California Desert Plan immediately preceding page 60. This map contains polygons of Native American Traditional Areas. It was not carried forward in either of the versions of the Desert Plan.

Estes, Allen, Kyle Brown, Lorraine Heartfield, Kimberly Popetz, James M. Allan, and William Self

2002 Report on Data Recovery at Sites CA-SBR-2257H and CA-SBR-7282 in Conjunction with the Kramer Junction Expansion Project, Line 6905 San Bernardino County, California, Prepared Under Bureau of Land Management ARPA Permit#CA-01-00-016. William Self Associates, Inc, Orinda, CA.

Johnson, Boma

1985 Earth Figures of the Lower Colorado and Gila Rivers: A Functional Analysis. Phoenix: Arizona Archaeological Society No. 20.

Kaldenberg, Russell L.

1981 The Archaeology of Selected Springs and Plays on Fort Irwin and in Portions of the Avawatz Mountains. San Bernardino County Museum Association Quarterly Volume XXVIII, NO. 3&4.

2006 A Festschrift Honoring the Contributions of California Archaeologist Jay von Werlhof. Maturango Museum Publication 20, Ridgecrest, CA.

Kroeber, A.L.

1925 The Handbook of the Indians of California. Bureau of American Ethnology, Bulletin 78:663.

Norris, Frank and Richard L. Carrico

1978 A History of Land Use in the California Desert Conservation Area. Unpublished manuscript for the Bureau of Land Management, Desert Planning Staff.

Smith, Gerald A. and Wilson G. Turner

1975 Indian Rock Art of Southern California. Redlands, California: San Bernardino County Museum Association.

The Redlands Institute, University of Redlands

2002 The Salton Sea Atlas. Redlands, California: ESRI Press.

Von Werlhof, Jay

1987 Spirits of the Earth: Volume 1. The North Desert, El Centro: Imperial Valley College Museum.

2004 That They May Know and Remember: Volume 2, Spirits of the Earth. Ocotillo: Imperial Valley Desert Museum Society.

Whitley, David S.

1996 A Guide to Rock Art Sites: Southern California and Southern Nevada. Missoula, Montana: Mountain Press.

2000 The Art of the Shaman: Rock Art of California. Salt Lake City: University of Utah Press.

APPENDICES

APPENDIX A

National Programmatic Agreement Document Among the BLM, ACHP, NSHPOs

**PROGRAMMATIC AGREEMENT
AMONG
THE BUREAU OF LAND MANAGEMENT,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS
REGARDING
THE MANNER IN WHICH BLM WILL MEET ITS RESPONSIBILITIES
UNDER THE NATIONAL HISTORIC PRESERVATION ACT**

Preamble

Bureau of Land Management. The Bureau of Land Management (BLM), consistent with its authorities and responsibilities under the Federal Land Policy and Management Act of 1976 (FLPMA), is charged with managing public lands principally located in the States of Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Wyoming in a manner that will "protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values," and "that will provide for outdoor recreation and human occupancy and use."

The BLM also has specific responsibilities and authorities to consider, plan for, protect, and enhance historic properties and other cultural properties which may be affected by its actions in those and other States, including its approval for Federal mineral resource exploration and extraction, under the National Environmental Policy Act, the National Historic Preservation Act of 1966 (NHPA), the Archaeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, the Historic Sites Act of 1935, the Antiquities Act, the American Indian Religious Freedom Act, the Religious Freedom Restoration Act, Executive Order 13007 ("Sacred Sites"), and related authorities.

In carrying out its responsibilities, the BLM has developed policies and procedures through its directives system (BLM Manual Sections 8100-8160) to help guide the BLM's planning and decision making as it affects historic properties and other cultural properties, and has assembled a cadre of cultural heritage specialists to advise the BLM's managers and to implement cultural heritage policies consistent with these statutory authorities.

State Historic Preservation Officers. State Historic Preservation Officers (SHPOs), as represented by the National Conference of State Historic Preservation Officers (NCSHPO), have responsibilities under State law as well as under Section 101(b)(3) of the National Historic Preservation Act that include to "advise and assist as appropriate, Federal and State agencies and local governments in carrying out their historic preservation responsibilities," and to "consult with the appropriate Federal agencies in accordance with [NHPA] on Federal undertakings that may affect historic properties, and the content and sufficiency of any plans developed to protect, manage, or to reduce or mitigate harm to such properties."

In certain cases others may be authorized to act in the SHPO's place. Where the Secretary has approved an Indian tribe's preservation program pursuant to Section 101(d)(2) of the NHPA, a Tribal Preservation Officer may perform some SHPO functions with respect to tribal lands. A local historic preservation commission acting through the chief local elected official may fulfill some SHPO-delegated functions, where the Secretary has certified the local government pursuant to Section 101(c)(1) of the NHPA, and its actions apply to lands in its jurisdiction. Pursuant to the regulations implementing Section 106 of the NHPA [36 CFR 800.1(c)], the Council may at times act in lieu of the SHPO.

Advisory Council on Historic Preservation. The Advisory Council on Historic Preservation (Council) has the responsibility to administer the process implementing Sections 106, 110(f), and 111(a) of the National Historic Preservation Act, to comment with regard to Federal undertakings subject to review under Sections 106, 110(f) and 111(a) in accordance with its implementing regulations (36 CFR Part 800), and to "review the policies and programs of Federal agencies and recommend to such agencies methods to improve the effectiveness, coordination, and consistency of those policies and programs with the policies and programs carried out under [NHPA]" under Section 202(a)(6) of the NHPA.

The above-named parties now wish to ensure that the BLM will organize its programs to operate efficiently, effectively, according to the spirit and intent of the NHPA, and in a manner consistent with 36 CFR Part 800; and that the BLM will integrate its historic preservation planning and management decisions with other policy and program requirements to the maximum extent. The BLM, the SHPOs, and the Council desire and intend to streamline and simplify procedural requirements, to reduce unnecessary paperwork, and to emphasize the common goal of planning for and managing historic properties under the BLM's jurisdiction and control in the public interest.

Basis for Agreement

Proceeding from these responsibilities, goals, and objectives, the parties acknowledge the following basis for agreement:

WHEREAS the BLM's management of lands and mineral resources may affect cultural properties, many of which are historic properties as defined by the National Historic Preservation Act and are therefore subject to Sections 106, 110(f), and 111(a) of the NHPA; and

WHEREAS, among other things, the BLM's program established in response to Section 110(a)(2) and related authorities provides a systematic basis for identifying, evaluating, and nominating to the National Register historic properties under the bureau's jurisdiction or control; for managing and maintaining properties listed in or eligible for the National Register in a way that considers the preservation of their

archaeological, historical, architectural, and cultural values and the avoidance of adverse effects in light of the views of local communities, Indian tribes, interested persons, and the general public; and that gives special consideration to the preservation of such values in the case of properties designated as having National significance; and

WHEREAS the BLM's program is also intended to ensure that the bureau's preservation-related activities are carried out in consultation with other Federal, State, and local agencies, Indian tribes, and the private sector; and

WHEREAS the BLM's program also has as its purpose to ensure that the bureau's procedures for compliance with Section 106 are consistent with regulations issued by the Council pursuant to Section 211 of the NHPA (36 CFR Part 800, "Protection of Historic Properties"), and provide a process for the identification and evaluation of historic properties for listing in the National Register and the development and implementation of agreements, in consultation with State Historic Preservation Officers, local governments, Indian tribes, and the interested public, as appropriate, regarding the means by which adverse effects on such properties will be considered; and

WHEREAS the BLM's program also intends to ensure that its Section 106 procedures recognize the historic and traditional interests of Indian tribes and other Native American groups in lands and resources potentially affected by BLM decisions, affording tribes and other groups adequate participation in the decisionmaking process in accordance with Sections 101(d)(6), 110(a)(2)(D), and 110(a)(2)(E)(ii) of the NHPA, and provide for the disposition of Native American cultural items from Federal or tribal land in a manner consistent with Section 3(c) of the Native American Graves Protection and Repatriation Act, in accordance with Section 110(a)(2)(E)(iii) of the NHPA; and

WHEREAS this agreement will not apply to tribal lands, but rather, a proposed BLM undertaking on tribal lands will require consultation among the BLM, the Tribal Preservation Officer, and the Council; or among BLM, tribal officials (where no Tribal Preservation Program exists) the SHPO, and the Council; and such consultation will be outside the compass of this agreement and will follow 36 CFR Part 800 or the Indian tribe's alternative to 36 CFR Part 800; and

WHEREAS the BLM's program, the elements of which were defined in the BLM Manual between 1988 and 1994, does not incorporate some recent changes in legal, regulatory, and Executive Order authorities and recent changes in the nature and direction of historic preservation relationships, rendering the program directives in need of updating, and this need is recognized by the BLM, the Council, and the NCSHPO as an opportunity to work jointly and cooperatively among themselves and with other parties, as appropriate, to enhance the BLM's historic preservation program; and

WHEREAS the States, particularly those containing a high percentage of public land under the BLM's jurisdiction and control, have a strong incentive in forming a

cooperative relationship with the BLM to facilitate and promote activities of mutual interest, including direction and conduct of a comprehensive statewide survey and inventory of historic properties, identification and nomination of eligible properties to the National Register of Historic Places, preparation and implementation of comprehensive historic preservation plans, and development and dissemination of public information, education and training, and technical assistance in historic preservation, and

WHEREAS the parties intend that efficiencies in the Section 106 process, realized through this agreement, will enable BLM, SHPO, and Council staffs to devote a larger percentage of their time and energies to proactive work, including analysis and synthesis of data accumulated through decades of Section 106 compliance; historic property identification where information is needed, not just in reaction to proposed undertakings; long-term preservation planning; purposeful National Register nomination; planning- and priority-based historic resource protection; creative public education and interpretation; more efficient BLM, SHPO, and Council coordination, including program monitoring and dispute resolution; and other activities that will contribute to readily recognizable public benefits and to an expanded view of the Section 106 context, and

WHEREAS the BLM has consulted with the Advisory Council on Historic Preservation (Council) and the National Conference of State Historic Preservation Officers (NCSHPO) regarding ways to ensure that BLM's planning and management shall be more fully integrated and consistent with the above authorities, requirements, and objectives;

NOW, THEREFORE, the BLM, the Council, and the NCSHPO mutually agree that the BLM, after completing the actions summarized in 1. below, will meet its responsibilities under Section 106, 110(f), and 111(a) through the implementation of the mechanisms agreed to in this agreement rather than by following the procedure set forth in the Council's regulations (36 CFR Part 800), and the BLM will integrate the manner in which it meets its historic preservation responsibilities as fully as possible with its other responsibilities for land-use planning and resource management under FLPMA, other statutory authorities, and executive orders and policies.

Components Of Agreement

1. Applicability

The Council's regulations (36 CFR Part 800) and existing State programmatic agreements will continue to apply to BLM undertakings under a State Director's jurisdiction until the Director and State Directors, with the advice of the Preservation Board, assisted by the Council, the NCSHPO, the SHPOS, and other participating parties, as appropriate, have updated and revised national BLM policies and procedures; developed State-specific BLM/SHPO operating protocols; and trained all field managers and their cultural heritage staffs in the operation of the policies,

procedures, and protocols. Field offices under a State Director's jurisdiction (including those under the jurisdiction of the Eastern States Director) will not begin to employ the streamlined procedures developed pursuant to this agreement until the Director has certified that the State Director's organization is appropriately qualified to do so.

2. Establishment of Preservation Board

a. The BLM's Director will establish a Preservation Board to advise the Director, Assistant Directors, State Directors, and field-office managers in the development and implementation of BLM's policies and procedures for historic properties. Authority, responsibilities, and operating procedures for the Preservation Board will be specified in the BLM Manual.

b. The Preservation Board will be chaired by the BLM's Preservation Officer designated under Section 110(c) of the NHPA, and will include a professionally qualified Deputy Preservation Officer from each State Office. The field management organization will be represented by at least three line managers (i.e., officials who are authorized by the Director's or State Directors' delegation to make land-use decisions).

c. The Preservation Board will perform primary staff work and make recommendations to the Director and State Directors concerning policies and procedures (3. below); bureauwide program consistency (3. below); training (6. below); certification and decertification of field offices (8. below); monitoring of field offices' historic preservation programs (9. below); and responses to public inquiries (9. below).

d. In addition, the Preservation Board will confer regularly with the Council and NCSHPO and involve them in its activities, as appropriate, including the development of the items listed in 2.c. The Preservation Board will also confer regularly with individual SHPOs and such other parties as have identified themselves to the Board as interested parties, including Tribal Preservation Officers, local governments, and preservation associations, to promote consistency with State, regional, and national practice, to identify recurrent problems or concerns, and to create opportunities in general to advance the purposes of this agreement.

e. The BLM will provide assistance, where feasible and appropriate, with reasonable and prudent expenses of the Council related to its activities pursuant to 2.c. and 2.d. above.

3. Revision of "Cultural Resource Management" Procedures

a. Within 6 months from the date of its establishment under 2. above, the Preservation Board will provide notice to Indian tribes and the public and, in accordance with 2.c. above, will begin to review, update, revise, adapt, and augment the various relevant sections of its Manual (8100 Series). These are:

8100 - "Cultural Resource Management";
 8110 - "Cultural Resource Identification";
 8111 - "Cultural Resource Inventory and Evaluation";
 8130 - "Cultural Resource Planning";
 8131 - "Cultural Resource Management Plans";
 8132 - "Cultural Resource Project Plans";
 8140 - "Cultural Resource Protection";
 8141 - "Physical and Administrative Protection";
 8142 - "Recovery of Cultural Resource Data";
 8143 - "Avoidance and/or Mitigation of Adverse Effects to Cultural Properties";
 8150 - "Cultural Resource Utilization";
 8151 - "Cultural Resource Use Permits";
 8160 - "Native American Coordination and Consultation"; and
 H-8160-1 - "General Procedural Guidance for Native American Consultation."

b. Manuals will be revised in consultation with the Council, NCSHPO, and the SHPOs, and will consider the views of other interested parties who have identified themselves in response to 2.d. (above).

c. Procedures will be revised to be consistent with the purposes of (1) this agreement, (2) the principles and standards contained in the Council's regulations, "Protection of Historic Properties" (36 CFR Part 800); (3) the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* regarding identification, evaluation, registration, and treatment, (4) the Office of Personnel Management's classification and qualification standards as revised under Section 112 of the NHPA, and (5) other applicable standards and guidelines, and will include time frames and other administrative details for actions referred to in this agreement.

d. The BLM will ensure adequate public participation and consultation with parties outside the BLM when revising policy and procedures under 3.a. The BLM's procedures for implementing the National Environmental Policy Act (NEPA) will be used as appropriate for ensuring adequate public participation in the BLM's historic preservation decision making. Provisions of Section 110 of the NHPA and the Council's regulations will be the basis for tailoring the NEPA procedures to historic preservation needs. Mechanisms for continuing public involvement in BLM's historic preservation process will be incorporated in BLM/SHPO protocols under 5. below.

e. The BLM will provide Indian tribes and other Native American groups with appropriate opportunities for involvement. Consultation with tribes pursuant to Sections 101(d)(6) and 110(a)(2)(E) of the NHPA will follow government-to-government conventions. Procedures to ensure timely and adequate Native American participation will follow the direction in Sections 101(d)(6) and 110(a)(2)(E) of the NHPA, and BLM Manual Section 8160 and Manual Handbook H-8160-1, as revised pursuant to a. and b. above. Revisions to the 8160 Manual Section and Manual Handbook will treat the cited NHPA direction as the minimum standard for Indian tribes' and other Native American

groups' opportunities to be involved. Provisions for Native American participation in BLM's procedures for historic property identification, evaluation, and consideration of adverse effects will be incorporated in BLM/SHPO protocols under 5. below. For Indian tribes with historic preservation programs approved by the Secretary under Section 101(d)(2) of the NHPA, Tribal Preservation Officers will be involved in place of SHPOs when tribal land would be affected. Such involvement will occur under the Council's and/or the Tribe's procedures in all cases, not under this programmatic agreement.

f. It will be the Preservation Board's duty in accordance with 3.b. above to ensure that the policies and procedures, as revised pursuant to this section, are being followed appropriately by field offices. Where problems with implementation are found, it will be the Preservation Board's duty to move promptly toward effecting correction of the problems. This responsibility of the Preservation Board, among others, will be spelled out in the BLM Manual under 2.a. above.

4. Thresholds for Council Review

a. The BLM procedures will identify circumstances calling for the Council's review.

b. At a minimum, the BLM will request the Council's review in the following classes of undertakings:

- (1) nonroutine interstate and/or interagency projects or programs;
- (2) undertakings directly and adversely affecting National Historic Landmarks or National Register eligible properties of national significance;
- (3) highly controversial undertakings, when Council review is requested by the BLM, an SHPO, an Indian tribe, a local government, or an applicant for a BLM authorization.

5. Cooperation and Enhanced Communication

a. Immediately following execution of this agreement, the BLM will offer each affected SHPO and the Council (and others who have identified concerns under 2.d. above) the following information, and will provide or update as needed:

- a reference copy of the existing BLM Manual Sections and Manual Handbooks related to "Cultural Resource Management;
- a copy of any Handbook, Manual Supplement, or other standard procedure for "Cultural Resource Management" used by the BLM within an individual State Office's jurisdiction
- a list of Preservation Board members;
- a list of BLM cultural heritage personnel within each State Office's jurisdiction;

- a map of the State showing BLM field office boundaries and responsibilities;
- the best available map of the State showing tribal lands, ceded lands, and ancestral use areas; and
- a brief summary of land holdings, major ongoing development projects or permitted uses, proposed major undertakings such as land exchanges or withdrawals, and particularly significant historic properties on BLM lands within each State Office's jurisdiction.

b. Within 6 months after revised policies and procedures become available, each State Director will meet with each pertinent SHPO to develop a protocol specifying how they will operate and interact under this agreement. Where a State Director has few interactions with an SHPO due to minimal public land holdings, protocols need not be pursued and historic preservation consideration will continue to be carried out under the procedures of 36 CFR Part 800. Adoption of protocols, as formalized by the State Director's and SHPO's signatures, will be a prerequisite for the certification described in 8. The Preservation Board and the Council will be kept informed of the progress of protocol development, and will receive an information copy of any signed BLM/SHPO protocol. The SHPO and State Director may ask the NCSHPO, the Preservation Board, and the Council to assist at any stage in developing protocols.

At a minimum, protocols will address the following:

- the manner in which the State Director will ensure the SHPO's involvement in the BLM State management process;
- data sharing, including information resource management development and support
- data synthesis, including geographical and/or topical priorities for reducing the backlog of unsynthesized site location and report information, and data quality improvement;
- public education and community involvement in preservation;
- preservation planning;
- cooperative stewardship;
- agreement as to types of undertakings and classes of affected properties that will trigger case-by-case review (case-by-case review will be limited to undertakings that BLM finds will affect historic properties; the parties to this agreement agree that such case-by-case review will be minimized);
- BLM/SHPO approaches to undertakings involving classes of, or individual examples of, historic properties for which the present BLM staff lacks specialized capabilities;
- provisions for resolving disagreements and amending or terminating the protocol; and
- relationship of the protocol to 36 CFR Part 800.

c. As agreed under the protocol, but at least annually, the BLM will regularly send to the SHPO copies of forms and reports pertaining to historic properties, in a format

appropriate to the SHPO's established recording systems, and consistent with the confidentiality provisions of Section 304 of the NHPA, so that information can be shared to the maximum extent and contribute to State inventories and comprehensive plans as well as to BLM land use and resource management planning.

d. The State Director, with the assistance of the Preservation Board, will seek, as appropriate, the SHPO's active participation in the BLM's land-use planning and associated resource management activities so that historic preservation considerations can have a greater influence on large scale decisions and the cumulative effects of the more routine decisions, before key BLM commitments have been made and protection options have been limited. Where SHPO participation will be extensive, State Directors may provide funding, if available.

e. Relevant streamlining provisions of BLM Statewide programmatic agreements currently in force in Arizona, California, Colorado, Nevada, New Mexico, and Wyoming (and other programmatic agreements and/or formalized working arrangements between BLM and SHPOs in any State, relative to identifying undertakings, identifying properties, evaluating properties, determining effects, and protecting historic properties) may be incorporated in BLM/SHPO protocols as appropriate and as consistent with 5.b. above, after which the State Directors will notify the SHPO and Council that the Statewide agreements may be suspended for so long as this agreement remains in effect. Project and special purpose programmatic agreements will function normally according to their terms.

f. When potentially relevant to the purposes and terms of this agreement, the BLM will forward to the Council information concerning the following, early enough to allow for timely briefing and consultation at the Council's election:

- major policy initiatives;
- prospects for regulations;
- proposals for organizational change potentially affecting relationships addressed in this agreement;
- the Administration's budget proposals for BLM historic preservation activities;
- training schedules; and
- long-range planning and regional planning schedules.

6. Training Program

In cooperation with the Council and the NCSHPO, and with the active participation of individual SHPOs, the Preservation Board will develop and implement a training program to (a) instruct BLM line managers and cultural heritage program personnel on the policies underlying and embodied in this agreement, as well as specific measures that must be met prior to its implementation, and (b) enhance skills and knowledge of other BLM personnel involved with "Cultural Resource Management" activities, including land use planning and resource management staffs. Training sessions will be open to

Indian tribes, cultural resource consultants, and other parties who may be involved in the implementation of this agreement. The BLM may, where feasible and appropriate, reimburse the Council for assistance in developing training programs.

7. Professional Development

a. The Preservation Board, in consultation with the supervising line manager and cultural heritage specialist, will document each specialist's individual attainments as a preservation professional, consistent with OPM guidance and Section 112 of the NHPA and giving full value to on-the-job experience. Documentation will include any recommended limitations on the nature and extent of authorized functions. Where a field office manager's immediate staff does not possess the necessary qualifications to perform specialized preservation functions (e.g., historical architecture), the documentation will identify available sources of specialized expertise from outside the immediate staff, such as from other BLM offices, the SHPO, other Federal agencies, or non-governmental sources.

b. The Preservation Board, the supervising line manager, and the cultural heritage specialist will assess the manager's needs for special skills not presently available on the immediate staff, and the specialist's opportunities for professional development and career enhancement through training, details, part-time graduate education, and other means.

8. State Office Certification and Decertification

a. The Preservation Board, in consultation with the appropriate SHPO and the Council, will certify each BLM State Office to operate under this agreement upon determining that (1) managers and specialists have completed the training referred to in 7. above, (2) professional capability to carry out these policies and procedures is available through each field office's immediate staff or through other means, (3) each supervising line manager within the State has assigned and delimited cultural heritage specialists' duties, and (4) the State Director and the SHPO have signed a protocol outlining BLM/SHPO interaction in accordance with 5. above.

b. The Preservation Board may choose to review a field office's certification status. The field office's manager, the State Director, the Council, or the SHPO may request that the Preservation Board initiate a review, in which case the Preservation Board will respond as quickly as possible. If a field office is found not to have maintained the basis for its certification (e.g. the professional capability needed to carry out these policies and procedures is no longer available, or the office is not in conformance with the BLM/SHPO protocol, the procedures developed under 3. above, or this agreement) and the office's manager has not voluntarily suspended participation under this agreement, the Preservation Board will recommend that the State Director decertify the field office. If a suspended or decertified field office is found to have

restored the basis for certification, the Preservation Board will recommend that the State Director recertify the office.

c. A State Director may ask the Director to review the Preservation Board's decertification recommendation, in which case the Director will request the Council's participation in the review.

d. The Preservation Board will notify the appropriate SHPO(s) and the Council if the status of a certified office changes.

e. When a field office is suspended or decertified, the responsible manager will follow the procedures of 36 CFR Part 800 to comply with Section 106.

9. Accountability Measures

a. Each State Director will prepare an annual report in consultation with the appropriate SHPO(s), outlining the preservation activities conducted under this agreement. The annual report's content will be specified in the revised Manual. The report will be provided to the Council and made available to the public.

b. Once each year, the Council, in consultation with the BLM, SHPOS, and interested parties, and with assistance from the BLM, may select a certified State or States, or field offices within a State, for a detailed field review limited to the implementation of this agreement. Selecting parties may consider including other legitimate affected parties as participants in the review, as appropriate. The Preservation Officer and the appropriate Deputy Preservation Officer(s) and SHPO(s) will participate in the review. Findings and recommendations based on this field review will be provided to the Director, the State Director, and the Preservation Board for appropriate action.

c. The Preservation Officer and Deputy Preservation Officers will prepare responses to public inquiries for the Director's or a State Director's signature. This applies only to inquiries about the BLM's exercise of its authorities and responsibilities under this agreement, such as the identification, evaluation, and protection of resources, and not to general inquiries. Preparing responses will include establishing the facts of the situation and, where needed, recommending that the Director or State Director prescribe corrections or revisions in a practice or procedure.

d. Each meeting of the Preservation Board will be documented by a report. The Preservation Board will provide a copy of each report to the Council, the NCSHPO, and participating SHPOs.

10. Reviewing and Changing the Agreement

a. The parties to this agreement may agree to revise or amend it at any time. Changes that would affect the opportunity for public participation or Native American consultation will be subject to notice and consultation, consistent with 3.e. above.

b. Should any party to this agreement object to any matter related to its implementation, the parties will meet to resolve the objection.

c. Any party to this agreement may terminate it by providing 90 days notice to the other parties, provided that the parties will meet during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the BLM will comply with 36 CFR Part 800, including any relevant suspended State programmatic agreements (see 5.e. above).

d. Not later than the third quarter of FY 1999, and every two years thereafter, the parties to this agreement will meet to review its implementation.

Affirmation

The signatures below represent the affirmation of the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers that successful execution of the components of this agreement will satisfy the BLM's obligations under Sections 106, 110(f), and 111(a) of the National Historic Preservation Act.

<p style="text-align: center;">/s/ Sylvia V. Baca</p> <hr/> <p>Director, Bureau of Land Management</p>	Date	<p style="text-align: center;">3/26/97</p> <hr/>
<p style="text-align: center;">/s/ Cathryn B. Slater</p> <hr/> <p>Chairman, Advisory Council on Historic Preservation</p>	Date	<p style="text-align: center;">March 26, 1997</p> <hr/>
<p style="text-align: center;">/s/ Judith E. Bittner</p> <hr/> <p>President, National Conference of State Historic Preservation Officers</p>	Date	<p style="text-align: center;">Mar. 26, 1997</p> <hr/>

APPENDIX B

California Protocol Agreement Document between California BLM and the California SHPO

APPENDIX C
BLM ACEC Management Plans
Bound Separately

APPENDIX D

Map

Located inside back cover pocket

Thank you for your comment, Steve Saway.

The comment tracking number that has been assigned to your comment is SolarM60218.

Comment Date: September 14, 2009 12:30:38PM
Solar Energy Development PEIS
Comment ID: SolarM60218

First Name: Steve
Middle Initial:
Last Name: Saway
Organization:
Address: 533 Suffolk Drive
Address 2:
Address 3:
City: Sierra Vista
State: AZ
Zip: 85635
Country: USA
Email: stevesaway@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Agua Caliente Road Area.pdf

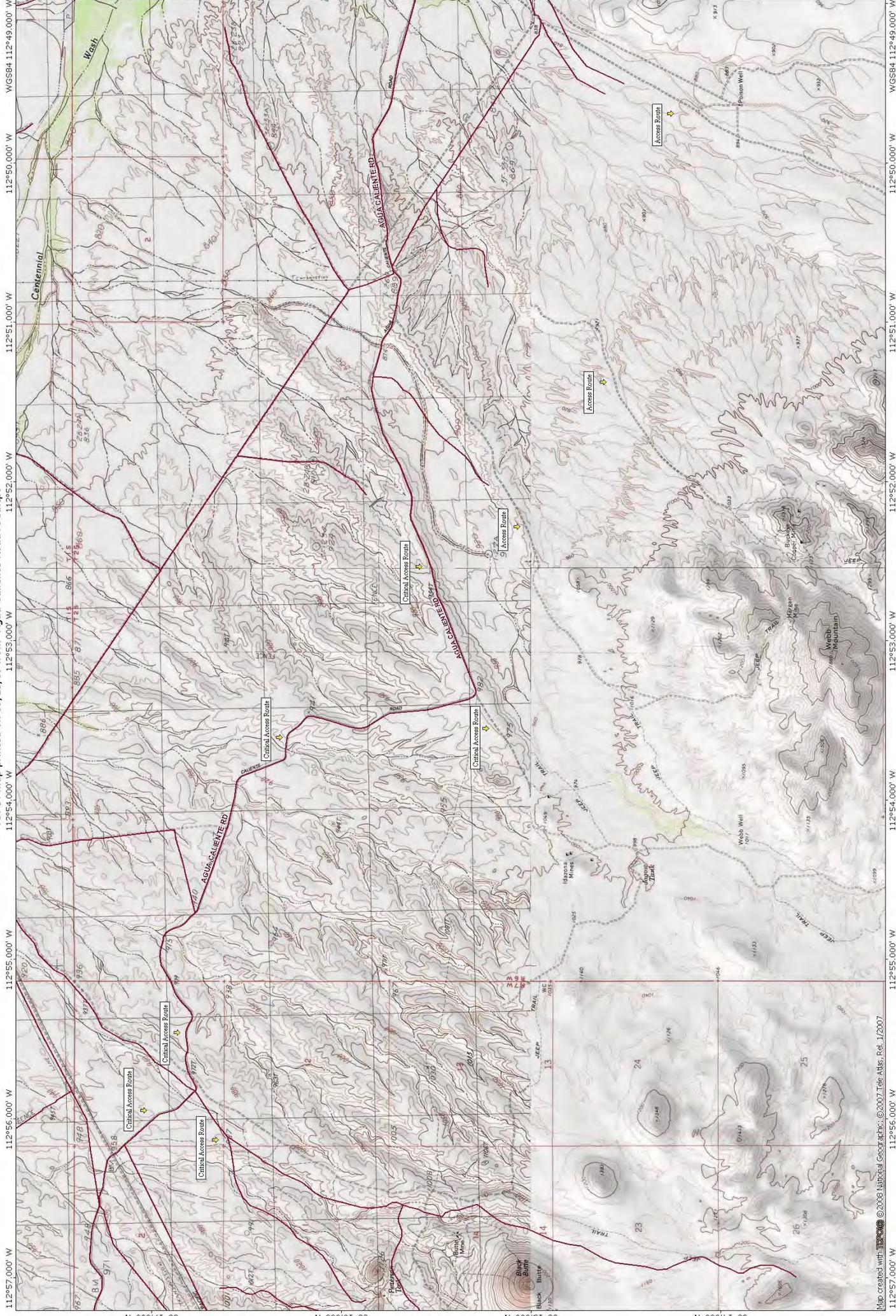
Comment Submitted:

1. In Arizona, the proposed Gillespie Solar Energy Study Area poses serious concerns. It includes a large stretch of Agua Caliente Road and surrounding lands to the south. It's expected that the upcoming Lower Sonoran RMP will designate Agua Caliente Road as a backcountry byway. It serves as a major recreational gateway to pristine Sonoran Desert public lands that offer a wide range of recreational opportunities, including hiking, hunting, dispersed camping, wildlife viewing, rockhounding, OHV backcountry touring, etc., as well as access to spectacular scenery, including the Gila Bend Mountains, Face Mountain, Yellow Medicine Butte, and Fourth of July Butte. This access is important to local rural communities which rely on public lands for recreational opportunities. Also, within the proposed solar study area, several OHV routes lead south from Agua Caliente Road to provide access to the Signal Peak and Woolsey Peak Wilderness areas. Would this proposed solar study area close off access to Agua Caliente Road and connecting OHV routes? If so, the solar energy values cannot begin to match the recreational values that exist now with the public's ability to access spectacular public lands via Agua Caliente Road, mainly west and south of the proposed solar study area. The Gillespie solar study area should either be excluded from further consideration as a solar study area, or at least re-defined to exclude existing routes (Agua Caliente Road and connecting routes) so that the public can continue to enjoy access to high value public lands and pristine Sonoran Desert landscapes outside of the solar study area boundary. I have attached a map which identifies some of the routes that must be protected for public access. In summary, I believe the proposed Gillespie solar energy study area did not receive adequate scrutiny to avoid conflicts with other important land uses.

2. As a general comment, the critical scarcity of groundwater resources in the West must be fully considered when evaluating the suitability of the various types of solar energy facilities. The noted author and water law expert, Robert Glennon, wrote an excellent article in the June 7, 2009 issue of The Washington Post ("Is Solar Power Dead in the Water?") that questions the wisdom of allowing hundreds of new groundwater wells to be drilled in the Mohave Desert to support the huge water demands of concentrating solar power (CSP) utility plants. See this link for the article: <http://www.washingtonpost.com/wp-dyn/content/article/2009/06/05/AR2009060501988.html>. In my view, BLM should rule that only photovoltaic or similar technologies that consume little or no water will be considered for solar energy development in these western desert solar energy study areas. Where high water use CSP technologies are envisioned, the BLM should require the use of air-cooled CSP solar energy technology which reduces water use by 80 to 90 percent. As Mr. Glennon's article points out, wet-cooled CSP utility plants should be sited on private land where water resources can be re-allocated, for example, from growing alfalfa and cotton to generating solar power.

3. Regarding the Notice of Proposed Withdrawal, I urge BLM to continue to allow public access and recreational use in the proposed solar energy study areas pending a final decision on the withdrawal application. This is particularly important where the proposed study area is located on lands that provide critical access for recreational uses and public enjoyment, e.g., the Gillespie solar study area.

TOPOI map printed on 09/13/09 from "Agua Caliente Road Area.tpo"



112°57.000' W 112°56.000' W 112°55.000' W 112°54.000' W 112°53.000' W 112°52.000' W 112°51.000' W 112°50.000' W 112°49.000' W
33°17.000' N 33°16.000' N 33°15.000' N 33°14.000' N



Map created with ©2008 National Geographic, ©2007 Tele Atlas, Rel. 1/2007



Thank you for your comment, Michael Cipra.

The comment tracking number that has been assigned to your comment is SolarM60219.

Comment Date: September 14, 2009 13:18:21PM
Solar Energy Development PEIS
Comment ID: SolarM60219

First Name: Michael
Middle Initial: C
Last Name: Cipra
Organization: National Parks Conservation Association
Address: 1300 19th Street NW
Address 2:
Address 3:
City: Washington
State: DC
Zip: 20036
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: NPCA Solar Energy Study Areas scoping comments.doc

Comment Submitted:

NATIONAL PARKS CONSERVATION ASSOCIATION

Protecting Parks for Future Generations

Submitted via electronic form

September 14, 2009

RE: Comments for the Department of Energy/Department of the Interior Solar Energy Study Area Maps

To Whom It May Concern:

The National Parks Conservation Association (NPCA) would like to thank both the Department of the Interior (DOI) and the Department of Energy (DOE) for the opportunity to provide scoping comments on these agencies' Solar Programmatic Environmental Impact Statement (PEIS), which aims to further develop solar energy resources in strategic locations throughout Arizona, California, Colorado, New Mexico, Nevada and Utah. The Bureau of Land Management (BLM) has announced the availability of maps that identify 24 tracts of BLM-administered land for in-depth study for solar development, and the comments in this letter are broken into two sections:

1. Principles for moving forward in the process, and
2. Concerns specifically focused on the BLM Solar Energy Study Area maps.

NPCA is a non-profit organization dedicated to the protection and enhancement of National Parks, Monuments, and Historic Sites for current and future generations. NPCA currently has a membership of 325,000 individuals including 73,000 members in the six-state region being considered for utility-scale solar development. Our members care deeply for America's shared natural and cultural heritage that is preserved by units of the National Park System and Park Service affiliated areas.

NPCA recognizes and supports the pressing need to increase renewable energy production. The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions and to avoid the worst consequences of climate change, which imperils our national parks, and our economic and environmental future. However, the development of renewable energy should not take place in such a way that harms our national park treasures. Accordingly, we urge the agencies to work with the National Park Service (NPS) to avoid the inappropriate siting of solar energy infrastructure within important wildlife corridors and within viewsheds. Furthermore, we ask that you adopt a policy that will protect critical water resources by discouraging the use of wet-cooling technology for power plants. We appreciate the opportunity to participate in this process to identify strategic locations for the production of renewable energy in a way that protects our natural, cultural, and historic resources while operating with the most technologically effective and water-conscious methods available.



1300 19th Street, N.W., Washington, D.C. 20036
Telephone (202) 223-NPCA (6722) • Fax (202) 659-0650

Section 1. Cross-cutting principles for the PEIS process

- a. Maximize use of areas that are already degraded and near existing infrastructure.

In addition to avoiding ecologically-sensitive lands, we commend BLM for selecting SESAs based on proximity to existing roads and existing or designated transmission corridors. We also recommend that BLM obtain and incorporate information on lands that are already impaired and/or are slated for other development uses. Fallow agricultural lands, developed oil and gas fields, entitled lands and other brownfields, which are not being restored to ecological function, provide opportunities for solar energy development without loss of other uses and values. Such sites are often close to existing infrastructure, so these two criteria work well together.

The Arizona BLM is conducting a specific process to identify lands that are both suitable for renewable energy development and require remediation or do not have other high resource values. The Restoration Energy Design Project is seeking to identify lands such as:

- hazardous material sites;
- brownfields;
- former landfills, mineral sites or gravel pits;
- sites damaged or disturbed to the extent that restoration potential is limited; and
- sites that otherwise have very limited productivity due to a disruption of natural processes.

The BLM could undertake a similar process, both internally and by seeking information from industry and the public, to identify such lands for solar energy development. The categories in use by the Arizona BLM could also permit coordination with adjacent landowners, to establish coordinated management of lands so that there would be sufficient acreage to support large-scale solar energy development.

Recommendation: In addition to accepting information from the public regarding areas to be excluded, BLM should solicit and incorporate information on severely degraded lands and disturbed habitat that could be additional SESAs.

- b. Discourage the use of wet-cooled or other water-intensive technologies

Water is a major concern in the arid regions of the West where the proposed SESAs are located and we urge the BLM to take a proactive approach to this issue in the PEIS.



Electric generation from solar (and other) thermal power plants is most efficient when a source of cooling – typically water – is available to remove waste heat from the thermal cycle.¹ Unfortunately, the SESAs that are the focus of the PEIS are located in arid areas where intense competition already exists between the use of limited supplies of water for urban areas, fossil fuel production and agriculture.² Permitting water-cooled production of energy from solar resources would add to that competition,³ presenting a clear threat to protected lands and their wildlife and plant communities due to over-allocation and drawdown. Desert rivers, seasonal seeps and springs are lifelines for wildlife, plants and humans alike. As water is removed from aquifers, seeps and springs do not reach the surface and are unable to be utilized by species that are dependent upon them, including threatened or endangered desert fish.⁴ The BLM should explore ways to avoid these results in the PEIS, including the options identified below:

- (1) *Adopt a policy which would discourage the use of wet-cooling for power plants.* Both California and Nevada have adopted such policies.⁵ California’s policy states that the Energy Commission “will approve the use of fresh water for cooling purposes by power plants only where alternative water supply sources and alternative cooling technologies are shown to be ‘environmentally undesirable’ or ‘economically unsound’.”⁶ There is broad acceptance of this policy in California, including among the solar industry,⁷ where alternatives considered to date have included use of brackish water as well as dry-cooling.⁸ Although Arizona does not have an explicit policy, it has moved to strictly regulate water use in solar projects.⁹

¹ See, e.g., Renewable Energy Transmission Initiative Phase 1B Final Report (January 2009), Chapter III – Environmental Assessment of Competitive Renewable Energy Zones, p. 3-3 (hereinafter “RETI Phase 1B Report”).

² See, e.g., Colorado River Project, River Report – Summer 2009, p. 8. See also *id.*, pp. 4-5, 6.

³ The amount of water used for wet cooling a power tower plant is about 500 gallons of water per MWh of electricity, similar to a typical coal or nuclear plant. U.S. Department of Energy, Report to Congress, “Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation, p. 4 (hereinafter “DOE Report on Water Use”) (accessible at http://www1.eere.energy.gov/solar/pdfs/csp_water_study.pdf). A water-cooled parabolic trough plant consumes about 800 gal/MWh, or about four times what a combined-cycle natural gas plant consumes. *Id.* Because wet-cooled plants are more efficient than dry-cooled, see text at note 6 *supra*, more land would be required to produce a given amount of energy.

⁴ <http://www.fws.gov/endangered/bulletin/2002/03-06/20-21.pdf>

⁵ See, e.g., California Energy Commission 2003 Integrated Energy Policy Report.

⁶ California Energy Commission, Preliminary Staff Assessment, Beacon Solar Energy Project, Application For Certification (08-AFC-2), Kern County (Posted April 1, 2009) (hereinafter “Beacon Staff Draft”), p. 4.9-5.

⁷ See, e.g., RETI Phase 1B Report, p. 3-3, describing agreement of all RETI stakeholders, including solar generators, to the assumption, for RETI purposes, that dry-cooling would be used except when reclaimed water from communities of a certain size is available.

⁸ In the case of the Beacon project, CEC analysis revealed that dry-cooling could “reduce ... consumption of potable water by up to 97 percent.” Beacon Staff Draft, p. 1-6. In addition, the analysis revealed that not only were both of these options economically feasible, but also that dry cooling might “actually result in lower project operating costs.” *Id.*, p. 4.9-48.

⁹ See <http://www.azwater.gov/AzDWR/WaterManagement/documents/SolarPowerPlantsSummaryFINALPublic.pdf>



- (2) *Adopt a performance standard that specifies the amount of water that is acceptable per MW generated.* Rather than tie solar development to one specific technology, such an option would allow for any technology that would meet the standard and could in fact result in technology improvements.¹⁰
- (3) *Adopt a technology-forcing standard that would continue to elevate the bar regarding water use and, simultaneously, encourage the use of new, innovative technologies.* For an example, the Department of Energy's project selection criteria for renewable energy projects "seeks to give priority consideration to "new or significantly improve[d] technologies" that are not extensively used in the marketplace, *See*, "Federal Loan Guarantees for Projects That Employ Innovative Energy Efficiency, Renewable Energy, and Advanced Transmission and Distribution Technologies," Loan Guarantee Solicitation Announcement, July 29, 2009, pp. 35-36.

Recommendation: The PEIS should examine several options related to guidelines on water use, including those described above, so that the generation of energy does not create severe environmental impacts resulting from unnecessary water drawdown. Wet-cooled projects that do not purchase existing water rights should not be permitted in the southwest.

c. Coordinate PEIS with other processes

It is critical that the BLM coordinate the Solar PEIS with ongoing processes that share the same overarching goal – i.e., facilitating the development of solar and other renewable resources in an environmentally responsible manner that minimizes the need for new transmission corridors.

The Western Renewable Energy Zones Initiative (WREZ) is a cooperative initiative between the WGA and the US Department of Energy. It is a project to address transmission barriers to increased renewable energy production in the West. WREZ intends to "generate (1) reliable information for use by decision-makers that supports the cost-effective and environmentally sensitive renewable energy development in specified zones, and (2) conceptual transmission plans for delivering that energy to load centers" (*see* <http://www.westgov.org/wga/initiatives/wrez/>) Importantly, the WREZ effort combines solar resource data from government and industry with lands, wildlife and natural resource information from state agencies and the conservation community. Most of the states within the scope of this PEIS have initiatives to identify locations and provide incentives for renewable energy development and transmission:

- New Mexico's Renewable Energy Transmission Authority was created to "stimulate clean energy production and create high-paying jobs, capital investment and greater economic development in rural areas." (www.nmreta.org)

¹⁰ For additional options, *see* DOE Report on Water Use, *supra*.



- Colorado's Clean Energy Development Authority is directed to "facilitate the financing of renewable energy projects in Colorado."
- Nevada's Renewable Energy Transmission Access Authority is tasked to "propose recommendations for improved access to the grid system by which renewable energy industries can set up and have market access in Nevada and neighboring states."

The increased focus on renewable energy in this planning area also increases the importance of the WREZ process. Accordingly, the Solar PEIS should coordinate with this parallel effort, and in particular, incorporate information and data when there is consensus reached between the environmental, renewable energy industry and utility and other stakeholders on zones/areas that are appropriate for large-scale solar energy development on public lands.

Recommendation: The BLM should coordinate with any on-going or proposed energy corridor processes including the Western Governors Association's Western Renewable Energy Zones. Additionally, the BLM should continue its careful review of existing transmission corridors and prioritize zones that utilize existing transmission.

Section 2. Concerns specifically focused on the BLM Solar Energy Study Area maps.

Like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid adverse impacts to sensitive species and habitat, and the siting of these projects should not compromise the integrity of National Park Service units that Congress and the American people have identified as crucial for the preservation of our natural and cultural heritage; including those established and/or expanded by the California Desert Protection Act of 1994.¹¹ In evaluating the Bureau of Land Management's Solar Energy Study Area maps, we have identified specific and pressing concerns about the potential for adverse impacts to National Park Service units, which we urge the agency to avoid when drafting the final Solar PEIS.

a. Potential adverse impacts to Joshua Tree National Park and associated resources

The BLM's "Riverside East" Solar Energy Study Area (SESA) in California is currently defined as contiguous with Joshua Tree National Park's boundary, and surrounding the park's Coxcomb Mountains wilderness on three sides. Development of this solar energy zone as currently conceived would effectively cut off or "island" a biologically significant portion of Joshua Tree National Park, threatening the ecological health and viability of park habitat. A species of particular concern in the area is the desert bighorn sheep. Recent bighorn sheep genetics and

¹¹ 16 U.S.C. §§ 410aaa through 410aaa-83, October 31, 1994.



movement studies conducted in the region¹² clearly delineate an established wildlife corridor between the Eagle Mountains and the Coxcomb Mountains of Joshua Tree National Park. This crucial wildlife corridor for desert bighorn sheep is situated in the Chuckwalla Valley just north of the Colorado River aqueduct—an area currently included in the Riverside East SESA. This area should be avoided in order to protect the wildlife movement corridor necessary for the continued health of Joshua Tree National Park’s bighorn sheep herd. In addition, a purported Papago Creation site north of Desert Center has been identified based upon public concern for the location. Research regarding the site needs to be conducted in order to analyze the appropriateness of this area for solar energy development.¹³

Immediately to the east of Joshua Tree National Park’s Coxcomb Mountains lies the Palen Valley, an area that contains significant Native American cultural resources and a unique microphyll woodland habitat. Sidewinder Well Area of Critical Environmental Concern (ACEC) and Palen Dry Lake ACEC shoreline both contain prehistoric habitation sites, mesquite processing sites and lakeshore sites.¹⁴ Most of the western portion of the Riverside East SESA is a unique microphyll woodland—arboreal desert that includes ancient ironwood trees. The area is also on the transition zone between the Sonoran and Mojave ecoregion, meaning that rare plants occur with frequency in the area. The sand dune habitats at the eastern end of the Eagle Mountains currently support 2 California Native Plant Society (CNPS) listed rare plants (*Cryptantha costata*, *Eriastrum harwoodii*), and one watchlist plant (*Astragalus aridus*). Other CNPS listed species that could be adversely impacted include: *Cryptantha costata*, *Proboscidea althaeifolia*, *Colubrina californica*, *Senna covesii*, *Ditaxis californica*, *Ditaxis claryana*, *Abronia villosa* var. *aurita*, *Hymenoxys odorata*, *Teucrium cubense* ssp. *depressum*, *Wislizenia refracta* ssp. *refracta*, *Grusonia parishii*, *Astragalus insularis* var. *harwoodii*, *Corypantha alversonii*, and *Castela emoryi*. Rare plants, ancient ironwood trees and archeological sites of national significance should be avoided when prioritizing areas for energy development, and the high potential for adverse impact to these resources, as well as the significant potential for disrupting a wildlife corridor for Joshua Tree National Park’s largest herd of bighorn sheep make the western portion of the Riverside East SESA a problematic area for solar energy development.

Recommendation: NPCA recommend that the BLM refine what is by far the largest SESA in the set of maps to avoid impacts to Joshua Tree National Park’s wildlife and the significant cultural and natural resources of the immediate area.

b. Potential adverse impacts to Death Valley National Park and associated resources

¹² Epps, Clinton W. et al. “Optimizing dispersal and corridor models using landscape genetics.” *Journal of Applied Ecology* 44 (2007): 714-724.

¹³ Mojave Desert Land Trust. (2008). *A Constraints Study of Cultural Resource Sensitivity within the California Desert*. Unpublished manuscript.

¹⁴ *Ibid.*



The “Amargosa Valley” Solar Energy Study Area (SESA) in Nevada lies just to the east of Death Valley National Park. The potential for the development of water-intensive, “wet-cooled” solar thermal facilities in this region presents a significant threat to the resources of Death Valley National Park. The source of the majority of Death Valley’s springs and natural water sources is an aquifer commonly called the Death Valley Flow System, which travels under southern Nevada and the Amargosa Valley to emerge as surface features such as springs inside the park. Wet-cooled solar power plants sited in this area could significantly draw down groundwater and put the park’s springs and wildlife at risk. Drawdown would have an immediate impact on the Devils Hole Pupfish (*Cyprinodon diabolis*), an endangered species which survives only in the Devils Hole unit of Death Valley National Park. Federal courts, including the Supreme Court in 1976, have ruled that the National Park Service (NPS) has a federal reserved water right in Devils Hole.¹⁵ NPCA’s position continues to be that “wet-cooled” solar projects are inappropriate in the southwest because of the threat to natural springs and the widespread ecological damage that occurs when these crucial water resources are depleted; it is particularly important in this area because of the NPS’ mandate to protect plant and animal species in Death Valley National Park. It is not in the public interest for the BLM to facilitate a process that draws water from resources specifically set aside for protection by Congress and the American people, and violates a senior water right that has been upheld by the Supreme Court of the United States of America.

Recommendation: NPCA recommends that the Amargosa Valley SESA be linked in the PEIS with a specific provision that no net water drawdown occur as a result of any solar development, and that new applications for groundwater rights be consistent with the Nevada State Engineer’s Order 1197 of November 4, 2008, outlining specific conditions for maintaining sustainability of the Devils Hole resource and stating that “conditions warrant the curtailment of future appropriations of underground water and additional regulation of change applications within a portion of the Amargosa Desert Hydrographic Basin.”

In summary, NPCA thanks the Department of the Interior for the opportunity to comment on and contribute to the Solar PEIS process and the Solar Energy Study Area maps. Please feel free to contact us with any questions that you may have concerning the comments made here. Thank you again for the opportunity to engage in this important environmental review process that will help our nation transition quickly and responsibly to a renewable energy future, for the benefit of our national parks and for our children’s and grandchildren’s futures.

Sincerely,

Mike Cipra
California Desert Program Manager

¹⁵ *Cappaert v. United States*, 426 U.S. 128, (1976).



Thank you for your comment, Ruth Rieman.

The comment tracking number that has been assigned to your comment is SolarM60220.

Comment Date: September 14, 2009 13:27:30PM
Solar Energy Development PEIS
Comment ID: SolarM60220

First Name: Ruth
Middle Initial: E
Last Name: Rieman
Organization: California Desert Coalition
Address: P. O. Box 1508
Address 2:
Address 3:
City: Yucca Valley
State: CA
Zip: 92286
Country: USA
Email: cadesertco@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment: BLM_Solar PEIS_CDC-scoping comments-9-14-09.doc

Comment Submitted:

Please record the comments from CDC as given in the attached word doc.

Ruth E. Rieman
CDC Vice Chair



CALIFORNIA DESERT COALITION

P.O. Box 1508
Yucca Valley, CA 92286
www.CaDesertCo.org

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Ave. - EVS/900
Argonne IL 60439

RE: Solar Energy Development Programmatic EIS: Solar Energy Study Area Public Scoping Comments

Dear BLM and DOE staff:

The California Desert Coalition (CDC) is pleased to provide the following public scoping comments on the Solar Energy Development Programmatic EIS: Solar Energy Study Area.

CDC is a citizens' advocacy group formed in 2007 to oppose the Los Angeles Department of Water & Power's (LADWP's) preferred alignment for its Green Path North transmission line project, the purpose of the new transmission line being to transmit electricity generated from remote renewable energy sources, including solar, in California's Imperial Valley to the Los Angeles transmission system. This preferred alignment lies outside of existing federally designated energy corridors. Our support consists of over 5,000 citizens who have signed a petition in opposition to LADWP's preferred alignment. Additionally, the counties of San Bernardino and Riverside, as well as numerous cities in the Morongo Basin and Coachella Valley, have lined up in protest against this project alignment, passing resolutions of opposition to Green Path North. CDC and our two county governments recommend that Green Path North be routed in existing energy corridors, such as the alternative alignment along Interstate 10.

Considering CDC's mission regarding the Green Path North transmission project and the stated intent of the Solar PEIS to "consider whether designation by BLM of additional electricity transmission corridors on BLM-administered lands is necessary to facilitate utility-scale solar energy development" (NOI, May 29, 2008), CDC has a vested interest in its submittal of the following comments.

SESAs Not Best Method for Executive Order 13212 Compliance

CDC does not see a direct and compelling relationship, as referred to in the Solar PEIS NOI of May 29, 2008, between Executive Order 13212 and the need for Solar Energy Study Areas (SESAs) as proposed during this scoping period. EO 13212 calls for executive departments "to expedite projects that will increase the production, transmission, or conservation of energy." There is no imperative in this that favors production over conservation. Considering the enormous reductions in greenhouse gas emissions and fossil fuel consumption that are possible through conservation efforts without altering the environmental, recreational, scenic and other values of our public lands, CDC contends that SESAs are not necessary.

In addition, the NOA of June 30, 2009, states that existing solar applications (received before June 30, 2009), whether within a SESA or outside SESAs, will continue to be processed under the BLM's

current procedures.” There were already 158 active solar applications, covering 1.8 million acres, with a projected capacity to generate 97,000 megawatts of electricity. Considering that many of these applications may gain approval, the sacrifice of this much public land already is more than is necessary considering the many other renewable energy options, including conservation, use of previously disturbed private lands, and local distributed renewable energy generation, such as solar PV on rooftops of commercial buildings and residences.

SESAs Will Not Contribute to Energy Policy Act of 2005 Compliance

Establishment of SESAs as proposed during this scoping period will not contribute to fulfilling the requirements of Title II, Section 211, of the Energy Policy Act of 2005 as referred to in the Solar PEIS NOI of May 29, 2008. This 2005 EPA section provides that the Secretary of the Interior should, within 10 years of enactment of the Act, “. . . seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity.” With active solar applications on public lands with a projected capacity to generate 97,000 megawatts, and many more thousands of megawatts projected for existing wind and geothermal project applications, compliance with the stated 2005 EPA section is already assured.

SESAs do not comply with DOE Goal #2

In accordance with the Energy Policy Act of 2005, the DOE completed a Strategic Plan for the US Climate Change Technology Program (CCTP). The CCTP strives to install federal leadership to facilitate multi-agency planning and coordination. Energy Supply or Goal #2 of that Program favors distributed energy, because it “provides the consumer with a greater choice, local control and more efficient waste utilization to boost efficiency and lower emissions”. This goal lends support that energy production should be planned close to point of use and that remote and rural SESAs are neither strategic nor cumulatively beneficial for reduction of Green House Gas emissions.

Existing Solar Applications Should be Disallowed Outside SESAs

CDC contends that identification of environmentally responsible SESAs could contribute to renewable energy development efforts that would reduce the nation’s dependence on fossil fuels and have an impact on global warming if existing solar applications (received before July 30, 2009) were disallowed outside of the SESAs. The BLM has accepted many solar transmission applications for ROWs in environmentally sensitive areas and in areas that have no access to sufficient existing transmission and are far from designated transmission corridors. Therefore, CDC requests that no solar projects, whether applied for before or after June 30, 2009, be approved outside of solar energy zones (SEZs) developed using SESAs to determine areas with minimal environmental impacts.

Pisgah, Iron Mountain, Riverside East and Imperial East SESAs and Other Lands Being Analyzed for Solar Development in PEIS

The current scoping review considers four SESAs (Pisgah, Iron Mountain, Riverside East, and Imperial East), as well as other lands being analyzed for solar development in the PEIS, that are within CDC’s area of interest. However, evaluation of these SESAs is beyond the scope of CDC’s mission and expertise. CDC defers to comments on these SESAs and other lands submitted for this scoping effort by The Wildlands Conservancy (TWC) and hereby incorporates TWC’s comments by reference.

Need for Utility-Scale Solar Energy Development on BLM Lands Overestimated

CDC contends that the Solar PEIS overestimates the need for utility-scale solar energy development on BLM lands and thus fails to protect the environmental, recreational, scenic and other values of our public lands. The addition of SESAs to the Solar PEIS does not overcome this deficiency.

- Distributed solar generation can and should play a significant role in solar energy development. For example, the U.S. Department of Energy states regarding its Solar Energy Technology Program, “PV systems built in the ‘brownfields’—the estimated 5 million acres of abandoned industrial sites in our nation's cities—could supply 90% of America's current electricity.” And, this figure doesn’t take into account the potential for PV systems on the rooftops of residences and commercial buildings.
- Solar energy projects should be sited on previously disturbed lands, e.g., fallowed agricultural lands and abandoned industrial sites, rather than on undisturbed lands that preserve the natural environment. This applies to BLM lands, but also to private lands. More emphasis should be put on utilizing private lands that have been disturbed in order to protect our dwindling supply of pristine public lands.

Considerations in Designating Additional Transmission Corridors

While the Solar PEIS NOA addressing SESAs states that a criterion for establishing SESAs is that they “be near existing roads and existing or designated transmission line routes,” the Solar PEIS NOI also states, “The need to designate additional electricity transmission corridors on BLM-administered lands to facilitate utility-scale solar energy development will be considered. The PEIS may include NEPA analysis for a limited number of site-specific corridor designations on BLM-administered lands, as appropriate.”

CDC contends that the BLM in determining the sufficiency of existing designated corridors should take into consideration that the primary reason for developing solar renewable energy is to replace nonrenewable sources of energy, such as fossil fuels. Since much of our Nation’s energy is currently supplied from fossil fuel sources, the BLM must consider the transmission line capacity that will be made available when use of fossil fuel sources is discontinued.

CDC further contends that, should BLM consider designating a corridor that currently has contingent corridor status under the California Desert Conservation Area (CDCA) Plan, the BLM must consider advances in scientific understanding that have led to changes in management philosophy subsequent to establishment of contingent corridors in 1980. For example, a 1998 CDCA Plan amendment states, “Since preparation of the 1980 CDCA Plan, management philosophy has changed from single-species management to ecosystem management, in recognition of the interdependence of species and their environment. To that end, managers now seek to maintain ecosystem functions and the diversity of life.”

BLM must also recognize changes in land status and ownership within any contingent corridor since the time the corridor was originally allowed contingency status in 1980.

Contingent Corridor S

Specifically, Contingent Corridor S should never become a designated corridor due to a changed BLM management philosophy and to significant changes to land designation and ownership that have occurred within Contingent Corridor S since this contingent corridor was included in the original CDCA Plan in 1980, nearly 30 years ago.

- The Big Morongo Canyon Preserve was designated an area of critical environmental concern in a CDCA Plan amendment in 1982. In 1998, another CDCA Plan amendment expanded the Big Morongo ACEC to 29,000 acres in order to

“ . . . preserve the remaining corridors connecting Joshua Tree National Park, Big Morongo Canyon ACEC, BLM’s San Gorgonio Wilderness, and the San Bernardino National Forest to maintain genetic diversity . . . of desert bighorn sheep and other wildlife to prevent local extinction from episodic events such as wildfire and drought.”

The amendment also states, referring to lands added to the ACEC by the amendment, that

“Recognizing the need to maintain these wildlife corridors, bighorn sheep fawning areas and watering sites, BLM and private conservancy groups have been acquiring lands The private conservancy groups in turn have been transferring title of their acquired lands to BLM via sale or donation.”

Considering that the earlier identified Contingent Corridor S, if designated, would establish a new energy corridor 2 to 5 miles wide running for 10 miles through the biologically critical Big Morongo ACEC and that this ACEC was put together in part through the donations of private conservancy groups whose intention was to preserve the land in its natural state in perpetuity, Contingent Corridor S lands no longer remain appropriate for consideration as a designated corridor.

- Pioneertown Mountains Preserve lands were purchased by The Wildlands Conservancy, a private, nonprofit conservancy organization, in the 1990s, i.e., subsequent to identification of Corridor S as a contingent corridor in 1980. This land was purchased through the donations of private citizens for the purpose of preserving the land in a natural state in perpetuity. Pioneertown Mountains Preserve protects wildlife linkages (i.e. wildlife corridors) that connect the San Bernardino Mountains with Joshua Tree National Park.

Considering that Contingent Corridor S, if designated, would transect Pioneertown Mountains Preserve, its privately donated conservation lands and its biologically significant wildlife linkages, CDC contends that Contingent Corridor S lands no longer remain appropriate for consideration as a designated corridor.

- Thirty miles of private lands are interspersed among the BLM lands traversed by Contingent Corridor S. If this were to become a designated corridor, any transmission line or water, oil, or gas pipeline project approved by BLM would have to gain federal approval to exercise eminent domain powers and remove the land from its private owners. With respect to expediting transmission for solar energy projects, this would cause indeterminable delays.
- Climate change has furthered the necessity for preserving the wildlife linkages that transect contingency corridor S in order to allow species migration as temperatures rise and species attempt to establish themselves in new suitable habitat. Since many wildlife linkages have been identified as crossing the path of Contingent Corridor S, this land should never become a designated corridor thereby preventing climate change biological adaptation.

Green Path North Proposed Transmission Project and Solar Energy Applications

In December of 2006, the Los Angeles Department of Water & Power (LADWP) applied to the BLM for a ROW across public lands for its Green Path North transmission project. The ROW requested was also selected as the preferred alignment in this application. Although LADWP could have chosen to align this project's transmission lines in an existing energy corridor along the I-10 Freeway that traverses little public land, LADWP chose instead to prefer an alignment that crosses 55 miles of mostly pristine public lands, land LADWP could use for a pittance, a little over \$14 per linear mile per year.

LADWP's preferred alignment for Green Path North traverses California Desert Conservation Area (CDCA) lands but does not fall within a CDCA Plan designated corridor. Thus, to approve this transmission line alignment would require amending the area's land use plan and designating a new energy corridor on public lands.

LADWP's preferred alignment does lie within the CDCA Plan's Contingent Corridor S commented on above. As discussed above, Contingent Corridor S should never become a designated corridor due to changes in BLM management philosophy and significant changes to land designation and ownership since Contingent Corridor S was included in the original CDCA Plan in 1980. Thus LADWP's preferred alignment for its Green Path North project should not be approved and the alternative alignment along the existing I-10 energy corridor should be selected for this project.

Because of LADWP's ROW application submittal and choice of preferred alignment, several applications by solar energy developers have been submitted to the BLM along LADWP's preferred alignment, even though there is no existing designated corridor in this area. CDC contends that these solar applications, Serial Numbers CA CA 049561, CA CA 049361, CA CA 048819, and CA CA 050712, should not be approved as the solar projects are far from any designated corridor. Also the projects do not fall within a proposed SESA.

Thank you for reviewing these comments regarding the Solar Energy Development PEIS and the proposed solar energy study areas.

Sincerely,



Ruth E. Rieman, Vice Chair
California Desert Coalition

Thank you for your comment, David Hubbard.

The comment tracking number that has been assigned to your comment is SolarM60221.

Comment Date: September 14, 2009 13:32:07PM
Solar Energy Development PEIS
Comment ID: SolarM60221

First Name: David
Middle Initial: P
Last Name: Hubbard
Organization: ORBA and EcoLogic Partners
Address: Gatzke, Dillon & Ballance LLP
Address 2:
Address 3:
City: Carlsbad
State: CA
Zip: 92008
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Scoping Comments on Solar Energy PEIS 9-14-09.pdf

Comment Submitted:

Please see the attached letter providing scoping comments.



OFF-ROAD BUSINESS ASSOCIATION, Inc.
www.orba.biz

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Ave. – EVS/900
Argonne, IL 60439

RE: *Additional scoping comments on Solar Energy Study Area Maps for Solar Energy Programmatic EIS.*

Thank you for the opportunity to comment on the recently released Solar Energy Study Area Maps. I am writing on behalf of the Off-Road Business Association (ORBA), a national non-profit trade association representing all aspects of the off-road industry, from OEM manufacturers to aftermarket suppliers and distributors and local retailers. Many of ORBA's members are located and/or conduct business in the six western states the Programmatic EIS ("PEIS") will cover. I am also writing on behalf of EcoLogic Partners, Inc. ("EcoLogic"), a non-profit organization dedicated to preserving public access to recreational lands throughout the United States.*

Many of the areas indentified in the Solar Energy Study Area Maps are classified as limited use and allow OHV travel on designated trails. We believe that it is the responsibility of the BLM, through the proposed PEIS, to analyze the cumulative loss of these trails to OHV recreation, as well as the other environmental concerns associated with large scale solar development.

The development of renewable resources is a valid use of public lands. We understand that renewable energy is and will remain an important part of the nation's continued security and independence. However, we do believe that if the development of these resources results in the loss of OHV recreation opportunities, then the companies profiting from the development should be required to compensate or mitigate for that loss.

* EcoLogic's charter members include ORBA, the San Diego Off-Road Coalition, the American Sand Association, and the American Motorcyclists Association District 37.

BOARD OF DIRECTORS
Chairman of the Board
Loren Snyder
Chief Financial Officer
Toby Hopper
Fiber-Tech
Secretary
Gary Howe
Alpha Kappa Society
Renee Harrison
KTM North America, Inc.
Joni Anderson
Southern AMC Supply
Jim Ryan
Pesh Communications
Group
Joni Tolson
SEMA
Mindy Meeser
Off Road Adventure
Tim Williams
Rep. James Ostertag

OFFICERS
President/CEO
Fred Wiley
Executive Vice President
Jim McGowan

In recent years, OHV recreational areas have been targeted by the alternative energy industry for potential solar, wind, and geothermal energy development. In addition, OHV areas continue to be threatened by plans, issued by the Department of Defense, to enlarge certain military installations in the California desert. One such plan – the proposal to expand the Marine Corps base at Twenty-nine Palms by some 400,000 acres – would encroach deeply into Johnson Valley, which is one of the premier OHV venues in the country. When combined, these various projects – both public and private – would result in a dramatic loss of land open to OHV use. The proposed PEIS must address this issue on both a project-specific and cumulative basis.

Perhaps worst of all, neither BLM nor the alternative energy industry nor the Department of Defense has devised a comprehensive approach for mitigating the site-specific and cumulative recreational impacts the various energy and military projects will create. If there is one issue the proposed PEIS must tackle, it is mitigation for lost recreational opportunity. BLM and the project applicants must develop a comprehensive plan for mitigating the Solar Energy Projects' impacts on public access and recreation, including OHV recreation. Only by addressing this issue on a desert-wide basis will the problem be solved adequately and efficiently. Proposing small, piece-meal mitigation on a project-by-project basis will not work. Such an approach provides no economies of scale and fails to appreciate the regional and cumulative nature of the impact.

Perhaps the best way to start is to require project applicants to have recreation mitigation plan that can be integrated into a coordinated strategy for the entire affected region. Such a strategy would guide project applicants on how to mitigate or compensate the recreation community for their loss of opportunity.

Another way this could be accomplished would be by requiring the project applicants to include recreation mitigation in at least one of their alternatives. These alternatives would offer replacement or compensation for the loss of the trails or areas if the project were approved. For example, if project approval will result in the loss of 50 miles of trails, then the project applicant should be required to do environmental analysis for the establishment of 50 new miles of trail.

CONCLUSION

We believe that looking at these large scale solar projects and studying there cumulative effect on the environment is a wise planning decision. It needs to be matched with a comprehensive mitigation strategy that addresses the cumulative impacts on recreational opportunity, including OHV recreational opportunity.

If you have any questions concerning the content of this letter, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "David P. Hubbard". The signature is fluid and cursive, with the first name "David" and last name "Hubbard" clearly distinguishable.

David P. Hubbard
Gatzke, Dillon & Ballance LLP
Legal Counsel for ORBA and EcoLogic Partners, Inc.

cc: Meg Grossglass, ORBA
Jerry Grabow, EcoLogic Partners, Inc.

Thank you for your comment, sheila bowers.

The comment tracking number that has been assigned to your comment is SolarM60222.

Comment Date: September 14, 2009 13:51:04PM

Solar Energy Development PEIS

Comment ID: SolarM60222

First Name: sheila

Middle Initial:

Last Name: bowers

Organization:

Address:

Address 2:

Address 3:

City:

State:

Zip:

Country:

Email: [Withheld by requestor]

Privacy Preference: Withhold address from public record

Attachment: BLM solar zone comments.doc

Comment Submitted:

Sheila Bowers



September 13, 2009

Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Ave. – EVS/900
Argonne IL 60439

Ladies and Gentlemen:

I am writing, yet again, to urge the Bureau of Land Management to refuse to permit utility-scale solar energy development in Arizona, California, Colorado, New Mexico, Nevada and Utah. I have studied the issues in very great depth and have concluded, like all true environmentalists, that the time has come for a SUSTAINABLE energy policy. The time for pillaging our national resources for profit, greed and waste is OVER.

As I have said in past communications with you, the first step is with you - you are in a position to refer energy consumers back to their own resources (rooftops, micro-wind, conservation, etc.) and to explain to the “Brass” at DOI that an ongoing policy of destroying millions more acres of our beautiful, intact ecosystems is hardly a long-term solution to gross over-consumption of energy. Our open spaces are NOT renewable and it is disingenuous to suggest that obliteration of wilderness and wildlife on an unprecedented scale is any kind of a “green” or “eco-friendly” approach. I refuse to greenwash this rapacious policy and I urge you to do the same.

Like everyone else, I was DEEPLY disturbed to hear that you caved to Big Energy pressure to designate huge segments of OUR land for incredibly destructive profiteering, this time for Big Solar, which has NO BENEFITS to the taxpayers who own the land, and in fact, will be used as one more way to hijack ratepayers, choke off supplies and manipulate prices, and otherwise destroy our property values and economy. All to profit Chevron, Goldman Sachs, Bechtel, BP, Pickens and the other Robber Barons who have been bleeding America dry for the past century or more. Americans are sick to death of having our beautiful open spaces destroyed by mining, drilling, paving, paneling, bulldozing, dynamiting, dehydrating, slaughtering, and other wasteful, ugly, poisonous private enterprises which deplete the land that you have been asked to steward. It is corrupt and indefensible and we are outraged.

Americans recognize that our energy needs are growing and that our future depends on finding sustainable ways to meet those needs, implement conservation measures, and especially to free ourselves from dependence on centralized energy suppliers, who have neither the best interests of our public lands nor our citizenry at heart. We have a genuine opportunity to build out a healthy, clean and independent renewable energy infrastructure WITHIN THE EXISTING BUILT ENVIRONMENT, and are relying on you not to undercut our progress by allowing Big Energy, once again, to externalize its costs onto

ratepayers, taxpayers and the environment, while privatizing its profits. It is like a flashback to the era of Robber Barons (complete with old fashioned remote combustion and lengthy transmission models), and I think we can all agree that era needs to end. If you can't do it for the public's good, then please do it for the planet's..

So, aside from affording individuals an opportunity to participate in renewable energy free markets, it's very important that we protect the natural value of our southwestern lands and the wildlife that lives there as we pursue renewable energy development on previously disturbed lands, like our own properties, brownfields and Superfund sites. We must leave intact ecosystems alone.

A single solar energy plant will cover roughly 10,000 acres and must be built on land with less than a 3% grade and completely bare of plants and animals. When land is graded, all living things are destroyed. Erosion, dust storms, flooding, non-native grasses and other common desert consequences to man's mis-handling of ecosystems will make certain that all surrounding areas and wildlife are also destroyed. Most of these power plants will deplete scarce desert groundwater at a rate of 35 million to 200 billion gallons per year, which will inevitably lead to aquifer collapse and subsidence, not to mention certain death to all those reliant on the aquifers for their lives. Most of the "mirrored arrays" will shoot scorching hot, blinding beams of light diagonally across huge distances and up 350+ feet into the air. It's like some sort of bad cartoon where the mad professor designs a series of massive killing fields modeled after a "bug zapper." The fact that these plants are being seriously considered at all - much less as our "green" source of energy would be laughable if it weren't so dangerous.

Since there is no need for remote power plants in the desert to begin with, we urge you to prospectively adopt the "no project" alternative for every application, and follow the example set in Germany, where regular people are rewarded for doing the right thing and feeding clean, non-lethal power into the grid, and preserving our open spaces for the billions of species which rely on them.

You see, unlike the era of coal, oil, gas, and combustion, we no longer have any reason to transmit power long distances or generate it far from point of use. Sun and wind are everywhere, and are free to us all. After factoring in transmission losses, harm to the environment, dry cooling inefficiencies and inherent unreliability, local, point of use renewables are a better alternative for ratepayers, desert ecosystems AND for preventing global warming. Please, don't believe the Big Energy propagandists who try to discount this viable alternative. It is ready, it is real, and these monopolists are the only thing standing between us and widespread adoption of their use.

If policies like the BLM's denial of projects in the desert were to take effect, the scaling of rooftop PV and micro-wind would be incredibly quick and affordable (no transmission, remember), and for once ratepayers, not Big Energy, would get to profit. No wildlife would be slaughtered, no families forced from their homes, no majestic viewsheds gone forever. It's the possibility of getting something for nothing from you at the BLM that keeps Big Energy from working with ratepayers, so if they get a message that our ecosystems are not cheapo sacrifice areas to their private profits, things will start to change more quickly

and for the better. You can make such a difference to the lives of all of us if you will just do what you know to be right and tell these mercenaries “not in America’s back yard.”

Our Southwest deserts are fragile ecosystems that provide vital habitat for wildlife, including species -- like the desert tortoise -- that are currently protected under the Endangered Species Act, as well as many which are critical to our survival in ways we do not yet understand. It is supremely arrogant to presume to kill off intact ecosystems, and think we have a full grasp on all the impacts that will cause.

You simply CANNOT KNOW the primary, secondary and ancillary consequences of destruction on this scale, since projects of this size do not exist anywhere on earth, so to review these projects as though you fully grasp all the consequences, would be lunacy, if you don't mind me saying so. What, for example, has caused 75% of the honeybees in CA to suddenly die? Right. Nobody knows. But you can bet that they didn't all join a cult and drink poisoned kool-aid. No, we did something, somewhere, and have not connected the dots, and now there is an ecological catastrophe. Do you want the next 20 versions of that on your shoulders? These awful projects are HUGE, they are HIGHLY DESTRUCTIVE, their efficacy is highly dubious, and they are NOT WELL UNDERSTOOD. With respect, you have no right to take these kinds of risks with our gorgeous, perfect deserts when our planet is already in peril and there is a better alternative.

I strongly support point of use solar development, and so should you. Have we learned nothing from bleached coral reefs, deforested Amazon, and mangrove destruction? Haven't the floods and fires shown us how devastating our footprint is on habitats which functioned perfectly before we ruined them? Southwest deserts are already under considerable pressure because of off-highway vehicle use, development, pollution, and water shortages. The Bureau should take into account how solar development projects, wind projects, mining, oil, gas, and, in particular, multiple projects of all these types combined, could completely destroy a vital part of our natural legacy. You cannot help but conclude that no gold rush is worth it - we just don't have enough pure spaces left to mess around any longer.

Specifically, the Bureau should consider all existing and foreseeable projects of all types (not just solar) and, to the extent it is even possible, all their related environmental problems when reviewing all applications. I am confident that you will agree that No Project is the only alternative which makes sense, and will join us in supporting SUSTAINABLE energy on previously disturbed lands only. If any of the Superfund sites or Brownfields are under your jurisdiction, and a project has particular political clout, it may be an acceptable compromise to site it on such a previously destroyed piece of land, as long as it is very close to existing transmission lines already.

With careful planning, our energy future -- and the future of our wildlife -- will both be more secure. Everyone is counting on you. Thank you for considering my views on this incredibly important topic.

Sheila Bowers, Ratepayer, Taxpayer, and Conservationist

Thank you for your comment, Rachel Buzzetti.

The comment tracking number that has been assigned to your comment is SolarM60223.

Comment Date: September 14, 2009 13:53:39PM
Solar Energy Development PEIS
Comment ID: SolarM60223

First Name: Rachel
Middle Initial:
Last Name: Buzzetti
Organization: NV State Grazing Boards Central Committee
Address: P.o. Box 28-1251
Address 2:
Address 3:
City: Lamoille
State: NV
Zip: 89828
Country: USA
Email: nrrc08@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar PEIS Comments.doc

Comment Submitted:



NEVADA STATE GRAZING BOARDS CENTRAL COMMITTEE

September 12, 2009

Solar Energy PEIS
Agronne National Laboratory
9700 South Cass Avenue—EVS/900
Argonne, Illinois 60437

Re: Comments regarding the Solar Programmatic Environmental Impact Study (Solar PEIS)

To Whom It May Concern:

The Nevada State Grazing Boards Central Committee is a legal entity of Nevada State Government, organized under NRS Chapter 568 “Grazing and Ranging.” The Central Committee was created to provide a means whereby the seven separate Grazing Boards could act together in a matter of common interest and of general, rather than local, concern in carrying out the provisions of NRS 568.010 to 568.210. The Nevada State Grazing Boards Central Committee lends its support to the comments submitted by the N-4 State Grazing Board.

The Nevada State Grazing Boards Central Committee supports the solar energy study area approved by the Board of the Lincoln County Commissioners. The Board’s decision was based on consultation with grazing permittees and local BLM staff. The County Commission identified and recommended to the BLM areas that sought to avoid and minimize direct impacts on public land grazing allotments and related indirect impacts to private land based properties. The solar energy study area is many times larger than that approved by the Board of Lincoln County Commissioners, and if developed for solar energy will result in unacceptable adverse impacts to the range livestock industry in the state of Nevada. The ranches that will be involved in the solar development area have evolved over the years to protect and maximize the available vegetation and water resources through careful management. Development of utility scale solar projects will convert the public lands within the project areas from multiple use management to a sole use that benefits a single interest.

Public lands are an integral part of many ranching operations in the State of Nevada; therefore, the Central Committee asks that the Solar PEIS commit to no net loss of AUM’s on grazing allotments where solar facilities are developed. To accomplish this, both direct and indirect impacts must be sufficiently identified and mitigation measures developed in order to minimize the effect on public land grazing. This needs to be done in close cooperation with BLM, permittees and county government.

We appreciate the opportunity to provide comments on this very important issue that affects not only the public lands, but also the ranchers that depend on it.

Sincerely,

Ron Cerri

Ron Cerri, Chairman
Nevada State Grazing Boards Central Committee

cc: Governor Jim Gibbons
Senator Harry Reid
Senator John Ensign
Congressman Dean Heller
Congresswoman Dina Titus
Congresswoman Shelley Berkley
Bob Abbey, Director Bureau of Land Management
Ron Wenker, State Director Bureau of Land Management
Rosemary Thomas, District Manager, Ely BLM
Victoria Barr, Manager, Caliente BLM Field Office
Paul Mathews, Chairman Lincoln County Commissioners
Jeff Fontaine, Nevada Association of Counties
N-4 State Grazing Board, Jeff Gardner, Chairman
Nevada Farm Bureau Federation
Nevada Cattlemen's Association

Thank you for your comment, Rebecca Schwendler.

The comment tracking number that has been assigned to your comment is SolarM60224.

Comment Date: September 14, 2009 14:19:42PM
Solar Energy Development PEIS
Comment ID: SolarM60224

First Name: Rebecca
Middle Initial:
Last Name: Schwendler
Organization: National Trust for Historic Preservation
Address: 535 16th St., Ste 750
Address 2:
Address 3:
City: Denver
State: CO
Zip: 80202
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: FINAL solar PEIS SESAs comments_NTTHP_9.14.09.doc

Comment Submitted:

September 14, 2009

VIA ELECTRONIC SUBMISSION
(<http://solareis.anl.gov/involve/comments/index.cfm>)

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439



Re: Scoping Comments on the Solar Energy Study Areas and the Solar Energy Programmatic Environmental Impact Statement

To Whom It May Concern:

The National Trust for Historic Preservation (National Trust) commends the efforts of the Bureau of Land Management (BLM) to identify the most appropriate areas for solar energy development while limiting impacts to significant cultural resources. We feel strongly that by incorporating the results of tribal consultation and previous cultural resources inventories into the development of the solar Programmatic Environmental Impact Statement (PEIS) and the specific Solar Energy Study Areas (SESAs), BLM can facilitate efficient and cost-effective renewable energy development while protecting the invaluable, significant cultural resources that are present on America's federal public lands. At the same time, we believe that efficiency and reduction of energy use at private and public scales should be a focus of current and future energy planning. Rather than simply producing and transmitting more energy, we should simultaneously work to reduce our energy needs.

In general, the National Trust supports BLM's development of the PEIS and identification of the specific SESAs. Specifically, we strongly applaud BLM's decision to exclude all units of the National Landscape Conservation System (NLCS) and other areas that contain significant cultural resources. However, we recommend that BLM define two key terms used in the Federal Register notice for the SESAs. We also recommend that BLM evaluate whether several specific resources should be excluded from the SESAs and, if not, whether BLM needs to develop site-specific avoidance or mitigation measures to ensure that solar energy development does not adversely affect those resources.

Interests of the National Trust

The National Trust is a private charitable, educational, non-profit corporation chartered by Congress in 1949 to protect and defend America's historic resources, to further the historic preservation policy of the United States and to facilitate public participation in the preservation of our nation's heritage. *See* 16 U.S.C. §§ 461, 468. With the strong support of 235,000 members nationwide, the National Trust works to bring people together to protect, enhance and enjoy the places that matter to them. By saving the places where great moments from history – and the important moments of everyday life – took place, the National Trust helps revitalize neighborhoods and communities, spark economic development, promote environmental sustainability and protect public lands. The National Trust, which is headquartered in Washington, D.C., has nine regional and field offices, 29 historic sites and partner organizations in all 50 states.

I. In the PEIS, BLM should define two key terms from the Federal Register notice for the SESAs.

The National Trust commends BLM on identifying “sensitive resource areas” to be excluded from solar energy development, including all units of the National Landscape Conservation System, “Areas of known Tribal concern” and “Areas of known high cultural site density.” *See* Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications, 74 Fed. Reg. 31,307, 31,308 (June 30, 2009). However, the National Trust feels that BLM should clearly define the latter two terms in the PEIS to ensure consistent usage and application.

II. BLM should ensure that SESAs do not adversely affect internal or adjacent significant cultural resources.

BLM should clarify whether any “sensitive resource areas” are located within the external boundaries of SESAs or whether SESAs were chosen because they did not intersect with any sensitive resource areas. If SESAs do surround excluded sensitive resource areas, BLM must ensure that those resources are adequately buffered from visual and other indirect impacts from solar energy development. Even if SESAs do not surround sensitive resource areas, SESAs may have the potential to visually and otherwise indirectly impact significant cultural resources that are located outside but adjacent to SESAs. Units of the NLCS contain many of the most stunning and awe-inspiring vistas within the United States. Long views uncluttered by modern human constructions are an essential aspect of the experiences sought by visitors to these federal public lands, and the views and visitors’ experiences of them must be protected in order to maintain the integrity of NLCS units.

Therefore, for example, protecting the ruts, swales, buildings, inscriptions and other artifacts directly associated with national historic trails is not enough to preserve the suite of historic and cultural resources that make national historic trails significant. Rather, preserving whole settings and viewsheds of national historic trails—and other units of the NLCS—is vital for enabling visitors to have authentic and high quality experiences of the historic events for which the cultural resources are purportedly preserved. In the National Trails System Act, as amended, “high potential historic sites and high potential route segments” are recognized as the very best sections of national scenic and historic trails that retain the highest historical and cultural integrity. The physical manifestations and viewsheds of these segments, at least, should be completely preserved. Similarly, BLM must thoroughly consider and work to avoid adverse impacts to sacred landscapes that are significant to tribes. As with national historic trails, the significance of these landscapes and of Native American traditional cultural properties goes far beyond their constituent features and artifacts; viewsheds and settings must be uninterrupted by modern constructions in order to maintain the sacred integrity of the landscapes.

BLM also should recognize that many significant cultural sites exist at low densities, and historic trails that are not part of the National Trails System (e.g., the Ehrenberg Road and the Phoenix Stage Road in western Arizona) may cross one or more SESAs. Adverse effects to these regionally important historic resources also should be avoided whenever possible even if the resources do not technically fall within any of the sensitive resource area categories. In addition, BLM should take steps to ensure that sensitive resource areas are not directly or indirectly impacted by construction roads and transmission lines.

III. BLM should compile complete records of all known cultural resources located within the SESAs.

All data available for cultural resources (e.g., location, temporal affiliation, condition, significance) should be gathered for each of the SESAs and incorporated into a single geographic information system database as part of the evaluation of SESA efficacy. Compiling information into one location will enable BLM to consistently identify which portions of SESAs have already been thoroughly inventoried and which have not. Then the latter locations should be inventoried for cultural resources, at least at a Class II sampling level. Furthermore, thorough tribal consultation should be performed for each of the SESAs as part of their evaluation, even if consultation has been done in nearby areas in the past. Knowing what cultural resources are present in SESAs, at least at a broad landscape level, will help to streamline solar energy development within them while assuring that impacts to significant resources and landscapes are avoided. A similar approach should be taken for areas outside SESAs that are likely to be developed for solar energy production, with developers directed towards locations that have already been inventoried for cultural resources and that contain few or no significant resources.

IV. BLM should evaluate whether to exclude additional cultural resources from SESAs and whether site-specific measures are necessary to avoid or mitigate adverse effects on cultural resources.

Potential impacts to all cultural resources—including prehistoric, historic and traditional sacred and cultural properties—located within SESAs and in proposed solar project areas outside SESAs should be considered in the NEPA and NHPA processes. In addition, we believe that BLM should evaluate whether the cultural resources mentioned below should be excluded from the SESAs in light of their significance and whether BLM should include site-specific measures in the PEIS in order to avoid or mitigate the potential adverse effects of solar energy development on those resources. For example, BLM has not yet defined management boundaries or areas around national scenic and historic trails, except in Wyoming. In that case, during oil and gas development, BLM defined a one-half mile wide special management corridor along the four National Historic Trails that cross the state. BLM severely limited energy development within the trails corridors and required stringent mitigation of visual and other impacts in areas along the trails outside the corridor. We recommend that BLM develop similar protections for trails and other visually sensitive resource areas in the face of solar energy development.

A. Arizona

The three SESAs in Arizona appear to have been well chosen in regard to archaeological sites, as they consist largely of previously disturbed lands. However, some Native American tribes have already expressed concern about impacts of the SESAs on sacred landscapes. Thus, BLM should thoroughly consult with concerned tribes to resolve potential conflicts now. In addition, many nationally and regionally significant historic trails cross the state and could be directly or indirectly impacted by solar energy development both within and outside the SESAs. Of particular concern are trails located in open areas of southwestern Arizona, including the Juan Bautista de Anza National Historic Trail (NHT), El Camino del Diablo, the Ehrenberg Road and the Phoenix Stage Roads. The latter two, in particular, appear to be located close to the Brenda and Gillespie SESAs. While the Federal Register notice states that BLM excluded national trails from the SESAs, BLM must still consider any visual and other types of indirect impacts, such as from increased public access during project construction, that solar energy development may have on the trails. To that end, BLM should develop stipulations for avoiding or mitigating indirect impacts to trails during solar energy development.

Comment [a1]: Which tribes? We should mention them by name.

B. California

The National Trust is concerned specifically with potential adverse effects to cultural resources within the Riverside East SESA. This area partially overlaps with the boundaries of historic Camp Rice, part of the World War II (WWII) Desert Training Center/ California–Arizona Maneuver Area that has been recommended eligible for the National Register of Historic Places (National Register). Camp Rice is part of an interconnected landscape of similar WWII camp sites in southern California and Arizona and is highly significant both for its association with General Patton and for its contribution to our understanding of how American soldiers were trained during WWII. Still visible at Camp Rice are roads and walkways lined with large pieces of basalt. BLM should modify the boundary of the Riverside East SESA to exclude Camp Rice and other sites within this important WWII cultural landscape.

C. Colorado

The National Trust is concerned about potential adverse effects to cultural resources located within the De Tilla Gulch and Fourmile East SESAs. Both contain rare Paleoindian archaeological sites whose eligibility for the National Register has generally not yet been determined. Because of Paleoindian sites' potential significance, BLM should develop specific mitigation measures to resolve adverse effects to them. Finally, the National Trust requests that BLM take a close look at the potential of the Fourmile East SESA to directly or indirectly affect the Old Spanish National Historic Trail and adjust the boundaries of the SESA to avoid any negative effects.

D. Nevada

The National Trust is concerned about potential adverse effects to prehistoric cultural resources in the Delamar Valley SESA. Two significant and large rock art sites in this SESA are "The Gathering," located along the Alamo Road off Hwy. 93 and "Rattlesnake Road," located approximately 2.5 miles farther east on the Alamo Road. Because the sites are located adjacent to the road, increased construction traffic could lead to increased visitation and inadvertent or purposeful damage by visitors. In addition, the National Trust requests that BLM take a close look at the potential of the Dry Lake SESA to directly or indirectly affect the Old Spanish National Historic Trail and adjust the boundaries of the SESA to avoid any such effects.

E. New Mexico

The National Trust has no specific concerns about cultural resources located within or near the proposed SESAs in New Mexico.

F. Utah

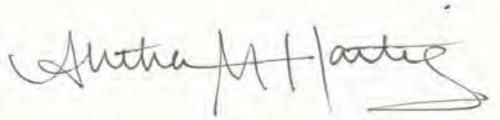
The National Trust requests that BLM take a close look at the potential of the Escalante Valley, Milford Flats South and Wah Wah Valley SESAs to directly or indirectly impact the Old Spanish NHT and adjust the boundaries of the SESAs to avoid negative impacts to the trail.

IV. Conclusion

While planning for solar energy development on federal public lands, BLM must prioritize the protection of outstanding historic and cultural resources, including significant concentrations of prehistoric and historic archaeological sites, historic trails and Native American traditional cultural properties and sacred sites. Accordingly, BLM should thoroughly evaluate the potential direct and indirect impacts of solar energy development on cultural resources both within and outside SESAs. Definition of the terms "Areas of known Tribal concern" and "Areas of known high cultural site density" will facilitate consistent avoidance of impacts to significant cultural areas, although significant resources are likely found outside those areas. Additionally, compilation of known data into a single GIS system will help BLM to identify and then inventory areas within SESAs whose cultural resources are not yet known. Thorough consultation with tribes, State Historic Preservation Officers, local communities and other interested parties will support this effort. Then, BLM should consult with the above parties to develop measures to avoid or, less ideally, minimize or mitigate adverse effects of solar energy development on significant historic and cultural resources.

Please include the National Trust on all announcements, as well as all notifications associated with the PEIS process. We appreciate the opportunity to provide these comments and we look forward to participating further in this process.

Sincerely,



Anthea Hartig, Director
Western Office, National Trust for Historic Preservation



Barbara Pahl, Director
Public Lands Program and Mountains/Plains Office, National Trust for Historic Preservation



Jonathan Poston, Director
Southwest Office, National Trust for Historic Preservation

Cc: Nancy Brown, Advisory Council on Historic Preservation
Dr. Robin L. Burgess, Federal Preservation Officer
Carol Griffith, Arizona State Historic Preservation Officer
Milford Wayne Donaldson FAIA, California State Historic Preservation Officer
Edward Nichols, Colorado State Historic Preservation Officer
Alice Baldrice, Nevada State Historic Preservation Officer
Jan Biella, Acting New Mexico State Historic Preservation Officer
Wilson Martin, Utah State Historic Preservation Officer

Thank you for your comment, Jeff Gardner.

The comment tracking number that has been assigned to your comment is SolarM60225.

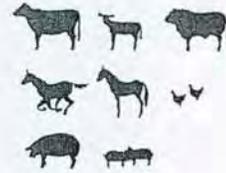
Comment Date: September 14, 2009 14:27:17PM
Solar Energy Development PEIS
Comment ID: SolarM60225

First Name: Jeff
Middle Initial:
Last Name: Gardner
Organization: N-4 State Grazing Board
Address: P.O. Box 461
Address 2:
Address 3:
City: Panaca
State: NV
Zip: 89042
Country: USA
Email: gardner_jeff@hughes.net
Privacy Preference: Don't withhold name or address from public record
Attachment: N-4 solar comments.pdf

Comment Submitted:



N-4 State Grazing Board
P.O. Box 461, Panaca, Nevada 89042
(775) 728-4682



September 1, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

Re: Comments Regarding the Solar Programmatic Environmental Impact Study (Solar PEIS)

To Whom It May Concern:

The N-4 State Grazing Board (Board) is a legal entity of Nevada State Government, organized under NRS Chapter 568 “Grazing and Ranging.” The Board represents grazing interests within the Bureau of Land Management’s Ely District including White Pine and Lincoln Counties, as well as portions of Eureka and Nye Counties. Development of utility-scale solar plants within the Solar Development Analysis Areas or specific Solar Energy Study Areas (Delamar Valley, Dry Lake Valley North and East Mormon Mountain) will result in serious impacts to the public lands grazing permittees that this Board represents. The Board has prepared the following comments per the National Environmental Policy Act.

Grazing of livestock on public lands is an essential part of the ranching industry within the analysis area. The ranching industry is an integral piece of the economic and traditional well-being of these rural communities. Public land grazing operations have been perfected over the years to protect and maximize available vegetative and water resources through careful management. The Delamar Valley, Dry Lake Valley North and East Mormon Mountain Study Areas are located within either the Mojave or Great Basin Ecosystems, which are both extremely fragile and vulnerable to disturbance. Development of utility-scale solar projects will convert the public lands within each project area from multiple use management to a sole-use that benefits a single commercial interest. As such, it is critical that all impacts be sufficiently identified early in the process and mitigation measures developed in order to avoid or minimize potential direct and indirect impacts to public lands grazing operations. Indigenous knowledge of the effected permittees and familiarity with their grazing operations is of paramount importance to this process.

It is the Board’s understanding, per the Department of Energy’s (DOE) presentation materials, that the Solar PEIS will:

- Be used to identify lands that are technically and environmentally appropriate for utility scale solar development

- Identify “generic” impacts of such actions and identify potential mitigation measures
- Establish policies and practices to implement such developments while minimizing impacts to public lands by tiering site-specific recommendations to the Solar PEIS

Given these major criteria for the Solar PEIS, the Board has arranged its comments and questions per each of these categories.

Identification of Lands Appropriate for Utility-Scale Solar Development:

The Solar PEIS shows two analysis areas: “Solar Energy Study Areas” and “BLM Lands Being Analyzed for Solar Development in PEIS”. The Board requests clarification as to which areas this PEIS would apply to as the analysis area is much larger than the specific study areas.

The Board only supports those areas approved by the Lincoln County Commission for consideration of solar development at this time (See Attachment 1). This includes portions of the Dry Lake Valley North Study Area located within the Ely Springs Cattle grazing allotment and portions of the Delamar Valley Study are located within the Buckhorn allotment. At this time, the Board does NOT support solar development in any other grazing allotment.

Further, the Board will not support any solar development that does not include the input of the public lands grazing permittee from the beginning of the site-specific analysis in order to identify impacts and potential mitigation measures to ensure the long-term sustainability of that permittee’s operation. The Board believes that, once identified, the proponent of any specific project should notify all impacted permittees as well as BLM staff to solicit input in terms of potential impacts and mitigation actions. The proponent should be responsible for providing economic means for each affected permittee to retain a professional range consultant, if desired, to serve as the permittees representative. All mitigation actions should be monitored for success and adaptive management should be afforded to allow for the most effective implementation of mitigation actions. Furthermore, it should be the responsibility of the project proponent to ensure that impacted public land grazing operators remain economically viable as a result of appropriate mitigation actions developed cooperatively by the project proponent, BLM and permittee.

Impacts of Utility-Scale Solar Development and Potential Mitigation Measures:

There are a suite of impacts relevant to the multiple use principles and rangeland grazing operations administered by the BLM on public lands for nearly every solar project that is implemented. The following impacts should be identified in the PEIS and required as part of the site-specific analysis for all projects:

Loss of Animal Unit Months (AUMs): An AUM is the amount of forage required to feed one mother cow and one calf, or five sheep, for one month. In terms of public lands grazing, the number of AUMs is the measure used to issue grazing permits. AUMs cannot be viewed as being proportional to the overall surface area of a given grazing allotment. In terms of solar development, areas of prime solar potential could overlap significantly with areas of key grazing forage as a result of gentle topography requirements located within valley bottoms. High value winter forage such as white sage (winterfat), bud sage and salt brushes as well as other native grasses and shrubs are also

located in many of these areas. Therefore, there is a high potential that the number of AUMs allotted to a grazing permittee could be significantly reduced as a result of solar development if proper mitigation is not completed, in advance of construction and operation of any solar facility.

The Board requests that the PEIS makes a commitment to no net loss of AUM's on grazing allotments where solar facilities are developed. In order to accomplish this goal, it is imperative to consult the BLM range conservationist and permittee for each allotment in order to cite facilities in low-value forage areas. It may also require development of new range improvements in order to maximize areas of low use within an allotment.

Loss of Native Vegetation, Soils and Increased Risk of Noxious Weeds: Any surface disturbance within either the Great Basin or Mojave Ecosystem will result in a loss of native vegetation, increase the risk of soil erosion (due to both wind and precipitation) and greatly increase the risk of establishment and spread of noxious weeds. These outcomes reduce overall rangeland health and resilience, which negatively impacts traditional land uses and multiple use values.

The Board requests that the PEIS requires certain stipulations for all projects. These stipulations should include:

- Minimizing the project disturbance area to the greatest extent, and a protocol to clearly delineate all project disturbance limits with highly visible temporary construction fencing
- Developing revegetation plans for each project area before the start of construction that are developed in conjunction with revegetation specialists who demonstrate indigenous experience to the geographic area and plant communities, and approved by the BLM before the start of construction. Each plan should include:
 - A topsoil salvage plan
 - Use of beneficial native and adapted plant species that will stabilize soils and compete with noxious weeds
 - Use of temporary irrigation to establish desired species
- A noxious / invasive weed management plan

Impacts to Existing Range Improvements: Range improvements are critical to grazing operations on public lands and include: seedings, fencing, gates, cattle guards, corrals, chutes, wells, reservoirs, pipelines, troughs, tanks, water hauls, roads, and trails. The BLM maintains an inventory of many range improvements, but the inventory is oftentimes incomplete. In order to maintain a viable ranching operation, all range improvements within the project site must be identified, GPS located, and mitigated if the project will hinder the operation of such improvements.

The Board requests that the PEIS include the identification of all range improvements within or adjacent to the project area as part of the impact analysis of each specific project area. This identification shall require the input of both the BLM AND permittee. Each impacted range improvement shall be mitigated based on input from the BLM AND permittee as part of the project at the proponent's expense. Further, the installation of new range improvements at the proponent's expense shall be viewed as an acceptable measure to mitigate the loss of use within the project area. Such improvements should be developed prior to land disturbing activities associated with the project and maintained at least until the project is decommissioned.

Impacts to Water Resources and Water Rights: Water is critical to any rangeland livestock operation. Many of the water resources (i.e. natural springs, catchments, or wells) have been developed and improved at the grazing permittee's expense and care in order to provide water throughout the allotments to better distribute livestock. These water sources benefit wildlife and wild horses in addition to livestock.

The Board requests that the PEIS include the identification of all water resources within or adjacent to project areas as part of the impact analysis of each specific project area. This identification process shall require the input of both the BLM AND permittee. Each impacted water resource or water right shall be mitigated based on input from the BLM, permittee and State Engineer at the proponent's expense. Further, the installation of new or improvement of existing water resources at the proponent's expense to enhance forage availability within impacted grazing allotments shall be viewed as an acceptable measure to mitigate the loss of use within the project area.

Impacts to Base Property: Each grazing allotment is required to have an associated privately owned base property that can sustain livestock in the event that the allotment cannot. Base property can be either water or land.

The Board requests that the PEIS include the identification of all base property associated with impacted grazing allotments as part of the impact analysis of each specific project area. Any impacted base property shall be mitigated at the proponent's expense based on input from the BLM AND permittee.

Impacts to Public Lands Access: The Board anticipated that access to or through solar project areas will be greatly limited. Open access to public lands is essential to maintaining multiple use principles and grazing allotments.

The Board requests that the PEIS include the identification of all public land access routes within or adjacent to project areas as part of the impact analysis of each specific project area. Any impacted access route shall be mitigated in order to ensure no net loss of access to adjacent public lands via mitigation at the proponent's expense.

Policies and Practices to Minimize Impacts for Site-specific Development:

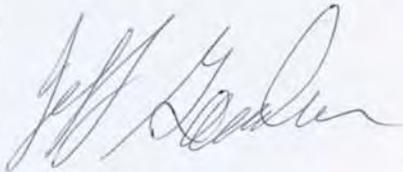
According to DOE's presentation materials, the PEIS will develop policies and practices to minimize impacts for site-specific development of solar projects. The PEIS should make clear what process will be used to approve site-specific developments, and the means by which effected parties can provide input during that process. While the Board understands the desire for this process to be streamlined, it is essential that the input of effected parties be included in identifying impacts and required mitigation actions. A process allowing site-specific analyses must be included within the scope of the PEIS as general Best Management Practices are simply too vague to adequately address all site-specific impacts and mitigations under NEPA requirements.

Solar Energy PEIS
Argonne National Laboratory
September 1, 2009
Page 5

The impacts identified in the previous section are those that must be addressed for every site-specific project. Therefore, it is imperative that the PEIS include site-specific analyses informed by input of the affected grazing permittee and BLM range conservationist from the beginning of the projects to the end. The Board requests that it be included as a cooperating agency for the PEIS, and that the Board be notified and included in any site-specific projects within the Ely BLM District that will be conducted as a part of this program.

The Board hopes that the above listed comments will help to ensure solar project implementation that maintains the sustainability of grazing operations and the BLM's multiple use mandate on public lands. Please feel free to contact the Board's consultant, John L. McLain or Jeremy Drew with Resource Concepts, Inc. at 775-883-1600 with any questions regarding this letter.

Sincerely,



Jeff Gardner, Chairman
N-4 State Grazing Board

Attachments: Lincoln County Regional Development Authority Recommended Solar Energy Citing and Solar Project Areas Approved by the Lincoln County Commission on March 2, 2009

cc: *Governor Jim Gibbons*
Nevada Legislative Committee on Public Lands
Senator Harry Reid
Senator John Ensign
Congressman Dean Heller
Congresswoman Dina Titus
Congresswoman Shelley Berkley
Bob Abbey, Director, Bureau of Land Management
Ron Wenker, State Director, Nevada BLM
Rosemary Thomas, District Manager, Ely BLM
Victoria Barr, Manager, Caliente BLM Field Office
Paul Mathews, Chairman, Lincoln County Commission
Carl Pyatt, Chairman, Lincoln County Regional Development Authority
Ron Cerri, Central Committee, Nevada State Grazing Boards
Meghan Brown, Nevada Cattlemen's Association
Jeff Fontaine, Nevada Association of Counties
Nevada Farm Bureau Federation

Attachment 1

**Board of Lincoln County Commissioners Recommendation
of Designation of Areas of Public Land for Solar Energy Development
(3/2/09)**

Area	LCRDA Recommendation		Lincoln Co. Commission Recommendation ²	
	Acres	MW Potential ¹	Acres	MW Potential ¹
A (Cave Valley)	0	0	0	0
B (Lake Valley)	7,680	1,536	0	0
C (W. Hamlin Valley)	0	0	0	0
D (E. Hamlin Valley)	0	0	0	0
E (Sand Springs V.)	3,840	768	0	0
F (Garden Valley)	0	0	0	0
G (Coal Valley)	6,400	1,280	0	0
H (Dry Lake Valley)	6,400	1,280	5,760	1,152
I (Groom Lake V.)	0	0	0	0
J (Tikaboo Valley)	0	0	0	0
K (N. Delamar Valley)	1,720	344	0	0
L (S. Delamar Valley)	0	0	5,760	1,152
Total	26,040	5,208	11,520	2,304

1/ Assumed to be 5 acres per MW

2/ Alternative 1 formulated following review of Lincoln County Regional Development Authority (LCRDA) recommendation by BLM; N-4 Grazing Board; Alamo Town Board; LDS and Lincoln County Public Land Advisory Group representatives.

Thank you for your comment, Paul Lopez.

The comment tracking number that has been assigned to your comment is SolarM60226.

Comment Date: September 14, 2009 14:39:01PM
Solar Energy Development PEIS
Comment ID: SolarM60226

First Name: Paul
Middle Initial:
Last Name: Lopez
Organization: Lone Oak Properties, Inc
Address: PO Box 774
Address 2:
Address 3:
City: Diablo,
State: CA
Zip: 94528
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I am interested to see the economic viability of the solar installations if the electricity transmission grids are not identified, designed and actually built to accommodate the transmission from energy production to energy load centers.

Also, include discussion the ability to upgrade the solar systems to accommodate new technologies as the industry advances.

Discuss the ability to reclaim the land at future date when the widespread adoption of solar roof top and commercial / retail buildings have added distributed systems.

Thanks

Paul Lopez

Thank you for your comment, Rachel McMahon.

The comment tracking number that has been assigned to your comment is SolarM60227.

Comment Date: September 14, 2009 14:57:57PM
Solar Energy Development PEIS
Comment ID: SolarM60227

First Name: Rachel
Middle Initial:
Last Name: McMahon
Organization: Solar Millennium, LLC
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment: Solar Millennium comment letter - BLM DOE SESA - 9.14.09.doc

Comment Submitted:

Comment letter attached.

September 14, 2009

SUBMITTED VIA INTERNET FORM

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

Re: Comments of Solar Millennium, LLC on Solar Energy Study Areas and Solar Energy Zones

To whom it may concern:

Solar Millennium, LLC respectfully submits these comments to the Bureau of Land Management (BLM) and Department of Energy (DOE) on proposed Solar Energy Study Areas (SESAs), released to the public on June 29, 2009. Solar Millennium develops solar thermal parabolic trough power plants, and is active worldwide with a focus in Spain, China, North Africa, and the Southwestern United States, with a specific focus in Southern California. Solar Millennium AG developed Europe's first parabolic trough plants – two 50 MW plants in Spain that have achieved operation. A third 50 MW plant is currently in commissioning. Solar Millennium has been an active participant in an associated planning effort, the California Renewable Energy Transmission Initiative (RETI) since it was formed in 2007.

I. Support that SESAs Apply Only to Future Applications

The Federal Register notice and Q&A section of the BLM's solar PEIS website both make clear that the proposed SESAs only apply to future solar applications, and not those currently under consideration, prior to June 30, 2009. This is positive. To judge current solar applications based on newly, and suddenly, proposed SESAs would be counterproductive and to the detriment of achieving the goals set forth in multiple state and federal policies and goals supporting increases in renewable energy and decreases in greenhouse gas emissions. Solar Millennium also stresses that no agency staff resources should be reallocated toward the SESA/SEZ effort and away from the processing of existing solar energy applications.

II. Solar Insolation and Slope Criteria

The SESAs were selected in part by eliminating lands that offer less than 6.5 kWh/m²/day and greater than 5% slope. These two criteria are not sufficient for solar parabolic trough development. Solar parabolic troughs are best suited for areas with a slope of 2% or less. With regard to solar insolation, in general, each difference of 0.5 kWh/m²/day between regions means a 10-15% difference in the total output of the solar thermal plant. Higher the solar insolation means greater overall plant output and a smaller overall plant footprint. Thus, from both an environmental and solar generation perspective, it makes sense to focus current and future solar development on lands with the highest solar insolation levels. Solar Millennium encourages the

BLM and DOE to consider solar resource and slope criteria that are appropriate to different solar technologies.

III. Best Solar Resource in California Not Considered

The proposed SESA map eliminates the area of highest solar insolation in California, the West Mojave Desert. It appears that this would have the effect of eliminating this region from consideration as viable and developable for solar energy resources into the future. It is included in neither the light, nor the dark, blue areas. Many of the lands within the West Mojave Desert cannot be developed because of restrictions under the West Mojave Plan (hereafter “Plan”). The Plan covers more than 9 million acres of the West Mojave Desert in California. More than 3 million of these acres are managed by the Bureau of Land Management. More than 2.5 million of these acres are managed by the Department of Defense.

As the BLM and DOE are aware, the Plan allows development on only 1% of lands within the Plan boundaries. The Plan does not consider solar energy on federal lands, and the BLM has not developed guidance as to how the 1% development threshold should be allocated for solar energy projects. Only a few project developers have active applications for rights of way on lands within the Plan boundaries. The BLM has not yet finalized permitting for these projects. Solar Millennium understands that many renewable energy applications have been rejected by BLM for these lands. Further, the Plan dictates an automatic 5:1 mitigation ratio for developing on some of their lands. This is financially unfeasible for solar development.

Further, military lands within the region contain high quality solar resources within their boundaries – but are also not pursued for development at present because the Department of Defense (DOD) has not yet set forth a proposal for developing solar resources on their lands that is workable for large-scale concentrating solar resource development.

All of these restrictions result in a double-whammy for solar development in this region – it is viewed as being lacking in both environmental preference, and economic interest. The lack of economic interest exists in large part because of both 1) the 1% development restriction under the Plan, and 2) large-scale solar development is not yet feasible on DOD lands. This is a cyclical problem. Interest in developing the solar resource in the West Mojave would be evident if it were feasible under existing rules.

Thank you for considering these comments.

Respectfully submitted,



Rachel McMahon

Director, Government Affairs – Project Development

Thank you for your comment, Daniel Bulloch.

The comment tracking number that has been assigned to your comment is SolarM60228.

Comment Date: September 14, 2009 14:58:49PM
Solar Energy Development PEIS
Comment ID: SolarM60228

First Name: Daniel
Middle Initial:
Last Name: Bulloch
Organization: Bulloch Ranch
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

It is our hope that the preferred solar areas can be moved to areas where the permittees welcome them such as Ely Springs allotment or to permits that are not being used. There are plenty of areas that are available that would basically not affect anybody and are located in the same solar quality regions. Locating these areas in places that run the ranchers out of business just does not make sense especially in these economic times. The current location of the "dry lake north" solar area takes out some of the best grazing area utilized by both ranchers and wild horses and wildlife. There are much better locations which accomplish the same thing and have much less impact on people and animals.

Thank you for your comment, Gary Werner.

The comment tracking number that has been assigned to your comment is SolarM60229.

Comment Date: September 14, 2009 15:00:50PM

Solar Energy Development PEIS

Comment ID: SolarM60229

First Name: Gary

Middle Initial:

Last Name: Werner

Organization: Partnership for the National Trails System

Address: 222 South Hamilton Street, Suite 1

Address 2:

Address 3:

City: Madison

State: WI

Zip: 53703

Country: USA

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment: Solar_PEIS_&_SESA_comments_-PNTS_-14Sept2009.doc

Comment Submitted:

Partnership for the National Trails System

222 South Hamilton Street, Suite 1, Madison, WI 53703 • (608) 249-7870



September 14, 2009

VIA ELECTRONIC SUBMISSION

(<http://solareis.anl.gov/involve/comments/index.cfm>)

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Re: Scoping Comments on the Solar Energy Study Areas and the Solar Energy Programmatic Environmental Impact Statement

To Whom It May Concern:

The Partnership for the National Trails System (Partnership) appreciates the need for the Bureau of Land Management (BLM) to systematically study and identify the most appropriate areas for solar energy development through the Programmatic Environmental Impact Statement (PEIS) and the specific Solar Energy Study Areas (SESAs). We further appreciate the stated intention by the BLM to minimize the impact of these developments on the array of natural, historical, and cultural resources on the public lands under its stewardship. Thus we strongly applaud and support the decision to exclude all units of the National Landscape Conservation System (NLCS), including the national scenic and historic trails, from areas to be considered for solar energy development.

We believe, as many others do, that all federal agencies, including the BLM, should work with other public and private entities to achieve significant reduction of energy use through greatly improved efficiency and conservation as a top national priority. Stabilization and reduction of energy use by government, corporations, and individuals -- as has been achieved in California for 30 years -- should be done before embarking on building vast new energy production systems on public lands. We also believe that BLM should play a role, with other federal agencies, in promoting and facilitating “distributive energy production” – the generation of energy through local technologies close to where the energy is used – rather than relying solely on large-scale energy production and transmission systems.

Once the SESAs are determined BLM should limit solar energy planning and development to those areas and close the rest of the public lands under its care from consideration for further energy development.

Interests of the Partnership

The Partnership for the National Trails System is a tax-exempt, non-profit federation of 34 non-profit organizations that work in direct partnership with Federal and state agencies to help sustain and manage

America's 30 national scenic and historic trails. The Partnership exists to foster information exchange among the trail organizations, to provide skill-building training for volunteers and staff, to coordinate their public policy advocacy, and to advise Federal agency managers about issues relating to the National Trails System.

The Partnership was incorporated in 2001 and received tax-exempt 501(c)3 status from the Internal Revenue Service in 2003.

Recommendations

While the Partnership is extremely supportive of BLM's decision to exclude all units of the National Landscape Conservation System (NLCS), including the national scenic and historic trails, from areas to be considered for solar energy development, we believe this decision needs further clarification in several ways.

First, unlike the other units of the NLCS, the national scenic and historic trails have not yet been given management boundaries or areas by the BLM, except in Wyoming. In Wyoming, for purposes of oil and gas development BLM defined a one-half mile wide special management corridor along the four national historic trails that cross the state. BLM severely limited energy development within this corridor and required stringent mitigation of visual and other impacts in areas along the national historic trails outside of that one-half mile wide corridor.

Recommendation: Until BLM determines special management corridors for all the national scenic and historic trails crossing lands that it manages SESAs should not be located in the vicinity of these trails.

Second, in much of the arid west the landscape is open for long distances providing recreationists and other visitors to the public lands expansive views. The units of the NLCS contain many of the most stunning and awe-inspiring vistas within the United States. Or, rather, they often contain the foreground and middle ground of such views, but do not include the background – the far and enclosing horizon. These long vistas uncluttered by human constructions are an essential aspect of the experience sought by visitors to these public lands. These views and the experience of them must be protected as essential for maintaining the integrity of the NLCS units.

It is common now to expect that congressionally designated Wilderness Areas should be kept free of human constructions so that the visitor can experience deep and expansive solitude and a sense of "primitive America." It is less well appreciated that visitors to the congressionally designated national scenic trails seek similar experiences of landscapes more natural than human dominated and that visitors to national historic trails seek authentic experiences of the historical "moment" or era of the trail they are visiting.

To preserve the historic and cultural resources associated with national historic trails it is not enough to protect the ruts, swales, buildings, inscriptions and other artifacts directly along the trails. Protecting these features alone without also preserving – and in some cases restoring – the setting or "context" of the artifacts makes it impossible for the scholar, interested citizen, or recreationist visiting the site to have an authentic and high quality experience of the historic "moment" for which it is purportedly preserved. Imagine trying to visualize the passage of hundreds of wagons and emigrants traveling to Oregon in the

1840s while standing at South Pass in Wyoming surrounded by fields of solar arrays or towering wind turbines.

Part of our natural and cultural heritage as Americans is our “wide, open spaces.” The experience of the uncluttered vastness of our land is part of the character of Americans. We must find ways to preserve opportunities for current and future generations of Americans to experience those uncluttered landscapes – not just in Wilderness Areas and national parks -- but also along national scenic and historic trails, wild and scenic rivers, and the other units of the NLCS. In the National Trails System Act authorization of national historic trails “high potential sites and segments” are recognized as the very best sections of these trails retaining the highest historical and cultural integrity. These “high potential sites and segments” – at the very least – should be accorded absolute preservation, not only of their artifacts, but also their essential setting – the landscape surrounding them.

Recommendation: The BLM should assess the viewshed from critical locations within all NLCS units – such as “high potential sites and segments” along national historic trails and vistas along national scenic trails – to determine areas outside those units that must be protected from development to preserve the essential character for which those units have been established. SESAs and future solar energy development should be excluded from those areas thus determined outside the NLCS units.

Third, the impact of construction activities associated with solar energy generation and transmission facilities on national scenic and historic trails is also a major concern. While exclusion of the SESAs from the national scenic and historic trails will presumably prevent direct impacts to them, indirect impacts by temporary construction roads and long-term impacts of transmission lines must also be avoided.

Recommendation: The BLM should stipulate that existing roadways be used to access SESA solar development sites and that transmission lines emanating from solar energy sites must follow existing transmission corridors.

Comments on Proposed SESAs

A. Arizona

The Partnership is concerned about possible direct and indirect impacts of the three SESAs to the **Juan Bautista de Anza National Historic Trail** and requests that BLM closely examines this potential and adjusts the SESAs accordingly.

B. Colorado

The Partnership requests that BLM closely examine the potential of the Fourmile East SESA to directly or indirectly affect the **Old Spanish National Historic Trail** and adjust the SESA accordingly.

C. Nevada

The Partnership requests that BLM closely examine the potential of the Dry Lake SESA to directly or indirectly affect the **Old Spanish National Historic Trail** and adjust the SESA accordingly.

D. Utah

The Partnership requests that BLM closely examine the potential of the Escalante Valley, Milford Flats South and Wah Wah Valley SESAs to directly or indirectly impact the **Old Spanish National Historic Trail** and adjust the SESAs accordingly.

Conclusion

Thanks for the opportunity to comment on the PEIS and the SESAs proposed for southwestern states. Please include the Partnership on all announcements, as well as all notifications associated with the PEIS process. We appreciate the opportunity to provide these comments and we look forward to participating further in this process.

Sincerely,

A handwritten signature in black ink that reads "Gary Werner". The signature is written in a cursive style with a large initial "G" and "W".

Gary Werner
Executive Director
Partnership for the National Trail System

Thank you for your comment, Dennis Ghiglieri.

The comment tracking number that has been assigned to your comment is SolarM60230.

Comment Date: September 14, 2009 15:12:39PM
Solar Energy Development PEIS
Comment ID: SolarM60230

First Name: Dennis
Middle Initial:
Last Name: Ghiglieri
Organization: Toiyabe Chapter Sierra Club
Address: P.O. Box 8096
Address 2:
Address 3:
City: Reno
State: NV
Zip: 89507
Country: USA
Email: dgnevada@gmail.com
Privacy Preference: Don't withhold name or address from public record
Attachment: finalSolarPEISscoping909.doc

Comment Submitted:



Toiyabe Chapter
P.O. Box 8096
Reno, NV 89507

September 11, 2009

Solar Energy PEIS - Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue--EVS/900
Argonne, IL 60439

via email

Re: Scoping Comments on the Solar Energy Development PEIS

On behalf of the Toiyabe Chapter of the Sierra Club and its 5,500+ members in Nevada and the eastern Sierra, we are submitting scoping comments for the Solar Energy Development Programmatic Environmental Impact Statement (PEIS), specifically on Solar Energy Study Areas in Nevada. These are in addition to comments submitted by the national Sierra Club. Many of our members live near or recreate on these public lands. While the Sierra Club strongly supports our nation's move towards more renewable energy, we also highly value our public lands and public resources. We agree that renewable energy development and environmental protection are not mutually exclusive. Our comments are offered to improve the process of selecting and prioritizing SESAs in Nevada.

1. WATER: Water availability and impacts of water withdrawals for solar facility construction and operation are the most critical issues for renewable energy development on all of the proposed desert sites in Nevada.

- o Availability: Most of the surface and groundwater in our state has already been permitted for many beneficial uses. You can find the Nevada State Engineer's ruling of July 9 2009 on Dry Lake and Delamar Valleys at: <http://images.water.nv.gov/images/rulings/5875r.pdf>. You can find active water rights by basin on the State Engineer's website under water rights database. Since multiple solar developments are proposed in some of the SESAs, their cumulative impacts on limited water resources must be analyzed.

- o Water-dependent ecosystems and species: our scarce water resources, especially the deep carbonate aquifer, support fragile desert ecosystems, 20 federally listed species and up to 137 water-dependent endemic species in desert springs from Utah through Nevada to California. Additional water demand created by the construction and operation of solar plants in SESA's proposed in Amargosa, Dry Lake Valley North, and Delamar Valleys would threaten water-dependent resources in basins downflow from all 3 SESAs. The Amargosa Desert basin is closed to any new development because it is over-appropriated. You can see a recent State Engineer's ruling denying new applications in the Amargosa Desert basin at: <http://images.water.nv.gov/images/rulings/5992r.pdf>. If solar companies purchase or lease existing permitted water currently most commonly used in rural areas for agricultural irrigation or stockwater, the 24/7, 365 days industrial use may require much additional

water and cause greater cumulative impacts on water-dependent species.

o National parks, refuges, public lands, and wildlife areas and their water-dependent habitats, species, and recreational uses down the flow system from especially Amargosa Valley, Dry Lake Valley North, and Delamar Valley could be threatened by excessive water withdrawals for solar facilities. These include: Death Valley National Park, Ash Meadows National Wildlife Area, Pahrangat NWR, Muddy Springs NWR, Desert NWR, Lake Mead National Recreation Area, public lands in the Ely and Las Vegas BLM Districts. The State manages a number of wildlife management areas which could be impacted by development in the SESAs, including: The Key Pittman WMA, Wayne E. Kirch WMA, and the Overton WMA, as well as several state parks in Lincoln, Clark, and Nye Counties. Such impacts, including cumulative impacts of multiple solar developments in SESAs should be analyzed and unavoidable impacts mitigated.

RECOMMENDATION: In order to conserve our scarce but invaluable water resources and to avoid conflicts with water-dependent species and public resources, we strongly urge that only dry-cooled solar facilities be allowed on all Nevada sites and mitigation directed at protecting water-based resources should be required for unavoidable adverse impacts.

2. **WILDLIFE:** Endemic wildlife species occupy habitats on public lands proposed as SESAs. These include the threatened Desert Tortoise which occur on the Amargosa, Dry Lake Valley North and Delamar Valley SESAs and the Amargosa Toad in Amargosa Valley site. Greater Sage Grouse may be found in any of the valleys in the Great Basin Desert in Nevada, using valleys for lek sites and critical nesting areas. The Nevada Department of Wildlife, federal agencies and other stakeholders working together as the Governor's Sage Grouse Conservation Planning Team, have developed and are implementing the 2001 Nevada Sage Grouse Conservation Strategy. This strategic document provides much information on sage grouse habitat requirements, locations, and management actions needed to make listing under the Endangered Species Act unnecessary. The June 2006 Nevada Wildlife Action Plan provides a plan of action for state wildlife conservation and funding by targeting the species of greatest conservation need, the key habitats on which they depend, and lays out strategies for conserving wildlife in each of the key habitats. More information on other listed and sensitive species can be found on the website of the Nevada Natural Heritage Program: <http://heritage.nv.gov/>. And information on management and conservation of native bird species, with a priority on 46 species, including Sage Grouse, for 15 major habitat types in Nevada, including sagebrush and Mojave shrub sites proposed as SESAs. In addition, the Miller's SESA is proposed just north of the desert oasis of trees, water, and lawn at the Miller's Rest Stop on Hwy. 95, 12 miles from Tonopah, NV. This area is heavily used by migratory birds, both in the spring and the fall and offers excellent birdwatching opportunities. SESAs boundaries should be adjusted to avoid native wildlife conflicts, especially critical desert tortoise habitat and sage grouse breeding and nesting sites. Mitigation must be required for any unavoidable habitat loss.

3. **COMMUNITY IMPACTS:** Local communities in rural Nevada depend economically on the livestock grazing occurring especially in Dry Lake Valley North and Delamar Valley. Winter grazing permits depend on large areas of native white sage in both valleys which once disturbed, is difficult if not impossible to reestablish. Nearby communities include Alamo, Caliente, Pioche, and Panaca, all in Lincoln County, NV. SESA boundaries should be reconfigured to avoid significant impacts on white-sage-dependent uses of public lands in these valleys.

4. ROAD ACCESS: Dirt roads in some SESAs, especially Dry Lake Valley North and Delamar Valleys are primitive and nearly impassible when the surface is disturbed and churned up by a lot of vehicle traffic. Soils are very fine and disturbance results in billowing dust. When wet, roads become extremely muddy and vehicle access may be impossible. Such unstable soils should be evaluated and SESA boundaries adjusted to avoid any solar facility construction and traffic impacts on valley roads and unstable soils.

5. CRITERIA FOR PRIORITIZING SESA'S: SESA sites which are proposed for public lands which are already disturbed, void of vegetation, or adjacent to industrial uses should have the highest priority for the siting of solar facilities. SESA sites which are ecologically intact and are providing essential habitat for native species as well as significant socioeconomic benefits to rural communities and tribes should be rejected or given the lowest priority for future solar facility sites. In addition, greater priority should be given to solar development on sites with existing transmission facilities and with adequate water sources.

Thank you for considering our comments.

Sincerely,

ROSE STRICKLAND /s/

Rose Strickland, Chair
Public Lands Committee

JANE FELDMAN /s/

Jane Feldman, Chair
Energy Committee

Thank you for your comment, Peter Weiner.

The comment tracking number that has been assigned to your comment is SolarM60231.

Comment Date: September 14, 2009 15:15:17PM
Solar Energy Development PEIS
Comment ID: SolarM60231

First Name: Peter
Middle Initial: H
Last Name: Weiner
Organization: Paul Hastings LLP, on behalf of LSA, SEIA, and CEE
Address: Paul, Hastings, Janofsky & Walker LLP
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94105
Country: USA
Email: peterweiner@paulhastings.com
Privacy Preference: Don't withhold name or address from public record
Attachment: SESA comment letter - LSA, SEIA, and CEERT (9-14-09).pdf

Comment Submitted:

Please see attached comments.

Atlanta
Beijing
Brussels
Chicago
Frankfurt
Hong Kong
London
Los Angeles
Milan
New York
Orange County
Palo Alto
Paris
San Diego
San Francisco
Shanghai
Tokyo
Washington, DC

(415) 856-7010
peterweiner@paulhastings.com

September 14, 2009

74882.00002

VIA OVERNIGHT UPS & INTERNET FORM

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

Re: Comments of LSA, SEIA, and CEERT on Solar Energy Study Areas and Solar Energy Zones

To whom it may concern:

On behalf of the Large-scale Solar Association (LSA), the Solar Energy Industries Association (SEIA), and the Center for Energy Efficiency and Renewable Technologies (CEERT), we are pleased to submit the following comments on the U.S. Bureau of Land Management's (BLM) Solar Energy Study Areas (SESAs). These comments have been submitted via overnight UPS and the form at <http://solareis.anl.gov/involve/comments/index.cfm>.

The Parties. LSA, SEIA, and CEERT are coalitions of utility-scale solar companies (and, in the case of CEERT, other renewable energy companies and environmental organizations) whose goal is to promote the environmentally-responsible development of renewable energy and associated transmission. LSA, SEIA, and CEERT are committed to working with the Departments of the Interior (DOI), Energy (DOE), and Defense (DOD), environmental groups, and other stakeholders to achieve this goal.

The SESA/SEZ Effort. BLM's efforts to establish SESAs and Solar Energy Zones (SEZs) represent an unprecedented and commendable effort to evaluate and promote responsible solar energy development of public lands. With certain important modifications, BLM's SESAs and Solar Energy Zones (SEZs), and the larger planning effort of which they are part, can serve a vital role in the timely siting and permitting of solar energy projects, adequately protecting our natural environment, and focusing the construction of new transmission capacity necessary to deliver renewable energy.

We understand that BLM's SESAs are but one aspect of the Solar Energy Programmatic Environmental Impact Statement (PEIS) being prepared jointly by BLM-DOE under the National Environmental Policy Act (NEPA). The PEIS should lead to the establishment of a focused program for promoting and managing responsible solar development on federal public lands. Such management should include designation of appropriate lands

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 2

for solar energy development in the short and long terms, based on environmental and technical analyses (including solar insolation levels), transmission, and other considerations. We concur that this designation should not be exclusive with respect to development on public lands, but rather indicate those lands where more intensive analysis has been completed, where the siting process may thus be expedited, and where new transmission may be focused. Thus, while our comments below are aimed at making the SESAs and any SEZs as effective as possible in this role, they also necessarily concern the relationship of the PEIS and possible SEZs to existing BLM processes and existing solar energy development applications.

Staffing and Resources. Finally, we are aware of BLM's staffing and resource constraints. The evaluation of SESAs and SEZs will require substantial resources, which we understand will be provided by the American Recovery and Reinvestment Act (ARRA). The industry is ready to assist BLM in ensuring that it has the resources it needs to effectively perform each of the many tasks before it, including identifying additional ARRA funds to be used in evaluating SESAs and SEZs.

We stress that no resources should be re-allocated toward the SESA/SEZ evaluation effort and away from the processing of existing solar energy development applications. Such action would strain existing investments and likely would cause capital currently devoted to solar energy projects to be shifted into other investments, dramatically and adversely affecting the solar energy industry and governmental renewable energy and greenhouse gas emission reduction goals.

I. Background

A. The Solar Energy PEIS

On May 29, 2008, DOE and BLM published in the Federal Register a Notice of Intent to prepare the Solar Energy PEIS to develop and implement agency-specific solar energy development programs and to evaluate solar energy development on BLM-administered public lands. *See* 73 Fed. Reg. 30,908 (May 29, 2008). We understand that the final PEIS is not expected to be published until early to mid-2011.

B. The SESAs

As part of the preparation of the PEIS, on June 30, 2009, BLM published 24 proposed SESAs in Arizona, California, Colorado, Nevada, New Mexico, and Utah. *See* <http://solareis.anl.gov/eis/maps/index.cfm>. Complete information regarding the maps is at <http://solareis.anl.gov/>.

In a press release concerning the SESAs, BLM explained that the 24 SESAs would be fully evaluated for their environmental and resource suitability for utility-scale solar energy production. If they are suitable for such development, they will be designated as SEZs, and projects located in them would be eligible for priority processing.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 3

Along with the maps (more on them below), BLM issued a press release (available at http://solareis.anl.gov/documents/docs/press_release_sesa_June09.pdf) and a Notice of Availability in the Federal Register (available at http://solareis.anl.gov/documents/docs/SESA_Maps_NOA.pdf). Together these documents explained the following:

Regarding the PEIS:

- The PEIS will identify lands for solar development, and
- The PEIS will establish a list of comprehensive mitigation measures applicable to all future solar development on BLM lands.

Regarding the SESAs:

- They comprise 670,000 acres.
- They are areas BLM has identified for in-depth study to determine whether they should be designated as SEZs, which are “specific locations determined best-suited for large-scale production of solar energy.”
- “The objective [of developing the SESAs and SEZs] is to provide landscape-scale planning and zoning for solar projects on BLM lands in the West, allowing a more efficient process for permitting and siting responsible solar development.”
- Some or all SESAs may be designated as SEZs.
- SESAs were identified based on RETI, WGA WREZ, and BLM information. Criteria for identifying SESAs include requirements that the areas be:
 - At least 2,000 acres;
 - Near existing roads and transmission lines, or designated transmission line routes; and
 - Have a slope of less than 5%.
- “Sensitive” areas were not considered. These include:
 - National Landscape Conservation System lands (California Desert Conservation Area (CDCA) lands with no other designation were not removed from consideration, however);

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 4

- Critical habitat;
- Backcountry byways;
- Areas of “known Tribal concern;”
- Areas of “known high cultural density;” and
- Areas designated for right-of-way (ROW) “avoidance” or “exclusion,” including Areas of Critical Environmental Concern (ACECs), areas with important visual resources, special recreation areas, lands managed for their wilderness characteristics, wildlife movement corridors, and areas where BLM has committed to taking certain actions with respect to sensitive species habitat.

Effect of the SESAs on solar energy development applications:

- ROW applications within SESAs:
 - Applications for projects within the SESAs will be eligible for priority processing.
 - Projects located within the SESAs would be able to tier to the PEIS in the course of their site-specific environmental reviews.
 - Submitted before June 30, 2009: BLM will continue to process the applications under current procedures.
 - Submitted after June 30, 2009: BLM will process the applications in accordance with the Solar Energy PEIS Record of Decision.
- ROW applications outside of SESAs:
 - BLM will process such applications under current procedures.
- “Any” ROW grant issued after the PEIS Record of Decision is published “may” be subject to the ROD’s requirements.
- BLM will continue to accept new ROW applications for solar energy projects on BLM lands. BLM is analyzing other lands that may be considered for solar energy development in the PEIS, but not as extensively as the SESAs. Maps of these additional lands are not available.

We strongly support BLM’s commitment to continuing to process existing applications, to process new ROW applications outside of SESAs and SEZs, and not to make SEZs

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 5

exclusive areas for solar development. Core siting criteria must be applied to the evaluation of SESAs, SEZs, and any ROW application, but those criteria should be applied neutrally without regard to SEZ designation. Rigorous processing requirements will also reduce the sheer number of applications to be considered.

II. Comments on the SESAs

A. The process for selecting SESAs needs to be clarified.

If the SESAs (and ultimately the SEZs) are to be useful and effective, the process BLM uses to designate them must be transparent and apply consistent criteria. Yet the criteria used to identify and designate the SESAs are vague, difficult to document, and appear to be incomplete.

For example, some lands that appeared to qualify based on the criteria discussed or implied in the SESA announcements and maps were nonetheless excluded, without explanation, while some lands that do not appear to meet the criteria were included. In addition, it appears that different criteria were used in different states. An area that qualified in one state might not have qualified in another. For example, whereas California includes lands in SESAs that already are subject to ROW applications, other states exclude from SESAs all lands with existing applications. In Arizona, it appears that the state Fish & Game agency eliminated most of the state from consideration, with little if any documentation. And, as discussed below, high insolation areas in Nevada were excluded without explanation. While there may be valid reasons for using different criteria in different states, there should be a core set of criteria used in all states, and any differences in criteria should be made transparent.

To address these issues, we request that BLM more fully articulate the criteria it used to select the SESAs and explain why a given area does or does not meet those criteria. In particular, the PEIS should document for each state (1) which criteria were used and (2) how those criteria were applied, including maps and links to GIS data. In terms of the criteria that should be applied, we suggest the following: (1) proximity to existing or future transmission infrastructure that is environmentally sound and appropriate, with an emphasis on designated transmission corridors; (2) high quality of solar insolation; (3) slope appropriate to different technologies; (4) the nature and extent of adjacent land uses (i.e., the potential suitability of those lands for solar energy development and low probability of land use conflicts); and (5) no known resource conflicts. Regarding the nature and extent of adjacent land uses, adjacent lands may be private, managed by a federal agency other than BLM, or otherwise suitable for solar energy development. We discuss this point further below.

Finally, some SESAs contain existing solar applications while others do not. While this discrepancy presents potential issues of its own, particularly in California (*see* Section II.E below), it is especially problematic where SESA boundaries contain part, but not all, of

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 6

one or more existing applications. We urge BLM to reconfigure the boundaries of such SESAs, where doing so would not violate important environmental criteria, to include the full existing application(s) within the SESAs.

B. The PEIS needs to consider additional areas for designation as SESAs.

1. The SESAs must not be a prescriptive constraint on development.

It is critical that the 24 already-designated SESAs do not become a prescriptive constraint on utility-scale solar energy development. Accordingly, and as we explain in more detail below, BLM should consider designating additional areas, outside of those areas that already have been designated as SESAs (and may be designated as SEZs), as SESAs in the PEIS. At the very least, BLM should make clear in the PEIS and the associated Record of Decision that developers will continue to be able to nominate additional parcels, outside of designated SESAs/SEZs, for potential development. Such consideration would employ set environmental and development criteria, to be developed in coordination with BLM and environmental stakeholders. (BLM has already stated this intent in its June 30 documents, but the intent should be repeated in the PEIS and Record of Decision themselves.)

Additional SESAs and/or the ability to nominate other parcels for development are needed to establish a level playing field for renewable and non-renewable energy development. BLM's leasing regulations strongly favor, through relatively simple lease application and NEPA review processes, oil and gas development. Meanwhile, the SESAs/SEZs and the solar energy ROW application process run the risk of making solar energy development of federal lands extraordinarily difficult. This is not consistent with, and in fact will stymie, DOI's policies encouraging renewable energy development or with other emerging climate change and renewable energy goals and mandates.

2. Additional areas should be considered for designation as SESAs.

Despite large swaths of land that may be suitable for solar energy development, BLM has proposed SESAs totaling just 670,000 acres. Large areas of high insolation and a slope of less than 5% have been completely omitted, e.g., the West Mojave. BLM should consider additional SESAs, both to satisfy NEPA's requirements to consider a reasonable range of alternatives, and to address the possibility that not all lands within the already-designated SESAs will be found suitable for development.

In identifying additional SESAs, BLM should give consideration to areas suggested by environmental and industry stakeholders. Industry interest in a particular parcel or area is the best indicator of which lands may be most suitable for development in terms of solar

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 7

insolation, slope, environmental considerations, and financial feasibility. This recommendation is not intended to suggest an endorsement of SESA designation of any particular area.

In addition, many SESAs are too small. The 10-MW threshold is far too low; projects of that size are too small for developers to be able to afford the expense of the NEPA process.

BLM should consider the following specific areas to add to and/or expand the existing SESAs:

- *Other federal lands.* BLM should consider the proximity of SESAs to other federal lands that may be appropriate for solar energy development and/or mitigation, such as those managed by the DOD, DOE, the Forest Service, or the Bureau of Reclamation.
- *Adjacent lands.* BLM evidently excluded some BLM lands that were too small by themselves but may be adjacent to suitable (e.g., degraded) private or other restricted lands. BLM should consider adjacent non-BLM federal lands and private lands (such as disturbed private lands) that, when combined with BLM lands, could support large solar energy projects and/or mitigation efforts.
- *Areas based on suitable technologies.* It is unclear whether BLM excluded certain areas because they could not support certain solar energy production technologies, without considering whether they could support other technologies. For example, some areas with limited water availability or higher slopes might not support wet-cooled solar thermal facilities, but could support photovoltaic or dry-cooled solar thermal facilities. BLM should not exclude as SESAs those areas that, assuming other criteria (environmental sensitivity, etc.) are met, could support one or more solar technologies simply because they cannot support all possible solar technologies.
- *Other areas.* We encourage BLM to continue to look for other areas with high solar insolation that should be considered based upon the application of criteria for environmental sensitivity. We will continue to work with other stakeholders and BLM to identify these areas. We understand that existing Resource Management Plans may have to be amended to accommodate any additional areas.
- *Specially-designated areas.* Certain specially-designated areas may be suitable for development.
 - BLM has stated that the Record of Decision for the Solar Energy PEIS may be used to amend existing Resource Management Plans, including the West Mojave Plan, the WEMO Plan, the NECO Plan,

and so on. If this is true, the areas covered by these Plans should not automatically be rejected.

- The West Mojave Desert has the highest solar insolation levels in California. *See* attached map. The West Mojave Plan, moreover, permits 1% ground disturbance in certain wildlife conservation and management areas. Given the high levels of solar insolation and the 1% disturbance allowance, these areas should not automatically be rejected by virtue of their special designations. In the same vein, BLM has not yet developed clear guidance regarding how the 1% area should be allocated for renewable energy and/or other projects, but should do so.
- BLM has excluded areas of the East Mojave because of possible legislative protection for those lands. However, legislation is now being considered for introduction that would require BLM to consider federally managed lands for use as mitigation for solar projects. Some of the excluded East Mojave areas may be appropriate for such consideration. BLM should consider the environmental and other values of such land. Such consideration will inform policy makers of the relative environmental and wilderness attributes of those lands, particularly as legislation affecting the availability of those lands for solar energy and mitigation may proceed.
- The Mojave Desert areas may also have been excluded from the SESAs by virtue of the segregation of lands near the 29 Palms Marine Training Area. However, the military has relinquished the segregation on those lands and it is likely that they will segregate the remaining areas withdrawn by BLM. This is a changed circumstance that warrants re-evaluation of these areas for inclusion in the SESAs.

C. The designation of SEZs should employ clear and consistent criteria using a comparative analysis.

As noted above, BLM should develop and consistently apply a clear and, to the extent possible, uniform set of criteria to apply to all lands for identifying and comparing SESAs for possible designation as SEZs.

In evaluating which SESAs should be designated as SEZs, the PEIS should include a *comparative* analysis among the proposed SESAs (and the alternatives of which they are part) to ensure that the designated SEZs provide the most energy with the fewest resource conflicts, environmental impacts, and development hurdles.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 9

D. SESA analysis should incorporate programmatic consultation under Section 7(a)(2) of the Endangered Species Act (ESA).

We understand that, consistent with several previous PEISs, the U.S. Fish & Wildlife Service (FWS) does not view the Solar Energy PEIS as a specific plan for activities that may impact species. As a result, FWS believes that Section 7(a)(2) consultation is neither necessary nor appropriate for the PEIS as a whole. Rather, Section 7(a)(1) consultation is appropriate for the PEIS, while Section 7(a)(2) consultation is more appropriate for site-specific projects.

However, we also understand that FWS believes Section 7(a)(2) consultation is appropriate for any specific solar energy development zones evaluated and designated in the PEIS. We concur that Section 7(a)(2) consultation is necessary and appropriate for SESAs and SEZs, and will help ensure that the PEIS is legally and substantively strong. Compared to site-specific consultations for individual projects, a broader programmatic consultation for SESAs and SEZs will have several benefits. First, site-specific consultations favor projects for which ROW applications already have been filed, reducing the benefits to be had from a broader planning-level effort, which can better identify the best sites for development and the best ways to protect sensitive species. Second, a programmatic consultation presumably will be more efficient and result in greater consistency than multiple site-specific consultations (*see next paragraph*). A completed Section 7 consultation with incidental take coverage for particular sites will enhance the value of those sites for potential developers, thus expediting permitting and review processes.

Of course, programmatic consultation will be most useful to the extent that it thoroughly evaluates the effects of solar energy development in designated SESAs and SEZs, with an appropriate level of streamlining for site-specific biological evaluations and consultations. To the extent possible, this Section 7 consultation also should seek to provide project-level take coverage under the federal Endangered Species Act. Toward these ends, Section 7(a)(2) consultation for the SESAs/SEZs should result in the development of best management practices (BMPs) for projects within those SESAs/SEZs. Similarly, Section 7(a)(1) consultation should result in the development of BMPs for projects located outside SESAs/SEZs.

Coordination with state agencies, such as the California Department of Fish & Game and its counterparts in other states, will improve the chance of realizing the benefits of in-depth consultation on the SESAs and SEZs.

E. State- and area-specific concerns

Apart from the general comments above, certain BLM lands should have been considered as SESAs because they are ecologically disturbed. In contrast, some designated SESAs have problems such as mountain shading, drainage control, seasonal flooding, and so on.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 10

For example, there is substantial degraded desert rangeland in the Southwest on which tens of thousands of acres of native vegetation communities were destroyed long before BLM's existence. The vegetative community that exists today is a combination of woody brush (e.g., mesquite, saltbush, and shrubby oak), cactus, and invasive annual grasses. These areas have lost (and not regained) much of their natural biological value and should be a high priority for solar energy projects.

The SESAs in particular states also bear attention. In California, the proposed SESAs overlay those areas that already are the subject of active ROW applications. This is not the case for SESAs in other states. This discrepancy raises two issues. First, unless other areas are designated as SESAs, and/or BLM permits projects outside of SESAs, utility-scale solar energy development will be severely and unnecessarily curtailed. Second, many applications in the already-designated SESAs are for projects that are unlikely to be built. BLM must develop actionable criteria by which to reject ROW applications for such projects. *See also* Section III.B.

In Nevada, only two SESAs were designated for the entire state. However, additional sites, outside of environmentally sensitive areas, are suitable for utility-scale solar energy development, including in the Boulder City and northeastern Las Vegas areas. These areas should be reconsidered for SESA designation.

Finally, Owens Dry Lake, in Inyo County, California, is an area of high insolation, low slope, and predominantly disturbed lands that BLM should consider for inclusion in a SESA.

III. Comments on the SEZs

A. The SEZs should not be a prescriptive restraint on development.

We understand that many environmental stakeholders would prefer that utility-scale solar energy projects be located only in designated SEZs. However, as we discussed above, BLM should preserve the ability to site projects meeting set environmental and developmental criteria outside of zones (in addition to those few "fast track" projects and other projects with pending ROW applications that are located outside of any zones) to better facilitate environmentally responsible renewable energy development. This need is especially clear where new applications are close to existing transmission.

Toward this end, BLM should develop criteria that will ensure that environmentally appropriate projects move forward, and that will avoid the unnecessary sprawl of energy generation and transmission infrastructure. Specifically, BLM should develop environmental sensitivity criteria for projects that are proposed for areas outside of designated SEZs. (*See* Sections II.A and II.B.1 above for suggested criteria.) Examples of projects that might be encouraged outside SEZs include, but are not limited to, projects on brownfields or other disturbed lands. However, other projects that meet siting criteria should also be expressly allowed.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 11

In any event, SEZs should be planned, with DOE assistance, to maximize renewable energy output and transmission use while minimizing overall greenhouse gas pollutants and other environmental impacts.

B. There must be a clear and consistent process for determining which new projects will be accepted and rejected in the SEZs.

BLM has not indicated how new applications would be accepted within the SEZs once they are designated. We and most other stakeholders agree that speculation should be deterred, that the lands most suitable for renewable energy development are well-utilized for that purpose, and that there must be a fair return for the use of public lands. Consistent with prior comments from the solar industry, competitive auctions are not well-suited to solar energy applicants or projects, not least because they increase speculation.

Finally, BLM should develop actionable criteria by which to reject ROW applications for projects that are unlikely to come online in designated SEZs. Such criteria should include, among other things, specific timetables for applicants to submit complete plans of development and demonstrate financial and technical feasibility.

To identify financially viable projects, BLM could adopt guidance requiring increasing scrutiny of financial viability as projects move toward approval. BLM should condition its final approval of a project on the developer having a power purchase agreement (PPA) and independent financing and/or satisfactory evidence of eligibility for a DOE loan guarantee. For projects in California, BLM also should require submission of an interconnection request to the California Independent System Operator (CAISO) and an associated queue position.

Regarding technical feasibility, BLM should require a project proponent to show that it has identified land, in terms of quality and quantity, that is reasonably suitable to its technology, taking into consideration the size of the intended project, applicable technical criteria, water availability, and compatibility with other prevailing environmental factors. By the time of project approval, the applicant should be required to show that its technology has been successfully demonstrated, or that it has qualified for a federal, state or local emerging technologies program.

C. Intra-BLM, as well as state and federal, cooperation is essential in SEZ administration.

BLM has indicated that, once a SEZ is designated, an Environmental Assessment, rather than an EIS, should be sufficient for satisfying NEPA's environmental review requirements for a solar energy project located within the SEZ (due to the previous environmental review associated with SEZ designation). In order for this tiered review to

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 12

be effective, BLM should ensure that its field offices consistently adopt this approach, as well as streamlined ROW processing procedures.

In addition, BLM should work with the California Energy Commission (CEC) and the California Department of Fish & Game to develop correspondingly streamlined state permitting and environmental review processes, without which the SEZs will not reach their full utility in the state that has the majority of solar energy project applications thus far.

It is important to note that transmission remains a constraint to new renewable resource development, especially in California. BLM also should work with the CAISO to address transmission constraints on renewable energy development. Similar coordination with sister agencies in other states will be increasingly important as more solar development applications are filed in those states.

BLM also should ensure that it and the CEC's documents can be used interchangeably in federal and state permitting and environmental review processes. Such sharing will require coordinating data gathering, analysis and compiling processes, and assigning tasks to minimize duplication. The existing Memorandum of Understanding between BLM and the CEC goes a long way toward meeting these objectives; however, we believe there is room for more on-the-ground coordination pursuant to the MOU.

IV. Comments on other PEIS issues

A. Coordination with other processes

The nature and extent of BLM's coordination with existing processes establishing the SESAs is unclear, at least based on the initial SESA maps.

Such coordination is essential. Where no or inadequate coordination likely would lead to inconsistent approaches, uncertainty, and potential delay in the implementation of appropriate projects, effective coordination can and should lead to improved administrative efficiencies, through unified data gathering, analysis and compiling processes, and the assignment of tasks to minimize duplication and to allocate them to achieve effective and efficient results that meet all applicable requirements. To the extent possible, BLM's efforts should be undertaken in way that will provide documents that can be used directly in the other agencies' processes, which is particularly important given BLM's and those agencies' resource constraints.

For example:

- BLM coordination with the Renewable Energy Transmission Initiative (RETI) will allow required new transmission infrastructure or significant upgrades to be focused in SEZs.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 13

- California Governor Executive Order S-14-08 requires the Governor's Renewable Energy Action Team (REAT) to, among other things, create a Desert Renewable Energy Conservation Plan (DRECP) for the Mojave and Colorado Desert regions. The DRECP will contain endangered species permit assurances, facilitate approval of renewable energy desert projects, and provide for state and federal funding. If doing so would not cause significant delay in the issuance of the PEIS, BLM should consider making the California portion of the Solar Energy PEIS a joint EIS/Environmental Impact Report (EIR) (pursuant to the California Environmental Quality Act (CEQA)) that would lead to a federal solar program, federal SEZs, and a state National Communities Conservation Plan (NCCP) for endangered species. At the very least, BLM should actively participate in the development of the DRECP and coordinate that development with work on the PEIS. Such coordination would consist of, among other things, exchanging biological information and mitigation measures.
- If a joint EIS/EIR is not possible, BLM should ensure that the Solar Energy PEIS provides source material for the California Department of Fish & Game's solar energy EIR/NCCP, e.g., a full evaluation of state-only listed species and CEQA-required subjects, and analysis of whether CEQA's significance thresholds are met. California, in turn, should work with BLM to further federal and state goals and mandates.
- Coordination with the Western Governors' Association and WECC Westwide planning efforts also is important.

B. Mitigation

The Solar Energy PEIS should establish a robust, thoughtful, and straightforward process for establishing mitigation measures for utility-scale solar energy projects on public lands. This process, and the mitigation measures it yields, must yield comprehensive and positive environmental benefits, including protection of listed species, their habitats, and wildlife corridors. Separate processes and measures should be developed for projects inside designated SEZs and projects outside SEZs. Moreover, given the limited availability of private land available for acquisition in the vicinity of many of the proposed projects, BLM should consider off-site mitigation measures.

To the extent that any public lands that are suitable for development (under established criteria) are removed from consideration for such development pursuant to congressional legislation, those lands should be considered as part of any mitigation bank established for projects that are developed on other public lands to the extent that they are otherwise appropriate for mitigation purposes.

Finally, to the extent that lands covered by the West Mojave Plan are considered for development, that Plan imposes a 5:1 mitigation ratio for developing some areas. This

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 14

ratio is financially infeasible and does not necessarily result in the best (i.e., most effective and tailored) protection for sensitive species. If BLM allows solar energy development in these areas, whether or not by amendment of the West Mojave Plan through the Solar Energy PEIS/Record of Decision, BLM should reconsider the efficacy and suitability of this mitigation ratio.

V. Looking Forward

The Obama Administration should develop a planning process, in consultation with the States, to establish and reach a renewable energy goal

BLM should develop a planning process with the States, utilities, transmission planners, and relevant federal agencies to establish national and to establish and reach state megawatt (MW) targets for renewable energy production on public lands. The targets would create a common set of expectations about the scope of renewable energy development envisioned for each state that would help BLM manage stakeholder expectations and concerns. These targets could be expressed as ranges but would not be a Renewable Portfolio Standard (RPS) requirement or another directive for utilities.

Because any renewable energy target for public lands will make an implicit judgment about renewable energy development on private land, the targets should be revisited at regular intervals and adjusted to reflect new policies and guidelines at both state and national levels and experience on the ground.

VI. Conclusion

LSA, SEIA, and CEERT sincerely appreciate BLM's efforts to promote responsible solar energy development of public lands through the establishment of SESAs and SEZs. BLM's SESAs and SEZs offer a unique opportunity to perform a landscape-level analysis of certain sites. With the important modifications we have discussed above, BLM's SESAs and SEZs, and the larger planning effort of which they are part, can serve a vital role in developing renewable energy while adequately protecting our natural environment.

Solar Energy PEIS – Comments on SESAs/SEZs
September 14, 2009
Page 15

Thank you for your time and consideration.

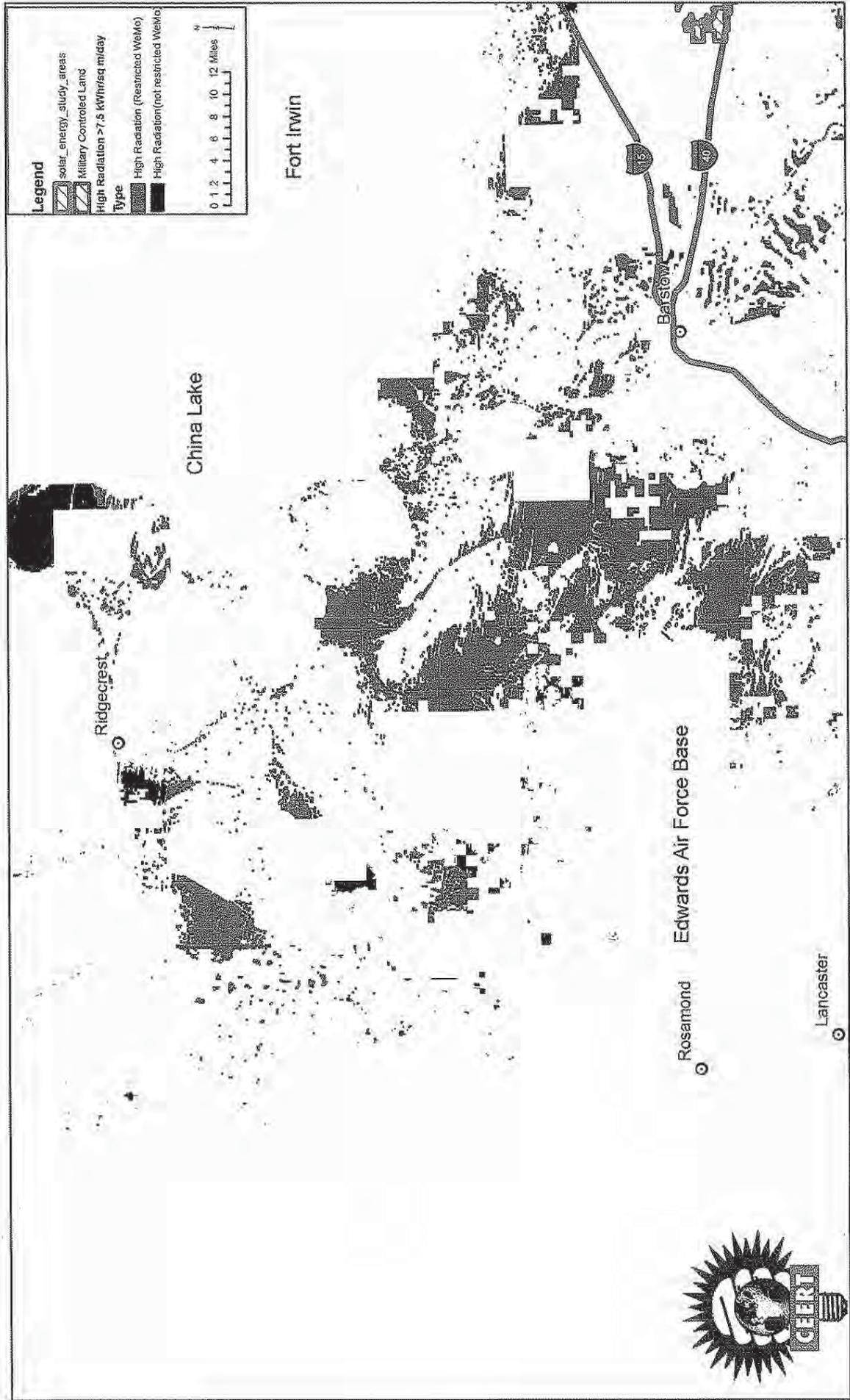
Sincerely,

A handwritten signature in black ink that reads "Peter H. Weiner". The signature is written in a cursive style with a small circle at the end of the last name.

Peter H. Weiner
PAUL, HASTINGS, JANOFSKY & WALKER LLP
on behalf of
the LARGE-SCALE SOLAR ASSOCIATION, the SOLAR ENERGY INDUSTRIES
ASSOCIATION, and the CENTER FOR ENERGY EFFICIENCY AND
RENEWABLE TECHNOLOGIES

LEGAL_US_W # 62651554.5

Possible land for SESA



Thank you for your comment, Stefanie Stavrakas.

The comment tracking number that has been assigned to your comment is SolarM60232.

Comment Date: September 14, 2009 15:16:43PM
Solar Energy Development PEIS
Comment ID: SolarM60232

First Name: Stefanie
Middle Initial:
Last Name: Stavrakas
Organization: U.S. Fish and Wildlife Service
Address: 4401 N. Fairfax Dr.
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22203
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: 041865-signed.pdf

Comment Submitted:



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington, D.C. 20240

SEP 14 2009



In Reply Refer To:

FWS/AFHC-DHRC-CPA/041865

Lisa Jorgensen, Department of Energy
Linda Resseguie, Bureau of Land Management
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, Illinois 60439

Dear Ms. Jorgensen and Ms. Resseguie:

U.S. Fish and Wildlife Service (Service) has reviewed the subject notice and has prepared an enclosure detailed comments pursuant to the: (1) Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*); (2) Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*); (3) Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703; (4) Bald and Golden Eagle Protection Act (BGEPA), 16 U.S.C. 668; (5) the Clean Water Act (CWA); (6) National Wildlife Refuge System Administration Act of 1966; (7) Section 211 of the Energy Policy Act of 2005 (EPAAct), and other applicable Executive Orders, regulations and policies.

As stated in this Notice of Availability (NOA), the Solar Programmatic Environmental Impact Statement (PEIS) will help the Bureau of Land Management (BLM) identify lands appropriate for solar energy development and establish a comprehensive list of mitigation requirements applicable to all future solar energy development on BLM administered lands. As part of the Solar PEIS, this NOA designates 24 proposed Solar Energy Study Areas (SESA) that will be evaluated to determine if the SESAs could be designated as solar energy zones (SEZs) to be included in the PEIS. The BLM and the Department of Energy (DOE) will conduct in depth environmental analyses of these 24 SESAs to determine whether these site-specific locations are suited for large-scale production of solar energy.

The attached comments supplement those submitted last year in response to the Notice of Intent (please incorporate by reference our letter to DOE and BLM dated July 7, 2008) and address most of the 24 SESAs for potential project effects on fish and wildlife and their habitats. It is critically important that direct, indirect and cumulative effects to fish, wildlife, plants, and their habitats are evaluated and that all reasonably foreseeable developments are identified and analyzed. It is our understanding that this PEIS provides a general evaluation of potential

TAKE PRIDE
IN AMERICA 

Ms. Jorgensen

2

impacts to fish and wildlife resources from subsequent development and that the 24 SESAs identified within the NOA that qualify as SEZs will be analyzed as site-specific areas pursuant to the National Environmental Policy Act and other applicable laws.

Thank you for the opportunity to provide comments for this action. More detailed comments are also enclosed. We look forward to continued collaboration with you on the development of your PEIS. Please contact Stefanie Stavrakas at (703) 358-2161, if you have any questions or need further information.

Sincerely,


Assistant Director for Fisheries
and Habitat Conservation

Enclosure

U.S. Fish and Wildlife Service
 Division of Habitat and Resource Conservation
 Comments on the

Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental
 Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy
 Development; Bureau of Land Management Approach for
 Processing Existing and Future Solar Applications

The Bureau of Land Management (BLM) and Department of Energy (DOE) issued a Notice of Availability (NOA) supplementing the Solar Programmatic Environmental Impact Statement (PEIS) with the designation of 24 proposed Solar Energy Study Areas (SESAs; BLM 2009a) to determine if these site-specific areas could be used for utility-scale Solar Energy Zones (SEZs) for inclusion in the PEIS. Concurrently and on behalf of the BLM, the Secretary of the Interior has proposed to withdraw these lands from other multiple uses for a period of 20 years to protect and preserve the SESAs for future solar development (BLM 2009b). For a period of 2 years, BLM will segregate the proposed lands from other uses until it can carry out various analyses in support of a final decision on the withdrawal application. The identification, analysis, and designation of SESAs/SEZs as dedicated sites for solar energy development are aimed at meeting the Secretary's policy goals set forth in May 2009.

BLM and DOE identified the proposed SESAs based on the following criteria: a minimum size of 2,000 acres; near existing roads; near existing or designated transmission line routes; and have a slope of less than 5 percent. The proposed SESAs constitute 676,048 acres of BLM-managed, public lands and are partitioned as described in Table 1.

Table 1. Proposed solar energy study areas by state

State (# of SESAs)	Acres	Megawatt Capacity at Build-out
Arizona (3)	16,492	1,832 - 3,298
California (4)	351,048	39,005 - 70,210
Colorado (4)	20,910	2,323 - 4,182
Nevada (7)	149,375	16,597 - 29,875
New Mexico (3)	121,459	13,495 - 24,292
Utah (3)	16,763	1,863 - 3,353
Total (24)	676,048	75,115-135,210

The U.S. Fish and Wildlife Service (Service) submits the following general analyses applying to all 24 SESAs, and specific analyses for 20 of the 24 SESAs identified in the NOA.

General Comments and Recommendations

The comments contained in our July 7, 2008 correspondence relative to the following issues remain important and applicable (not in any particular order):

- Clearly stated purpose and need;
- Alternatives considered;
- Exclusion of special management areas and consistency with existing land and resource management plans;
- Programmatic planning process and project site selection;
- Avoidance, minimization, and mitigation and compensation measures;
- Cumulative effects and analysis;
- Cost analysis;
- Trust resources and species of concern;
- Ground water; and
- Policies and incentives.

We encourage the BLM and DOE to carefully consider these issues as they move forward in drafting the PEIS. In addition, we offer the following:

While the Federal Register notice provided some information on the methods used to identify the proposed SESAs, we are unclear as to how specific resource factors (i.e., biological, cultural, Tribal, visual, etc.), land uses (i.e., recreation and military, etc.), and proximity to load centers and other infrastructure were used in identifying proposed SESA boundaries. Without fully understanding the screening process used to select SESA locations, we have a more difficult task in providing constructive comments relative to potentially significant impacts. The Service recommends that the BLM and DOE utilize landscape level analysis with a spatial decision support system and then identify the specific resource factors and methods used in identification of the proposed SESA boundaries in the PEIS. This will enable prioritization of projects and appropriate siting relative to economic feasibility, transmission infrastructure, and fewer impacts to environmental, cultural, and military resources. This type of approach may also aid in the identification of mitigation opportunities and alternative development and transmission scenarios. The Service also recommends that BLM and DOE base final SEZs on resource values without consideration of existing right-of-way applications.

Given the potential extent, magnitude, and long-term nature of habitat impacts associated with solar energy development, the Service also recommends that the PEIS place limits on projects within the proposed SESAs that will use technologies that have not been commercially tested or proven to avoid unnecessary impacts to wildlife and habitat. The BLM has stated that under its policies and regulations, it cannot approve or disapprove projects based on the type of technology proposed. Because of these limitations, the Service recommends that the BLM approve these types of projects in phases to minimize the amount of unnecessary habitat loss in the event that the project proves to be unfeasible, or is rendered economically obsolete by technological advances during the phased development schedule. Alternatively, the BLM could

identify specific areas within the proposed SESAs to serve as research and development or pilot sites on areas with lowest biological function and value to further perfect technological capabilities.

Desert Tortoise

As discussed in our July 7, 2008, letter, the desert tortoise (*Gopherus agassizii*), listed as threatened under the Endangered Species Act of 1973, as amended (ESA), in the state of California, is at the greatest risk of being significantly affected by solar energy development and transmission through extensive habitat loss, population and habitat fragmentation, changes in water flow (both surface and ground water), introduction of environmental contaminants, mortality by vehicle encounters, increased raven predation, alteration of habitat due to the introduction of non-native plant species, and alteration of adjacent desert tortoise conservation areas through edge effects. Given the large area associated with the proposed SESAs and the projects themselves, we anticipate that development of many projects would involve translocation of desert tortoises out of their existing home ranges, which could result in potentially significant impacts to both translocated individuals and individuals that are resident to any identified translocation site. We recommend that any analysis of the effects of translocation also include potential effects to resident desert tortoises in proposed recipient sites.

To address apparent conflicts with the solar program and desert tortoise, we have been working closely with local BLM offices to identify survey and minimization strategies that will aid in moving renewable energy projects forward. Discussions of each proposed SESA will include any information we have for the species under our purview in these areas. For the desert tortoise, we have provided some information on potential population densities based on line distance sampling (LDS) and available habitat within each proposed SESA based on the recently released desert tortoise habitat model (Nussear et al. 2009). The most important consideration when extrapolating these data to the specific SESAs is that the LDS long-term monitoring transects are in some cases based on very few transects or non-random placement of transects, which can confound the results. In addition, we do not advise making determinations relative to potential habitat based solely on the U.S. Geological Survey's (USGS) model absent on-the-ground verification of the outputs. Therefore, we are providing input on densities and available habitat within the proposed SESAs to assist DOE and BLM with the analysis on the potential magnitude of impacts. We also highly recommend site-specific surveys to estimate densities. We recommend that BLM and DOE use these more detailed data to refine SESA boundaries by excluding higher function and value habitats from development where sufficient acreage is otherwise available to achieve renewable energy objectives.

Groundwater, Wetlands, and Other Aquatic Resources

Because vast amounts of water are required for some proposed solar energy projects, these projects have the potential to significantly impact listed and sensitive species dependent on the regional ground water flow systems that a given proposed SESA overlies. Small changes in ground water levels, water quality, or flow patterns may significantly impact desert fishes and spring snail species, as many inhabit spring systems that these flow systems support. We recommend BLM require applicants to disclose their water source and determine whether impacts to listed and sensitive species would occur because of the proposed project's water consumption. The PEIS should identify requirements for project planning, construction, and

operation to avoid, minimize, and mitigate impacts to listed and sensitive species that are dependent on surface and ground water resources. As mentioned in our previous comments on the PEIS, we recommend BLM include in their policy a requirement that project proponents must use technology that uses minimal amounts of water for power production. The BLM and DOE should incorporate measures to monitor and adaptively manage for ground water resources that may be affected by development of solar energy projects within the SESAs.

Under Executive Order 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural and beneficial values. We recommend that BLM and Department of Energy (DOE) contact the U.S. Army Corps of Engineers (Corps) for permitting requirements under Section 404 of the Clean Water Act if your proposed action could impact wetlands. These habitats should be conserved through avoidance or mitigation should occur to ensure no net loss of wetlands functions and values. The Service recommends that established BLM best management practices (BMPs) for wetlands be used during construction.

Migratory Birds and Bats

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted. The Service recommends the 24 SESAs specifically evaluate and plan mitigation for potential project impacts to migratory birds. The Service recommends that all 24 SESA sites be evaluated for habitat fragmentation for species that require large habitat patches, and whether habitat enhancement efforts may minimize displacement impacts for some species¹. Additionally we recommend habitat impacts for species on the Service's 2008 list of Birds of Conservation Concern (BCC) be evaluated for each of the 24 SESAs (<http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf>). The BCC List identifies those migratory and non-migratory avian species that, without additional conservation actions, may be considered candidates for listing under the ESA.

To help meet responsibilities under Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds), we also recommend construction activities occur outside the general migratory bird nesting and breeding season of February through July. To minimize adverse impacts to birds protected under the MBTA, tree stands or other adequately vegetated areas should be surveyed for the presence of nesting birds during the general migratory bird nesting season of February through July. Disturbance to nesting areas should be avoided until nesting is completed.

Birds at lower elevation appear to be influenced by local topography (Williams et al. 2001). Relative to other bird groups migrating over land, passerines tend to migrate at lower flight altitudes, whereas shorebirds and waterfowl tend to migrate at higher altitudes (Kerlinger 1995). Williams et al. (2001) observed that the lowest 300 meters of bird migration probably represented the densest stratum of nocturnal migrants. Mabee and Sanzenbacker (2008) reported

¹ The Service, for example, recommended a 2.25 mi buffer of un-fragmented habitat between leks of Lesser Prairie-chickens and development sites. For Greater Prairie-chickens, the Service recommended a 3.5 mile buffer of un-fragmented habitat, and for Sage-grouse, we recommended more than an 11-mi buffer between leks and development sites (Manville 2004) – which would include at least the 3 solar energy projects under review where Sage-grouse are present in Utah.

that the majority of nocturnal passerine migrants fly below 600 meters above ground level. Understanding the behavior of nocturnal bat migrants is also important for conservation because development for projects such as communication towers, wind-powered generators and electric lines are constantly increasing. The Service recommends that the construction of new transmission lines to solar facilities include a detailed study of bird and bat behavior at the precise location where construction is proposed to identify species that are particularly vulnerable, which sites are intensively used, and hence the optimum transmission line location.

Birds of prey such as eagles, hawks, and owls frequently use power lines and support structures for perching and nesting. These raptors can be electrocuted while using power lines, thus contributing to the cumulative mortality factors affecting these biologically important and environmentally sensitive birds. Standard techniques have been developed to prevent raptor electrocutions at electric distribution lines. This guidance is included in the publication *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* by the Avian Power Line Interaction Committee². The Service recommends using the APLIC guidance and suggested BMPs to minimize power line collisions and electrocutions.

Using the above-referenced guidance, new or modified electric distribution lines should be designed and constructed to prevent the electrocution of raptors. Proper design includes separation of energized hardware or insulation of wires where sufficient separation cannot be attained. Closely spaced transformer jumper wires, bushing covers, protective cutouts, or surge arresters can be made safe for raptors by use of special insulating material. The use of grounded steel cross-arms braces should be avoided. These measures should be implemented on each line and pole associated with the new or converted lines as necessary.

We also recommend that BLM carefully review potential impacts to nesting and resident Bald and/or Golden Eagles under the new “take” provisions of the Bald and Golden Eagle Protection Act (50 CFR 22.26 and 50 CFR 22.27) where taking is associated with, but is not the purpose of the solar development activity, and cannot practicably be avoided. These activities would include both disturbance and lethal take³.

Where communication towers may be an issue, based on the need for 2-way communications, the Service recommends that BLM use BMPs recommended to the Federal Communications Commission (Manville 2007). These include the use of un-guyed, unlit towers, less than 200 ft above ground level where towers are necessary. Whenever possible, antennas should be placed on existing structures. Steady burning lighting at night should be avoided where possible, using motion or heat sensors on security lighting instead (Manville 2007).

In addition to coordination with the Service, it is important to develop project design standards and monitoring requirements in cooperation with state wildlife agencies and the state Partners in

² The document may be requested from Edison Electric Institute, P.O. Box 266, Waldorf, Maryland, 20604-0266; telephone (800) 334-5453;

http://www2.eei.org/products_and_services/descriptions_and_access/suggested_pract.htm; or may be requested from Linda Spiegel (916) 654-4703; lspiegel@energy.state.ca.us.

³ A draft Environmental Assessment is available on the Service's website. The final EA and new regulation are anticipated to be released to the public in fall 2009.

Flight contact. These standards and practices should be regularly evaluated and revised to ensure that they are effective in lessening the detrimental effects of agency actions on migratory bird populations.

We recommend the BLM and DOE incorporate the following mitigation measures to minimize impacts to migratory birds. These general measures include the following:

- Avoid the breeding seasons
- Use spatial buffer when appropriate
- Minimize the footprint
- Provide habitat compensation
- Provide restoration for short-term projects
- Provide offsite replacement or enhancement for long-term impacts
- Any inventory, survey, or monitoring data should be provided to the state wildlife agency, heritage program, or coordinated bird monitoring program.

Proposed SESAs within Arizona:

For all three SESAs within Arizona: Proposed Bullard Wash SESA (8,201 acres), Proposed Brenda SESA (4,321 acres), and Proposed Gillespie SESA (3,970 acres)

The desert tortoise (*Gopherus agassizii*) may be present in the action area and within the Sonoran Desert. Although the Sonoran Desert population of desert tortoise is not protected by Federal law at this time, the Service was petitioned on October 9, 2008 to consider listing the Sonoran desert tortoise population as threatened or endangered under the ESA. We recommend the project proponent contact the Arizona Game and Fish Department regarding proper handling and mitigation measures. We recommend that any Biological Assessment (BA), prepared for the purpose of section 7 consultation, evaluate potential effects to the Sonoran Desert population of desert tortoise as the species' status could change prior to project completion.

Additionally, these project areas are likely traversed by numerous washes that are regulated as jurisdictional waters under section 404 of the Clean Water Act. We recommend the project proponent contact the Corps to evaluate the need for a permit. If a permit is needed, we recommend an analysis of effects on the biological function of jurisdictional waters, and the development of a mitigation plan that addresses the totality of project-related impacts.

Proposed Bullard Wash SESA (8,201 acres)

The Gila topminnow (*Poeciliopsis occidentalis occidentalis*) may be present in the action area at Yerba Mansa Spring along the Santa Maria River near Date Creek Ranch. We recommend this species be considered in the BA prepared for the purpose of section 7 consultation.

Proposed Gillespie SESA (3,970 acres)

The southwestern willow flycatcher (*Empidonax traillii extimus*), the Yuma clapper rail (*Rallus longirostris yumanensis*), and the yellow-billed cuckoo (*Coccyzus americanus*), may be present in the action area, likely along the Gila River. Both the flycatcher and rail are listed as

endangered under the ESA, while the cuckoo is a candidate for listing. We recommend these listed species be considered in the BA prepared for the purpose of section 7 consultation. We recommend inclusion of candidate species in the event that its status may change prior to project completion.

Additionally, this project could conceivably provide habitat for the Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*). On July 29, 2008, the Service published a 90-day finding that a petition to list the Tucson shovel-nosed snake presented substantial information indicating that listing the species may be warranted. Again, we recommend consideration in the BA in the event the species' status changes prior to project completion.

Proposed SESAs within California:

Proposed Pisgah (26,282 acres) and Iron Mountain (109,642 acres) SESAs

Potentially Significant Impacts to Desert Tortoises and their Habitat

Based on the recently released USGS desert tortoise habitat suitability model (Nussear et al. 2009) and the location of the SESA boundaries, we estimate that the majority of the proposed Pisgah and Iron Mountain SESAs contain potential desert tortoise habitat that could be lost due to development of large-scale solar energy facilities. Depending on the need to install or upgrade transmission facilities, we anticipate potential additional losses of habitat outside of the proposed SESAs, including impacts to the Ord-Rodman and Chemehuevi designated critical habitat units. Within the PEIS cumulative effects analysis, we recommend that the BLM and DOE consider these habitat losses in combination with other sources of existing and reasonably foreseeable habitat loss in the Western Mojave and North Colorado recovery units. Given the difficulty and duration of restoration of desert tortoise habitat following large-scale disturbances, we recommend that the BLM consider a sufficient time scale when analyzing the significance of the effects of habitat loss on the desert tortoise.

In 2007, LDS transects were performed by the Service's Desert Tortoise Recovery Office in areas that overlap portions of the proposed Pisgah SESA, and estimated a density of 3.5 desert tortoises per square kilometer over the 2,682 square kilometers that their survey covered (L. Allison, Service, pers. comm. 2009). If we assume that the density across the proposed Pisgah SESA is similar to that within the LDS survey area, full build-out (i.e., development of all suitable habitat) of the proposed Pisgah SESA has the potential to result in adverse impacts to as many as 260 desert tortoises through direct injury and mortality or through adverse effects associated with translocation. LDS surveys of the Chemehuevi Desert Wildlife Management Area (DWMA), immediately adjacent to the proposed Iron Mountain SESA, estimated a desert tortoise density of approximately five individuals per square kilometer within the 4,038 square kilometer DWMA. While these surveys covered areas of good and poor areas of the DWMA, it is likely that overall average density within the proposed Iron Mountain SESA is less because much of the SESA is at very low elevation. Regardless of the density estimate, the large size of the proposed SESA and the amount of potential desert tortoise habitat within it means that full build-out of the proposed Iron Mountain SESA would potentially impact from several hundred to more than 1,000 desert tortoises.

In addition, fragmentation from development of the proposed Iron Mountain and Pisgah SESAs could potentially affect population connectivity and long-term genetic exchange and demographic augmentation between desert tortoise populations, including restriction of gene flow between DWMAs. The construction of large-scale solar energy projects within the proposed Pisgah SESA could potentially exacerbate fragmentation of habitat between the Ord-Rodman and Superior-Cronese DWMAs. Based on a review of the USGS desert tortoise habitat model, development of some higher elevation portions of the Iron Mountain SESA are likely to result in the loss of some of the higher quality desert tortoise habitat between the Pinto Mountains and Chemehuevi DWMAs. This loss may add to existing restrictions in gene flow associated with the very low elevation areas around Bristol, Cadiz, and Danby Lakes. We must stress that we do not know the current level of gene flow between any of these units, nor do we know how restriction of gene flow would affect our ability to recover the desert tortoise and provide for long-term population stability within DWMAs. However, there is evidence that gene flow has historically occurred between populations over large portions of the Mojave Desert, which may have important evolutionary consequences for the species.

Potential Impacts to Migratory Birds, Mojave Tui Chub, and Riparian Habitats

Depending on the types of solar technologies accommodated by the proposed SESAs, the BLM may need to investigate potentially significant impacts to riparian and aquatic resources at Camp Cady, Afton Canyon, and at other springs and seeps near these proposed SESAs. The USGS ground water flow model for the Mojave River identifies areas near Troy Lake in the western portion of the proposed Pisgah SESA as providing additive recharge for the ground water system that supports riparian and aquatic communities at Camp Cady and Afton Canyon (Stamos et al. 2001). This regional ground water system interconnects with the floodplain aquifer of the Mojave River. The existing Mojave River ground water flow system is currently in a state of overdraft due to increases in pumping since the 1940s (Stamos et al. 2001). Cumulative overdraft in this portion of the Mojave River Basin between 1950 and 1999 amounted to 1.1 million acre-feet (Stamos et al. 2001). Additive pumping due to large-scale, wet-cooled, solar facilities within some portions of the proposed SESA could potentially exacerbate the ground water overdraft in this area and possibly result in further degradation of riparian and aquatic habitats along the Mojave River. Any loss or degradation of these habitats would negatively impact a variety of neotropical migratory bird species that utilize these areas as stopover sites during migration or as nesting areas. Camp Cady also provides artificial refugia for the federally endangered Mojave tui chub. Reduction in ground water resources could significantly impact these refugia by making it difficult to pump water. Therefore, the PEIS should fully analyze the potential for significant impacts to these ground water dependent resources.

Proposed Imperial East SESA (12,830 acres)

Desert Tortoise

The USGS desert tortoise habitat model does not cover the proposed Imperial East SESA, nor is it contained within or adjacent to any LDS monitoring strata analyzed by the Service. The area occurs outside the known distribution of desert tortoise, which we assume is absent from the area.

Potential Impacts to Listed Birds and Wetland and Riparian Habitats

The proposed Imperial East SESA is east of the agriculture in the Imperial Valley, west of the Algodones Dunes, north of the International Boundary with Mexico, and south of Interstate 8. This area encompasses a sensitive wetland region occupied by the federally endangered Yuma clapper rail (*Rallus longirostris yumanensis*) and the State threatened California black rail (*Laterallus jamaicensis coturniculus*). This wetland has formed as a result of leakage from the unlined All-American Canal funded by the Bureau of Reclamation and is operated by Imperial Irrigation District. In planning for the lining of the canal, it was determined that the loss of wetlands of this extent could not be mitigated. The Bureau of Reclamation's chosen alternative (as identified in their Record of Decision of July 29, 1994) was to construct a parallel concrete-lined canal up to Drop 3 but not including the wetland area between Drops 3 and 4. Wetland losses in the lined segments were to be offset with new creation in the wetland area that would remain. This alternative was the subject of the Service's Biological Opinion (February, 8, 1996), in which we concurred that the action was not likely to adversely affect Yuma clapper rails because impacts to the habitat would be avoided. The enhancements required to offset losses along the lined portion are well underway, and both rail species have been detected consistently in the wetland complex. Because of the sensitivity of these areas, we recommend that BLM avoid these areas in future designations of the Imperial East SESA.

Proposed Riverside East SESA (202,295 acres)

The proposed Riverside East SESA is a large and sprawling area mostly on the north side of Interstate 10 (I-10) from Joshua Tree National Park east to the agricultural area around the City of Blythe, California. The central portion of the proposed SESA wraps around and appears to be immediately adjacent to the western, southern, and eastern boundaries of the Palen/McCoy wilderness area. The eastern portion of the proposed SESA in McCoy Wash is between the Rice Valley, Big Maria Mountain and Palen/McCoy wilderness areas, and the agricultural area of Blythe. To the west, the proposed SESA surrounds three sides of the southern Coxcomb Mountains in Joshua Tree National Park and the Palen Dry Lake and dune system including the Desert Lily Preserve and Palen Dry Lake Area of Critical Environmental Concern within the Chuckwalla Valley. The potential location of large-scale solar development within these sensitive and remote desert landscapes poses numerous potentially significant impacts that warrant in-depth analysis in the PEIS.

Potentially Significant Impacts to Desert Tortoises and their Habitat

The Riverside East SESA is located immediately adjacent to Joshua Tree National Park and the Chuckwalla DWMA. LDS density estimates from 2007 were 3.5 and 5.0 desert tortoises per square kilometer, respectively (L. Allison, Service, pers. comm. 2009). Note that this site is in the southern part of the Baker Sink, which occurs at very low elevations, and is not included in the USGS model as potential habitat. Because the proposed SESA shares borders with two DWMA's, the habitat is likely suitable for desert tortoises. Even if tortoises are present at low densities, solar development of a site this large is likely to impact numerous desert tortoises. The analysis below illustrates the potential magnitude of impacts using density estimates from neighboring areas.

Although the proposed SESA shares more of its boundaries with the Chuckwalla DWMA, we used the Joshua tree density estimates based on connectivity with the Pinto Basin. Therefore, under these assumptions, full build-out of the 818 square kilometer Riverside East SESA area could adversely affect approximately 2,865 desert tortoises if we assume that the density here is approximately 3.5 desert tortoises per square kilometer. It is our understanding that species-specific surveys have been conducted for the First Solar Project proposed within this proposed SESA; therefore, we recommend additional surveys and other site-specific information be obtained to help refine proposed SESA boundaries, with a defined process to exclude habitat areas with higher function and value where needed to achieve biological objectives on a regional scale. Prioritizing areas with lower population densities for development is imperative to maintain a reasonable level of survival for translocated individuals. As discussed above, the BLM and DOE need to thoroughly assess the effects of translocation on recipient and translocated populations of desert tortoises, as well as the availability of receiver sites where large scale translocation efforts are deemed likely to be successful.

Northern and Eastern Colorado Desert Coordinated Management Plan Context

The proposed Riverside East SESA occurs within the plan area for the BLM's Northern and Eastern Colorado Desert Coordinated Management Plan (NECO; BLM 2002), which is one of six regional amendments to the California Desert Conservation Area (CDCA) Plan. The NECO plan focused on several aspects of BLM's multiple use mandate including biological considerations. Stated biological purposes of the NECO plan include preventing the need for new listings as special status species (BLM 2002; p. 2-12), protecting connectivity between protected communities (BLM 2002; p. 2-58), and considering the fragmenting effects of new projects.

Under NECO, the term "Multi-species Conservation Zone" was defined to include existing restricted lands (BLM Wilderness Areas, Joshua Tree National Park, and Chocolate Mountain Aerial Gunnery Range lands), DWMA's, and Wildlife Habitat Management Areas (WHMA's). WHMA's identified some of the areas that support special status species and their habitats including dune, playa, and desert dry wash communities that would likely require special consideration, protection, and/or management (BLM2002; p. 2-2). Some regulatory elements were applied to WHMA's, such as closure of some routes of travel and closure of some dune and playa areas (Palen and Ford Dry Lake and associated dune systems) and requiring mitigation in some WHMA's as a disincentive to development in these locations (e.g., 3:1 habitat compensation ratio for disturbance to desert dry wash woodland communities) (BLM 2002; pgs. 2-57 and 4-83). A large portion of the proposed Riverside East SESA overlaps with several WHMA's (BLM 2002; Map 2-21), which may preclude implementing or achieving the conservation objectives for many of the approximately 60 special status plants, animals, and natural communities in the NECO plan (BLM 2002; p ES-1). The PEIS should fully analyze the extent to which these conservation objectives would not be realized, after application of all feasible mitigation measures to avoid and minimize the significance of these adverse effects.

NECO Wildlife Habitat Management Areas

Along I-10 between the Chuckwalla DWMA and the Chuckwalla Valley and the Chemehuevi DWMA to the north is a WHMA with the specific role of providing connectivity for the desert tortoise between these areas (BLM 2002; Map 2-21). The Riverside East SESA overlaps this

WHMA on the north side of I-10, potentially disrupting desert tortoise connectivity anticipated in NECO as generally recommended in the desert tortoise recovery plan (Service 2008c).

The proposed Riverside East SESA also overlaps most of Palen and Ford dry lakes and nearby dune systems and their associated sand source and transport corridors, which are designated as a combination of WHMAs: dune and playa, desert dry wash woodland, and multi-species (BLM 2002; Map 2-20, 3-3, and 2-21). Dune systems generally support high biological diversity with unique and often endemic species assemblages (Andrews et al 1979; Crawford 1988; Pavlik 1985; Pitts et al 2009; Crawford and Seely 1987; Holm and Scholtz 1980). Some of the species unique to sand dune systems are included in NECO's list of special status species such as the Mojave fringe-toed lizard (*Uma scoparia*).

The proposed Riverside East SESA does not appear to consider the protection of these dune systems and their associated sand source and sand transport corridors as reflected under NECO. If full build-out occurs within this proposed SESA, the development would likely alter and permanently degrade these large dune systems. NECO requires mitigation in these dune and playa areas to "discourage projects on these very rare communities" (BLM 2002; pgs. 2-57 and 4-83). Designating a SESA on these dune systems and playas appears to contradict the intended purpose of the WHMA designation and would result in permanent alteration of these unique habitats. Further, the proposed SESA on dune and playa WHMAs appears to be in conflict with a major intended purpose of NECO to help avoid threats and alleviate the need for potential future listing of species since dune systems are likely to contain high biodiversity with many restricted species (e.g., the Mojave fringe-toed lizard and other endemic or undescribed taxa).

Other areas of the proposed Riverside East SESA such as parts of the McCoy Wash area and portions south of I-10 within the SESA are designated as desert dry wash woodland and multi-species WHMAs (BLM 2002; Map 2-21 and 3-3). Proposing SESAs over these WHMAs appears to conflict with the intended purpose of discouraging projects that would degrade and eliminate this high function and value wildlife habitat (BLM 2002; p. 3-29). Desert dry wash woodlands contain high species richness, especially for migratory songbirds and resident game bird species. The desert dry wash woodlands of eastern Riverside County have been identified by the Audubon Society as an Important Bird Area (IBA) (Cooper 2004) and the Ironwood forest in the upper reaches of McCoy Wash were identified by the BLM as a Unique Plant Assemblage in the 1980 CDCA Plan (BLM 1980). The BLM and DOE should consider effective avoidance and mitigation measures for these natural communities within the proposed Riverside East SESA. These dry wash woodlands typically occur along washes and in floodplains that pose feasibility and logistical problems to solar development. Therefore, a detailed analysis in the PEIS is needed to determine the applicability of particular solar technologies and other mitigation measures that would be less disruptive to the many braided wash systems that typify McCoy Wash and other areas of the SESA.

In general, we recommend proposing SESAs in areas that do not overlap with the specific resources that the WHMAs were established to conserve.

Fragmentation

As described above, the size, location, and shape of the proposed Riverside East SESA appears to maximize fragmentation of wildlife populations north and south of I-10 for more than 40 miles. We expect that there are several existing culverts and overpasses that may be used by wildlife to move across I-10 where the Riverside East SESA is proposed and recommend that information relative to existing crossings and wildlife species that may be using them is analyzed in the draft PEIS.

The proposed Riverside East SESA closely surrounds the southern end of the Coxcomb Mountains in Joshua Tree National Park. Developing solar energy projects in this area may affect the use of the mountains by desert bighorn sheep (*Ovis canadensis nelsoni*). We request that the PEIS provide information about the use of the southern end of the Coxcomb Mountains by desert bighorn sheep and an analysis of effects on desert bighorn sheep resulting from project development in this area, including connectivity to other desert bighorn sheep populations in nearby mountain ranges.

Proposed SESAs within Nevada:

Proposed Amargosa Valley SESA (32,699 acres)

Potentially Significant Impacts to Desert Tortoises and their Habitat

The federally listed desert tortoise (Mojave population) may be present within the proposed Amargosa Valley SESA. Specific information on density of desert tortoises for the proposed Amargosa Valley SESA is not currently available. LDS transects have been conducted south of this SESA; however, extrapolating those densities to this particular area would not be an appropriate use of the data. A number of desert tortoises, however, were observed anecdotally along U.S. Highway 95 between Nevada State Route (SR) 373 (SR 127 in California) in Amargosa Valley and Indian Springs. The USGS model identifies the proposed Amargosa Valley SESA as potential desert tortoise habitat (Nussear et al. 2009); therefore, we recommend site-specific surveys to estimate desert tortoise densities prior to any solar energy development projects. If you determine that desert tortoises occur within the SESA, we ask that you disclose project impacts to the desert tortoise and its habitat, and provide avoidance, minimization and mitigation measures for impacts to desert tortoise as appropriate in the PEIS.

Potential Impacts to Ground Water and Ground Water Dependent Species

The Service's Nevada Fish and Wildlife Office works closely with the BLM on ground water issues relative to renewable energy development within and adjacent to the Amargosa Desert hydrographic basin and previously submitted two memoranda to the BLM's Southern Nevada District Manager regarding our concerns. These include the following:

- The Ash Meadows National Wildlife Refuge is located within the Amargosa basin and encompasses 23,000 acres of spring-fed wetlands. The refuge is a complex of thermal springs and was established to protect 12 federally listed threatened and endangered plant and wildlife species, including the endangered Devils Hole pupfish (*Cyprinodon diabolis*). Devils Hole is a 40-acre disjunct unit of Death Valley National Park that

occurs within the boundaries of the refuge. The refuge provides habitat for at least 24 plants and animals that occur nowhere else in the world.

- The Ash Meadows region is one of the major discharge areas within the regional Death Valley ground water flow system (of which the Amargosa basin is a subunit) of southern Nevada and adjacent California. Ground water recharge relies primarily on precipitation within the basin, and discharge is influenced by climatic conditions and ground water pumping. These factors also impact the water level in Devils Hole.
- Ground water development in the Amargosa basin in the 1960s and early 1970s was determined to have had a negative impact on the water level in Devils Hole and thereby population viability of the pupfish. A Supreme Court decision in 1976 upheld a lower court ruling that established a minimum water level threshold for Devils Hole in order to protect the pupfish. This decision together with the State-based water right at Ash Meadows and Devils Hole underpins the Federal interest.
- Based on the perennial safe yield relative to the number of existing water rights, the Nevada State Engineer has determined that the Amargosa basin is currently over-allocated (i.e., the volume permitted under existing rights exceeds that which is available by about 33 percent). In response, he has instituted a moratorium on the approval of applications for new water rights and the ability to transfer rights or change points of diversion will be limited. Recent rulings (Ruling 5750 in 2007; 5971 in 2009) and Order 1197 (in 2008) restrict ground water pumping within this basin.
- Service, National Park Service, and USGS hydrologists are greatly concerned with the potential negative effects on the ground water flow system, the species and ecosystems that it supports, and the public interest that could be impacted over time, especially in light of the multitude of proposed renewable energy projects that utilize ground water intensive technologies.
- The PEIS analysis should consider the interconnectedness of the regional ground water basins and the aquatic and terrestrial ecosystems they support. While ground water pumping for one project may have near-term, obvious effects, another project may have effects that are not evident for many years, even decades. The cumulative impacts to ground water and aquatic and biological resources that are dependent upon this system are likely to be significant.
- The PEIS and cumulative effects analyses will be critical in bringing together all of the information relative to the solar technologies being proposed, the amount of ground water necessary to support development and operations of facilities, and other impacts to the environment. The PEIS should explore all possible alternatives and technologies to minimize significant impacts.

The Service was recently petitioned to list the Amargosa toad (*Bufo nelsoni*), a toad species endemic to the Oasis Valley, and 45 species of spring snails under the ESA. Solar development has the potential to directly or indirectly impact 10 of the 45 species of springsnails in the

proposed Amargosa Valley SESA. These species are the Crystal springsnail (*Pyrgulopsis crystalis*), Ash Meadows pebblesnail (*P. erythropoma*), Fairbanks springsnail (*P. fairbanksensis*), Elongate gland springsnail (*P. isolatus*), Distal gland springsnail (*P. nanus*), Median gland Nevada pyrg (*P. pisteri*), Sporting goods tryonia (*Tryonia angulata*), Point of Rocks tryonia (*T. elata*), Minute tryonia (*T. ericae*), and Amargosa tryonia (*T. variegata*).

The Amargosa toad and springsnail species are most at risk from habitat loss and the depletion of ground water resources within their respective hydrologic basins. We recommend that the analysis for this study area include the potential direct and indirect effects to these species and their habitat from the use of ground water associated with solar energy production and maintenance of facilities. We also ask that proposed energy development projects be consistent with the goals and objectives of the multi-agency conservation agreement and its strategy for the Amargosa toad (NDOW 2000). Though no legal protection currently exists for these species, the PEIS should consider incorporating measures to avoid and minimize impacts to these species and their habitats in the interest of avoiding potential future listings.

Proposed Delamar Valley SESA (17,932 acres)

Desert Tortoise

Although the proposed Delamar SESA is not covered by the USGS desert tortoise habitat model, nor is it contained within or adjacent to any LDS monitoring strata, the desert tortoise may occur in low densities in the south portion of study area. Surveys should be conducted to assess impacts to the desert tortoise and its habitat. The PEIS should provide desert tortoise avoidance, minimization, and mitigation measures as appropriate.

Potential Impacts to Ground Water and Ground Water Dependent Species

As discussed above and in our previous comments on the subject project PEIS, potential long-term hydrological effects and impacts to listed and sensitive species as they relate to solar energy projects should be carefully considered. Solar energy projects in the proposed Delamar Valley SESA may affect listed and sensitive species dependent on the White River Valley regional ground water flow system. This system is comprised of the pluvial White River, which extends from Ely in central Nevada to the Moapa Valley in southern Nevada. Small changes in ground water levels, water quality, or flow patterns may impact desert fish species, as many inhabit spring systems that these flow systems recharge. Listed desert fishes, including the White River springfish (*Crenichthys baileyi baileyi*), Hiko White River springfish (*Crenichthys baileyi grandis*), Railroad Valley springfish (*Crenichthys nevadae*), Pahrump poolfish (*Empetrichthys latos*), Pahranaagat roundtail chub (*Gila robusta jordani*), White River spinedace (*Lepidomeda albivallis*), Big Spring spinedace (*L. mollispinis pratensis*), and Moapa dace (*Moapa coriacea*), are dependent on recharge from the White River ground water flow system.

Ground water pumping from the system underlying the proposed Delamar Valley SESA has the potential to indirectly affect sensitive species located in adjoining areas such as Pahranaagat Valley. Decreases in water availability within Pahranaagat Valley could adversely affect the foraging and nesting habitat of the endangered southwestern willow flycatcher (*Epidonax traillii extimus*) and candidate, yellow-billed cuckoo (*Coccyzus americanus*). In addition, the Hubbs pyrg (*P. hubbsi*), Pahranaagat pebblesnail (*P. merriami*) and Grated tryonia (*T. clathrata*) (3 of

the 45 springsnails identified in the petition) may be indirectly affected by ground water withdrawal from this system. We recommend that the analysis of this SESA consider the potential indirect effects to these species and their habitat from the use of ground water associated with solar energy production and maintenance of facilities.

Migratory Birds

The PEIS should evaluate solar projects in the proposed Delamar Valley SESA for potential impacts to migratory birds. In particular, a species identified as a priority species by the Partners in Flight Nevada Working Group, Scott's oriole (*Icterus parisorum*) breeds in Yucca forests within the proposed Delamar Valley SESA. Concerns over the loss of Mojave scrub habitat, particularly Joshua tree stands, have resulted in its selection as a species of priority focus for the Nevada Partners in Flight, Bird Conservation Plan (PIF 1999). We recommend Joshua tree stands be avoided and land clearing, or other surface disturbance be conducted outside the avian breeding season to avoid potential destruction of bird nests or young, or birds that breed in the area. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Proposed Dry Lake SESA (16,516 acres)

Potential Impacts to Desert Tortoises and their Habitat

The proposed solar energy projects in the proposed Dry Lake SESA may affect the desert tortoise. LDS transects have been sampled in the vicinity of the proposed Dry Lake SESA, which is immediately adjacent to the Mormon Mesa desert tortoise critical habitat unit and identified as potential habitat by the USGS model. Results of LDS yield density estimates of 1.6 to 3.2 desert tortoises per square kilometer over the survey area (Service 2008a, L. Allison, Service, pers. comm. 2009). Applied across the proposed Dry Lake SESA, full build-out of this area has the potential to result in adverse effects to 107 to 213 desert tortoises through direct injury, mortality or translocation. Avoidance, minimization and mitigation measures for impacts to desert tortoise should be included as appropriate in the PEIS.

Sensitive Plants

The threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*), listed as critically endangered by the State of Nevada under Nevada Revised Statutes 527.260 and designated as a BLM special status species may occur in or near the Dry Lake SESA. As a State listed plant, this species may not be removed or destroyed at any time by any means except under special permit issued by the State Forester (NRS 527.270). Consideration of this species during project planning and early coordination with the State is important to assist with species conservation efforts and to prevent the need for Federal listing actions in the future.

We are concerned that the solar projects located within the proposed Dry Lake SESA may impact at-risk plant species tracked by the State of Nevada's Natural Heritage Program (Heritage Program). In particular, populations of the rosy two-tone beardtongue (*Penstemon bicolor* subsp. *roseus*) may occur within the proposed Dry Lake SESA. We recommend that a qualified

botanist survey for this species prior to any construction activities within the study area. If individuals are located, we recommend individuals or populations be avoided through fencing and flagging of the area, including an appropriate buffer zone.

Potential Impacts to Groundwater and Water-dependent Species

As mentioned above, springsnails may be indirectly affected by ground water withdrawal from solar projects. The springsnail Flag pyrg (*P. breviloba*), is also included in the springsnail petition, and its habitat may be affected from the use of ground water associated with solar energy production and maintenance of facilities. We recommend that the analysis for this study area include the potential indirect effects to this species and its habitat from the use of ground water associated with solar energy production and maintenance of facilities.

Migratory Birds

The proposed solar energy projects in the Dry Lake SESA may affect migratory birds such as the Le Conte's thrasher (*Toxostoma lecontei*), a bird of conservation concern (Service 2008b), and crissal thrasher (*Toxostoma crissale*). Both species have been identified as priority species in the Partners in Flight Nevada Bird Conservation Plan (in prep). The crissal thrasher occurs in mesquite and other brush along desert washes. The Le Conte's thrasher occurs in saltbush and creosote bush scrub. Therefore, we recommend that areas of mesquite and saltbush within the proposed Dry Lake SESA be avoided. If these habitat types cannot be avoided, minimization and mitigation measures for potential impacts to Le Conte's thrasher and crissal thrasher should be included in the PEIS.

Proposed Dry Lake Valley North SESA (49,775 acres)

Desert Tortoise

Desert tortoises do not occur within the Dry Lake Valley North SESA.

Sensitive Plants and Wildlife

The proposed solar energy projects in the Dry Lake Valley may affect Blaine fishhook cactus (*Sclerocactus blaneii*). Dry Lake Valley is one of three known locations in Nevada for this species. This cactus is considered very rare at all of its known locations. It is one of the most desirable species in a genus prized by cactus collectors and the locations of most of its populations are well known and appear to have declined appreciably over the past two decades. This rare species is also known from Iron County, Utah, where one of its known populations has been lost to residential development. The Dry Lake Valley population, with 14 known individuals, is currently the largest known population of this species. Thorough surveys by a qualified botanist should be conducted for Blaine fishhook cactus prior to any ground disturbing activities. A qualified botanist should be on-site for construction activities in Dry Lake Valley to ensure that Blaine fishhook cactus is adequately protected. Individuals located within the project area should be avoided through fencing and flagging of the area, including an appropriate buffer zone. If construction impacts are unavoidable, a qualified botanist should develop and implement a plan to salvage and transplant individuals.

We are concerned that the solar projects located within the Dry Lake Valley North SESA would impact at-risk plant and animal species as identified by the Heritage Program. In particular, Eastwood milkweed (*Asclepias eastwoodiana*) and Desert Valley kangaroo mouse (*Microdipodops megacephalus albiventer*) may occur within the Dry Lake Valley North SESA. A qualified botanist should survey the project area for Eastwood milkweed prior to any construction activities within the SESA. If the species is located, individuals or populations should be avoided through fencing and flagging of the area, including an appropriate buffer zone. We also recommend that surveys be conducted for the Desert Valley kangaroo mouse. If this species is determined to be present within the Dry Lake Valley North SESA, avoidance, minimization, and mitigation measures for this species should be included as appropriate in the PEIS.

Proposed East Mormon Mountain SESA (7,418 acres)

Potential Impacts to Desert Tortoises and their Habitat

The proposed solar energy projects in the proposed East Mormon Mountain SESA may affect the desert tortoise. The proposed East Mormon Mountain SESA is located between the Mormon Mesa and Beaver Dam Slope DWMAs. LDS density estimates from 2007 were 3.7 and 1.3 desert tortoises per square kilometer, respectively (L. Allison, Service, pers. comm. 2009). Because this proposed SESA is not separated by elevated areas from the Beaver Dam Slope strata, and assuming that there is therefore more connectivity to this critical habitat unit, we have applied the density estimate that corresponds to the Beaver Dam Slope to this proposed SESA. Accordingly, about 30 desert tortoises have the potential to be adversely affected by full build-out of the East Mormon Mountain SESA. Avoidance, minimization and mitigation measures for direct impacts to desert tortoise and indirect effects to adjacent critical habitat as a result of placement of solar projects within the proposed East Mormon Mountain SESA should be identified in the PEIS.

Candidate Plant Species

The Service is concerned about potential impacts to the Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*). In 2007, the Las Vegas buckwheat was designated as a candidate species under the ESA. A candidate species receives no legal protection under the ESA, but could be proposed for listing in the near future. We are concerned about the status of the Las Vegas buckwheat because approximately 95 percent of this species' historic range has been lost to development or other factors.

Currently, about 890 acres of occupied Las Vegas buckwheat habitat exist, of which more than 50 percent is subject to development. We recommend that a qualified botanist survey for the Las Vegas buckwheat prior to any construction activities within the SESA. If individuals are located within the study area, they should be avoided through fencing and flagging of the area, including an appropriate buffer zone. Consideration of this plant species during project planning and early coordination with the State and the Service is important to assist with species conservation efforts and to prevent the need for Federal listing actions in the future.

Proposed Millers SESA (19,205 acres)

Desert Tortoise

Desert tortoises do not occur within the proposed Millers SESA. The Millers SESA is not covered by the USGS desert tortoise habitat model, nor is it contained within or adjacent to any LDS monitoring strata analyzed by the Service.

Sensitive Plants

We are concerned that solar energy development within the proposed Millers SESA may impact the candelaria blazingstar (*Mentzelia candelariae*), a species included on the Heritage Program's watch list. We recommend that a qualified botanist survey for this species prior to any construction activities within the SESA. If individuals are located, we ask that you avoid individuals or populations through fencing and flagging of the area, including an appropriate buffer zone.

Migratory Birds

We are concerned that solar projects located within the proposed Millers SESA may impact migratory birds. In particular, a rest area with a small stand of cottonwood occurs adjacent to Highway 95/SR6. The stand of cottonwoods is used as a stopover site for migratory birds such as vireos and warblers and is a popular site for bird watchers. Based on the Nevada SESA map, it is unclear whether or not this particular cottonwood stand would be affected by the solar projects. We recommend that this area be avoided.

Proposed Gold Point SESA (5,830 acres)

Other than our general concern for migratory birds, we are not aware of any potential impacts to federally listed or sensitive species from placement of solar projects within the proposed Gold Point SESA. Desert tortoises do not occur within the proposed Gold Point SESA.

Proposed SESAs within New Mexico:

For all three Proposed SESAs within New Mexico: Afton (55,810 acres), Mason Draw (17,802 acres), and Red Sand (46,972 acres) SESAs

Aplomado Falcon

Potential significant impacts to the northern aplomado falcon (*Falco femoralis septentrionalis*) and their habitats could occur at each of the three proposed SESA sites in New Mexico.

A northern aplomado falcon reintroduction program began in 2006 in southern New Mexico under section 10(j) of the Endangered Species Act. Between 2006 and 2008, 120 aplomado falcons were reintroduced into several sites in southern New Mexico, and additional reintroductions are planned during the next several years in southern New Mexico.

Our understanding of northern aplomado falcon ecology indicates that a sustainable falcon population is likely to be detrimentally affected by the alteration and loss of grassland habitat. Changes or losses of grassland habitats in New Mexico will affect species that are grassland

adapted. As such, grassland conservation is critical in conserving northern aplomado falcons and other grassland birds in New Mexico. Northern aplomado falcons are associated with savannas and grasslands with a sparse canopy of mature woody vegetation. In New Mexico, northern aplomado falcons are associated with semi-desert grasslands in the Chihuahuan Desert. These grasslands are characterized by scattered yuccas, mesquite, and cactus. The Service recommends that BLM and DOE avoid savannas and grasslands with a sparse canopy of mature woody vegetation. In addition, impacts to mature trees containing other raptor or raven nests should be avoided because aplomado falcons use this highly limited resource for their nests.

Identification of suitable habitats and pre-activity surveys for the northern aplomado falcon should be conducted during project planning and typically include systematic observations in suitable habitat for territorial northern aplomado falcons and/or nest sites. Pre-activity surveys should be conducted by qualified, permitted individuals in accordance with protocols that are recognized by the Service and/or the New Mexico Department of Game and Fish (NMDGF). Currently, protocol guidance is contained in the Interim Survey Methodology for the northern aplomado falcon (*Falco femoralis septentrionalis*) in Desert Grasslands (USFWS 2003).

The BMPs are recommended measures that, if implemented as part of the proposed action, would to the extent practicable, avoid, minimize, and mitigate for adverse effects of that proposed action on the northern aplomado falcon. However, even with these BMPs in place, there may be adverse effects that may remain and require initiation of formal conference. The inclusion of BMPs into the project proposal would streamline any formal conference that may be required.

BMPs and Recommendations to avoid and minimize impacts to northern aplomado falcon include the following:

1) Project Planning:

Roads, fences, security zones, surveillance sites, and other facilities that would require land clearing and have associated noise and artificial lighting components should be located at least 0.5 miles outside of any northern aplomado falcon territory or an active reintroduction site. Northern aplomado falcon home range size is estimated to be about 8,400 acres. For management purposes, this can be described as a circle with a radius of two miles around a particular habitat feature (e.g., a nest site or the preferred roosting site of a territorial northern aplomado falcon).

Firebreaks, fuels reduction, or other improved access for fire suppression should be incorporated, as appropriate in the placement of facilities. Facilities should not be located between northern aplomado falcon nests and their important forage areas such that movement between the two is compromised.

Pre-construction surveys should be conducted to identify any northern aplomado falcon territories in or adjacent to project areas located in or near suitable habitat. Presence/absence surveys may be conducted, or the presence of the northern aplomado falcon in the habitat area will be assumed.

All personnel that will be involved with the on-the-ground construction or maintenance for the proposed action should receive training in the species, the agreed upon BMPs, and the role of the construction monitor.

During construction or maintenance activities in or within 0.5 miles of a northern aplomado falcon territory or an active re-introduction site (or such distance that noise, light, or other effects reach the territory or site), a construction monitor with authority to halt construction at any time the appropriate BMPs are not being properly implemented as agreed to should be present on site.

New roads in the vicinity of northern aplomado falcon territories and other important habitat areas should be avoided to reduce effects of human activity. Existing roads used to access new or existing facilities may need to be closed to other access to protect important northern aplomado falcon habitat.

If an active territory is discovered during the planning phase of a proposed permanent facility, alternate locations for the facility should be considered for feasibility/use.

2) Construction/Maintenance:

Construction activities for roads, fences, or other facilities that must be built closer than .05 mile to an occupied northern aplomado falcon territory should occur between August 1 through January 31 to avoid the northern aplomado falcon breeding season. Staging areas for equipment and supplies should be as far as practicable from northern aplomado falcon habitats.

Maintenance activities for facilities may occur at any time; however, for major work on roads or fences where significant amount of equipment will be required, the August 1 through January 31 period is preferred.

Large, open-topped liquid storage containers will not be allowed on job sites as they can pose a drowning risk to northern aplomado falcons.

3) Post Construction:

The need for and extent of site restoration should be determined in coordination with the landowner/manager and the extent of impacts to northern aplomado falcon habitat and connectivity.

A restoration plan should be developed during project planning and provide an achievement goal to be met by the restoration activity.

The project management plan should provide a report describing the implementation of the BMPs and their effectiveness. This report should be completed at the completion of the project and posted to the BLM and DOE home websites. Documentation of completion of any mitigation actions should be included in the report.

4) Facility Operations:

Security/stadium lighting along fences and other facilities should be designed to minimize light pollution beyond the designated security zone while achieving light levels needed for operational purposes. Because directed lighting for security zones can extend ambient light levels well over 900 feet away from the source, the effects of lighting are widespread. Based on our lack of specific data on a “safe” level of light pollution, security lights should not shine onto habitat areas at a level greater than 1.5 foot candles. All lights should be shielded from the top to prevent up-lighting.

5) Other Mitigation Measures:

Shrub encroachment and non-native vegetation are significant concerns in northern aplomado falcon habitat. Potential mitigation to prevent shrub encroachment and non-native vegetation is funding to contribute to native grassland restoration programs.

Providing funds for surveying for northern aplomado falcons, monitoring of known northern aplomado falcon territories, inventorying suitable habitat, and reintroducing aplomado falcons in New Mexico is an appropriate option.

Recommendations to Minimize Impacts to Wildlife and Their Habitats at Construction Sites

Roads should be designed to appropriate standards.

Construction and maintenance activities should be conducted during daylight hours only to avoid noise and lighting issues during the night. If construction or maintenance work activities would continue at night, all lights should be shielded to direct light only onto the work site, the minimum wattage needed should be used, and the number of lights should be minimized. Noise levels for day or night construction and maintenance should be minimized. All generators should be in baffle boxes (a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise-abatement methods in accordance with industry standards.

The perimeter of all areas to be disturbed during construction or maintenance activities should be clearly marked using flagging or temporary construction fence, and no disturbance outside that perimeter should be authorized. The area to be disturbed should be minimized through scheduling materials deliveries and equipment on site to only those needed for effective project implementation. All access routes into and out of the project disturbance area should be flagged, and no travel outside of those boundaries should be authorized. If new access is needed or existing access requires improvement to be usable for the project, roads should be constructed to accepted standards. To the extent possible, areas already disturbed by past activities or those that will be used later in the construction period should be used for staging, parking, and equipment storage. Waste materials and other discarded materials should be removed from the site as quickly as possible. This should assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

Proposed SESAs within Utah:

For all three SESAs within Utah: Proposed Escalante Valley SESA (6,648 acres), Proposed Milford Flats South SESA (6,440 acres), and Proposed Wah Wah Valley SESA (3,676 acres):

Sage-Grouse and Sage-Grouse Habitat

It appears as if the project area encompasses sage-grouse habitat. If sage-grouse habitat is present within the project area, the PEIS should describe potential effects to this species resulting from project activities and habitat removal. We recommend no human disturbance within 2 miles of a lek during the breeding season and maintenance of a 15-25% sagebrush canopy cover and 7 inches or more of grass and forb understory to optimize nesting success. Guidelines, including seasonal and spatial buffers and habitat restoration recommendations, can be found in: the Utah Division of Wildlife Resources' *Strategic Plan for Management of Sage Grouse, 2002*, Publication No. 02-20 and in *Guidelines to Manage Sage Grouse Populations and Their Habitats* (Connelly et al. 2000). If sage-grouse are determined to be within range of disturbance, we recommend that you coordinate with the local Service Field Office to assess the feasibility of potential mitigation measures that could be employed to offset impacts to sage-grouse.

Proposed Escalante Valley SESA (6,648 acres) and Proposed Milford Flats South SESA (6,440 acres):

Utah Prairie Dog

Escalante Valley SESA and Milford Flats South SESA may provide habitat for the Utah prairie dog (*Cynomys parvidens*), a species listed as threatened under the ESA. We recommend that official surveys be conducted for this species as per the Service's approved protocol. The NEPA document should address the proximity of the project activities to any prairie dog colonies, analyze any potential impacts, including indirect impacts, and identify conservation measures. We recommend seasonal and/or spatial buffering to avoid prairie dog areas if they are determined to be within range of disturbance, as well as working with the Utah Field Office to determine additional best management practices for avoiding impacts to the prairie dogs.

Raptors

Raptor management guidelines, especially those developed by the Utah Field Office (Romin and Muck 2002), should be applied to all 24 of the proposed solar energy development areas. These guidelines include raptor protection measures that are designed to ensure that proposed projects will avoid adverse impacts to raptors, including the Peregrine Falcon. Before any projects are initiated, existing raptor nests need to be identified, taking all necessary steps to avoid direct loss of nesting sites or territories. Be aware that raptor arrival at nest sites can occur as early as December for certain species, with nesting and fledging continuing through August. The Utah Field Office recommended a spatial buffer of at least 1.0 mi for threatened and endangered raptors from their nests, 0.5 mi for other diurnal raptors, and 0.25 mi for nocturnal raptor nests. Spatial buffers for all raptor species present in Utah and the West are delineated by Romin and Muck (2002), along with seasonal presence, number of brooding days, fledging days, and post-fledge dependency to nests.

Summary

We appreciate the opportunity to provide additional comments on the inclusion of SESAs as part of the PEIS analysis and offer our perspective on renewable energy development. We request that the BLM and DOE continue to work closely with local Service Field Offices to ensure that fish and wildlife resources can be effectively identified and addressed early in the planning process. In addition, companies intending to utilize the PEIS should plan and develop their projects in close coordination with our field offices. This early engagement should help to streamline any subsequent permitting and consultation that may be necessary. We look forward to continuing working with you on the development of your PEIS.

References and Literature Cited

- Andrews, F.G, A.R. Hardy and D. Giuliani. 1979. The Coleopterus Fauna of Selected California Sand Dunes. California Department of Food and Agriculture, Sacramento, CA. 142 pp.
- Avian Power Line Interaction Committee. 1994. Mitigating bird collisions with power lines: the state of the art in 1994 (being rewritten). Edison Electric Institute, Washington, DC. 78 pp.
- Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines: the state of the art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC, and Sacramento, CA. 207 pp.
- Bureau of Land Management. 1980. The California Desert Conservation area Plan. Bureau of Land Management, California Desert District, Moreno Valley, California 157 pp.
- Bureau of Land Management (BLM). 2002. Northern and Eastern Colorado Desert Coordinated Management Plan: and amendment to the California Desert Conservation Area Plan 1980 and Sikes Act Management Plan with the California Department of Fish and Game. Bureau of Land Management, California Desert District, Moreno valley, California.
- Bureau of Land Management (BLM). 2008. Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Evaluate Solar Energy Development, Develop and Implement Agency-specific Programs, Conduct Public Scoping Meetings, Amend Relevant Agency Land Use Plans, and Provide Notice of Proposed Planning Criteria. Federal Register 73:30908-30912.
- Bureau of Land Management (BLM). 2009a. Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications. Federal Register 74:31307-31309.

Bureau of Land Management (BLM). 2009b. Notice of Proposed Withdrawal and Opportunity for Public Meeting; Arizona, California, Colorado, Nevada, New Mexico, and Utah. Federal Register 74: 31308-31309.

Crawford, C.S. 1988. Surface-active arthropods in a desert landscape: Influences of microclimate, vegetation, and soil texture on assemblage structure. *Pedobiologia* 32, 373-385.

Crawford, C.S. and M.K. Seely. 1987. Assemblages of surface-active arthropods in the Namib dunefield and associated habitats. *Revue de Zoologie Africaine* 101, 397-421.

Desert Tortoise Recovery Office. 2009. Email Correspondence on 7-09-2009 with Linda Allison regarding density of desert tortoises near the proposed Solar Energy Study Areas.

Gehring, J.L., P. Kerlinger, and A.M. Manville II. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. *Journal Ecological Applications* 19(2): 505-514.

Holm E. and C.H. Scholtz. 1980. Structure and pattern of the Namib Desert dune ecosystem at Gobabeb. *Madoqua* 12, 3-39.

Kerlinger, P. 1995. How birds migrate. Stackpole Books, Mechanicsburg, PA. 228 pp.

Mabee, T.J., P.M. Sanzenbacher. 2008. A radar study of nocturnal bird and bat migration at the proposed hatchet ridge wind project, California, fall 2007. Final Report - Prepared for Hatchet Ridge Wind, LLC, Portland, OR and Western Ecosystems Technology, Inc. Cheyenne, WY. February 2008.

Manville, A.M., II. 2004. Prairie grouse leks and wind turbines: U.S. Fish and Wildlife Service justification for a 5-mile buffer from leks; additional grassland songbird recommendations. Division of Migratory Bird Management, USFWS, Arlington, VA, peer-reviewed briefing paper. 17 pp.

Manville, A.M. II. 2007. Comments of the U.S. Fish and Wildlife Service submitted electronically to the FCC on 47 CFR Parts 1 and 17, WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on Migratory Birds." February 2, 2007. 32 pp.

Manville, A.M., II. 2009. Towers, turbines, power lines, and buildings – steps being taken by the U.S. Fish and Wildlife Service to avoid or minimize take of migratory birds at these structures. In C.J. Ralph and T.D. Rich (editors). Proceedings 4th International Partners in Flight Conference: Tundra to Tropic, February 2008, McAllen, TX. 11 pp (in press).

Nevada Division of Wildlife (NDOW). 2000. Conservation Agreement for the Amargosa Toad (*Bufo nelsoni*) and co-occurring sensitive species in the Oasis Valley, Nye County, Nevada.

Nevada Partners in Flight Working Group. 1999. Nevada Partners in Flight Bird Conservation Plan. November 29, 1999.

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, 18p.

Pavlik, B.M. 1985. Sand dune flora of the Great Basin and Mojave Deserts of California, Nevada and Oregon. *Madrono* 32, 197-213.

Pitts, J.P., J.S. Wilson, K.A. Williams, and N.F. Boehme. 2009. Velvet Ants (Hymenoptera: Mutillidae) of the Algodones Sand Dunes of California, U.S.A. *Zootaxa* 2131, 1-53.

Romin, L.A., and J.A. Muck. 2002. Utah Field Office guidelines for raptor protection from human and land use disturbance. U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake. 16 pp.

Stamos, C.L., Martin, P., Nishikawa, T., and Coz, B.F. 2001. Simulation of ground-water flow in the Mojave River Basin, California: U.S. Geological Survey Water-Resources Investigations Report 01-4002, Version 1.1.

U.S. Fish and Wildlife Service. 2008a. DRAFT Range-wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.

U.S. Fish and Wildlife Service. 2008b. Birds of Conservation Concern 2008. U.S. Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp.

U.S. Fish and Wildlife Service. 2008c. U.S. Draft revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California. 209 pp.

U.S. Fish and Wildlife Service. 2003. Interim Survey Methodology for the Northern Aplomado Falcon (*Falco femoralis septentrionalis*) in Desert Grasslands. Albuquerque, New Mexico. 16 pages.

Williams, T.C., J.M. Williams, P.G. Williams, and P. Stokstad. 2001. Bird migration through a mountain pass studied with high resolution radar ceilometers, and census. *The Auk* 118(2):389-403. 2001.

Thank you for your comment, Stefanie Stavrakas.

The comment tracking number that has been assigned to your comment is SolarM60233.

Comment Date: September 14, 2009 15:17:22PM
Solar Energy Development PEIS
Comment ID: SolarM60233

First Name: Stefanie
Middle Initial:
Last Name: Stavrakas
Organization: U.S. Fish and Wildlife Service
Address: 4401 N. Fairfax Dr.
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22203
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: 041865-signed.pdf

Comment Submitted:



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Washington, D.C. 20240

SEP 14 2009



In Reply Refer To:

FWS/AFHC-DHRC-CPA/041865

Lisa Jorgensen, Department of Energy
Linda Resseguie, Bureau of Land Management
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, Illinois 60439

Dear Ms. Jorgensen and Ms. Resseguie:

U.S. Fish and Wildlife Service (Service) has reviewed the subject notice and has prepared an enclosure detailed comments pursuant to the: (1) Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq.*); (2) Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*); (3) Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703; (4) Bald and Golden Eagle Protection Act (BGEPA), 16 U.S.C. 668; (5) the Clean Water Act (CWA); (6) National Wildlife Refuge System Administration Act of 1966; (7) Section 211 of the Energy Policy Act of 2005 (EPAAct), and other applicable Executive Orders, regulations and policies.

As stated in this Notice of Availability (NOA), the Solar Programmatic Environmental Impact Statement (PEIS) will help the Bureau of Land Management (BLM) identify lands appropriate for solar energy development and establish a comprehensive list of mitigation requirements applicable to all future solar energy development on BLM administered lands. As part of the Solar PEIS, this NOA designates 24 proposed Solar Energy Study Areas (SESA) that will be evaluated to determine if the SESAs could be designated as solar energy zones (SEZs) to be included in the PEIS. The BLM and the Department of Energy (DOE) will conduct in depth environmental analyses of these 24 SESAs to determine whether these site-specific locations are suited for large-scale production of solar energy.

The attached comments supplement those submitted last year in response to the Notice of Intent (please incorporate by reference our letter to DOE and BLM dated July 7, 2008) and address most of the 24 SESAs for potential project effects on fish and wildlife and their habitats. It is critically important that direct, indirect and cumulative effects to fish, wildlife, plants, and their habitats are evaluated and that all reasonably foreseeable developments are identified and analyzed. It is our understanding that this PEIS provides a general evaluation of potential

TAKE PRIDE
IN AMERICA 

Ms. Jorgensen

2

impacts to fish and wildlife resources from subsequent development and that the 24 SESAs identified within the NOA that qualify as SEZs will be analyzed as site-specific areas pursuant to the National Environmental Policy Act and other applicable laws.

Thank you for the opportunity to provide comments for this action. More detailed comments are also enclosed. We look forward to continued collaboration with you on the development of your PEIS. Please contact Stefanie Stavrakas at (703) 358-2161, if you have any questions or need further information.

Sincerely,


Assistant Director for Fisheries
and Habitat Conservation

Enclosure

U.S. Fish and Wildlife Service
Division of Habitat and Resource Conservation
Comments on the

Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications

The Bureau of Land Management (BLM) and Department of Energy (DOE) issued a Notice of Availability (NOA) supplementing the Solar Programmatic Environmental Impact Statement (PEIS) with the designation of 24 proposed Solar Energy Study Areas (SESAs; BLM 2009a) to determine if these site-specific areas could be used for utility-scale Solar Energy Zones (SEZs) for inclusion in the PEIS. Concurrently and on behalf of the BLM, the Secretary of the Interior has proposed to withdraw these lands from other multiple uses for a period of 20 years to protect and preserve the SESAs for future solar development (BLM 2009b). For a period of 2 years, BLM will segregate the proposed lands from other uses until it can carry out various analyses in support of a final decision on the withdrawal application. The identification, analysis, and designation of SESAs/SEZs as dedicated sites for solar energy development are aimed at meeting the Secretary's policy goals set forth in May 2009.

BLM and DOE identified the proposed SESAs based on the following criteria: a minimum size of 2,000 acres; near existing roads; near existing or designated transmission line routes; and have a slope of less than 5 percent. The proposed SESAs constitute 676,048 acres of BLM-managed, public lands and are partitioned as described in Table 1.

Table 1. Proposed solar energy study areas by state

State (# of SESAs)	Acres	Megawatt Capacity at Build-out
Arizona (3)	16,492	1,832 - 3,298
California (4)	351,048	39,005 - 70,210
Colorado (4)	20,910	2,323 - 4,182
Nevada (7)	149,375	16,597 - 29,875
New Mexico (3)	121,459	13,495 - 24,292
Utah (3)	16,763	1,863 - 3,353
Total (24)	676,048	75,115-135,210

The U.S. Fish and Wildlife Service (Service) submits the following general analyses applying to all 24 SESAs, and specific analyses for 20 of the 24 SESAs identified in the NOA.

General Comments and Recommendations

The comments contained in our July 7, 2008 correspondence relative to the following issues remain important and applicable (not in any particular order):

- Clearly stated purpose and need;
- Alternatives considered;
- Exclusion of special management areas and consistency with existing land and resource management plans;
- Programmatic planning process and project site selection;
- Avoidance, minimization, and mitigation and compensation measures;
- Cumulative effects and analysis;
- Cost analysis;
- Trust resources and species of concern;
- Ground water; and
- Policies and incentives.

We encourage the BLM and DOE to carefully consider these issues as they move forward in drafting the PEIS. In addition, we offer the following:

While the Federal Register notice provided some information on the methods used to identify the proposed SESAs, we are unclear as to how specific resource factors (i.e., biological, cultural, Tribal, visual, etc.), land uses (i.e., recreation and military, etc.), and proximity to load centers and other infrastructure were used in identifying proposed SESA boundaries. Without fully understanding the screening process used to select SESA locations, we have a more difficult task in providing constructive comments relative to potentially significant impacts. The Service recommends that the BLM and DOE utilize landscape level analysis with a spatial decision support system and then identify the specific resource factors and methods used in identification of the proposed SESA boundaries in the PEIS. This will enable prioritization of projects and appropriate siting relative to economic feasibility, transmission infrastructure, and fewer impacts to environmental, cultural, and military resources. This type of approach may also aid in the identification of mitigation opportunities and alternative development and transmission scenarios. The Service also recommends that BLM and DOE base final SEZs on resource values without consideration of existing right-of-way applications.

Given the potential extent, magnitude, and long-term nature of habitat impacts associated with solar energy development, the Service also recommends that the PEIS place limits on projects within the proposed SESAs that will use technologies that have not been commercially tested or proven to avoid unnecessary impacts to wildlife and habitat. The BLM has stated that under its policies and regulations, it cannot approve or disapprove projects based on the type of technology proposed. Because of these limitations, the Service recommends that the BLM approve these types of projects in phases to minimize the amount of unnecessary habitat loss in the event that the project proves to be unfeasible, or is rendered economically obsolete by technological advances during the phased development schedule. Alternatively, the BLM could

identify specific areas within the proposed SESAs to serve as research and development or pilot sites on areas with lowest biological function and value to further perfect technological capabilities.

Desert Tortoise

As discussed in our July 7, 2008, letter, the desert tortoise (*Gopherus agassizii*), listed as threatened under the Endangered Species Act of 1973, as amended (ESA), in the state of California, is at the greatest risk of being significantly affected by solar energy development and transmission through extensive habitat loss, population and habitat fragmentation, changes in water flow (both surface and ground water), introduction of environmental contaminants, mortality by vehicle encounters, increased raven predation, alteration of habitat due to the introduction of non-native plant species, and alteration of adjacent desert tortoise conservation areas through edge effects. Given the large area associated with the proposed SESAs and the projects themselves, we anticipate that development of many projects would involve translocation of desert tortoises out of their existing home ranges, which could result in potentially significant impacts to both translocated individuals and individuals that are resident to any identified translocation site. We recommend that any analysis of the effects of translocation also include potential effects to resident desert tortoises in proposed recipient sites.

To address apparent conflicts with the solar program and desert tortoise, we have been working closely with local BLM offices to identify survey and minimization strategies that will aid in moving renewable energy projects forward. Discussions of each proposed SESA will include any information we have for the species under our purview in these areas. For the desert tortoise, we have provided some information on potential population densities based on line distance sampling (LDS) and available habitat within each proposed SESA based on the recently released desert tortoise habitat model (Nussear et al. 2009). The most important consideration when extrapolating these data to the specific SESAs is that the LDS long-term monitoring transects are in some cases based on very few transects or non-random placement of transects, which can confound the results. In addition, we do not advise making determinations relative to potential habitat based solely on the U.S. Geological Survey's (USGS) model absent on-the-ground verification of the outputs. Therefore, we are providing input on densities and available habitat within the proposed SESAs to assist DOE and BLM with the analysis on the potential magnitude of impacts. We also highly recommend site-specific surveys to estimate densities. We recommend that BLM and DOE use these more detailed data to refine SESA boundaries by excluding higher function and value habitats from development where sufficient acreage is otherwise available to achieve renewable energy objectives.

Groundwater, Wetlands, and Other Aquatic Resources

Because vast amounts of water are required for some proposed solar energy projects, these projects have the potential to significantly impact listed and sensitive species dependent on the regional ground water flow systems that a given proposed SESA overlies. Small changes in ground water levels, water quality, or flow patterns may significantly impact desert fishes and spring snail species, as many inhabit spring systems that these flow systems support. We recommend BLM require applicants to disclose their water source and determine whether impacts to listed and sensitive species would occur because of the proposed project's water consumption. The PEIS should identify requirements for project planning, construction, and

operation to avoid, minimize, and mitigate impacts to listed and sensitive species that are dependent on surface and ground water resources. As mentioned in our previous comments on the PEIS, we recommend BLM include in their policy a requirement that project proponents must use technology that uses minimal amounts of water for power production. The BLM and DOE should incorporate measures to monitor and adaptively manage for ground water resources that may be affected by development of solar energy projects within the SESAs.

Under Executive Order 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural and beneficial values. We recommend that BLM and Department of Energy (DOE) contact the U.S. Army Corps of Engineers (Corps) for permitting requirements under Section 404 of the Clean Water Act if your proposed action could impact wetlands. These habitats should be conserved through avoidance or mitigation should occur to ensure no net loss of wetlands functions and values. The Service recommends that established BLM best management practices (BMPs) for wetlands be used during construction.

Migratory Birds and Bats

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds, nests, and eggs, except as permitted. The Service recommends the 24 SESAs specifically evaluate and plan mitigation for potential project impacts to migratory birds. The Service recommends that all 24 SESA sites be evaluated for habitat fragmentation for species that require large habitat patches, and whether habitat enhancement efforts may minimize displacement impacts for some species¹. Additionally we recommend habitat impacts for species on the Service's 2008 list of Birds of Conservation Concern (BCC) be evaluated for each of the 24 SESAs (<http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf>). The BCC List identifies those migratory and non-migratory avian species that, without additional conservation actions, may be considered candidates for listing under the ESA.

To help meet responsibilities under Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds), we also recommend construction activities occur outside the general migratory bird nesting and breeding season of February through July. To minimize adverse impacts to birds protected under the MBTA, tree stands or other adequately vegetated areas should be surveyed for the presence of nesting birds during the general migratory bird nesting season of February through July. Disturbance to nesting areas should be avoided until nesting is completed.

Birds at lower elevation appear to be influenced by local topography (Williams et al. 2001). Relative to other bird groups migrating over land, passerines tend to migrate at lower flight altitudes, whereas shorebirds and waterfowl tend to migrate at higher altitudes (Kerlinger 1995). Williams et al. (2001) observed that the lowest 300 meters of bird migration probably represented the densest stratum of nocturnal migrants. Mabee and Sanzenbacker (2008) reported

¹ The Service, for example, recommended a 2.25 mi buffer of un-fragmented habitat between leks of Lesser Prairie-chickens and development sites. For Greater Prairie-chickens, the Service recommended a 3.5 mile buffer of un-fragmented habitat, and for Sage-grouse, we recommended more than an 11-mi buffer between leks and development sites (Manville 2004) – which would include at least the 3 solar energy projects under review where Sage-grouse are present in Utah.

that the majority of nocturnal passerine migrants fly below 600 meters above ground level. Understanding the behavior of nocturnal bat migrants is also important for conservation because development for projects such as communication towers, wind-powered generators and electric lines are constantly increasing. The Service recommends that the construction of new transmission lines to solar facilities include a detailed study of bird and bat behavior at the precise location where construction is proposed to identify species that are particularly vulnerable, which sites are intensively used, and hence the optimum transmission line location.

Birds of prey such as eagles, hawks, and owls frequently use power lines and support structures for perching and nesting. These raptors can be electrocuted while using power lines, thus contributing to the cumulative mortality factors affecting these biologically important and environmentally sensitive birds. Standard techniques have been developed to prevent raptor electrocutions at electric distribution lines. This guidance is included in the publication *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006* by the Avian Power Line Interaction Committee². The Service recommends using the APLIC guidance and suggested BMPs to minimize power line collisions and electrocutions.

Using the above-referenced guidance, new or modified electric distribution lines should be designed and constructed to prevent the electrocution of raptors. Proper design includes separation of energized hardware or insulation of wires where sufficient separation cannot be attained. Closely spaced transformer jumper wires, bushing covers, protective cutouts, or surge arresters can be made safe for raptors by use of special insulating material. The use of grounded steel cross-arms braces should be avoided. These measures should be implemented on each line and pole associated with the new or converted lines as necessary.

We also recommend that BLM carefully review potential impacts to nesting and resident Bald and/or Golden Eagles under the new “take” provisions of the Bald and Golden Eagle Protection Act (50 CFR 22.26 and 50 CFR 22.27) where taking is associated with, but is not the purpose of the solar development activity, and cannot practicably be avoided. These activities would include both disturbance and lethal take³.

Where communication towers may be an issue, based on the need for 2-way communications, the Service recommends that BLM use BMPs recommended to the Federal Communications Commission (Manville 2007). These include the use of un-guyed, unlit towers, less than 200 ft above ground level where towers are necessary. Whenever possible, antennas should be placed on existing structures. Steady burning lighting at night should be avoided where possible, using motion or heat sensors on security lighting instead (Manville 2007).

In addition to coordination with the Service, it is important to develop project design standards and monitoring requirements in cooperation with state wildlife agencies and the state Partners in

² The document may be requested from Edison Electric Institute, P.O. Box 266, Waldorf, Maryland, 20604-0266; telephone (800) 334-5453;

http://www2.eei.org/products_and_services/descriptions_and_access/suggested_pract.htm; or may be requested from Linda Spiegel (916) 654-4703; lspiegel@energy.state.ca.us.

³ A draft Environmental Assessment is available on the Service's website. The final EA and new regulation are anticipated to be released to the public in fall 2009.

Flight contact. These standards and practices should be regularly evaluated and revised to ensure that they are effective in lessening the detrimental effects of agency actions on migratory bird populations.

We recommend the BLM and DOE incorporate the following mitigation measures to minimize impacts to migratory birds. These general measures include the following:

- Avoid the breeding seasons
- Use spatial buffer when appropriate
- Minimize the footprint
- Provide habitat compensation
- Provide restoration for short-term projects
- Provide offsite replacement or enhancement for long-term impacts
- Any inventory, survey, or monitoring data should be provided to the state wildlife agency, heritage program, or coordinated bird monitoring program.

Proposed SESAs within Arizona:

For all three SESAs within Arizona: Proposed Bullard Wash SESA (8,201 acres), Proposed Brenda SESA (4,321 acres), and Proposed Gillespie SESA (3,970 acres)

The desert tortoise (*Gopherus agassizii*) may be present in the action area and within the Sonoran Desert. Although the Sonoran Desert population of desert tortoise is not protected by Federal law at this time, the Service was petitioned on October 9, 2008 to consider listing the Sonoran desert tortoise population as threatened or endangered under the ESA. We recommend the project proponent contact the Arizona Game and Fish Department regarding proper handling and mitigation measures. We recommend that any Biological Assessment (BA), prepared for the purpose of section 7 consultation, evaluate potential effects to the Sonoran Desert population of desert tortoise as the species' status could change prior to project completion.

Additionally, these project areas are likely traversed by numerous washes that are regulated as jurisdictional waters under section 404 of the Clean Water Act. We recommend the project proponent contact the Corps to evaluate the need for a permit. If a permit is needed, we recommend an analysis of effects on the biological function of jurisdictional waters, and the development of a mitigation plan that addresses the totality of project-related impacts.

Proposed Bullard Wash SESA (8,201 acres)

The Gila topminnow (*Poeciliopsis occidentalis occidentalis*) may be present in the action area at Yerba Mansa Spring along the Santa Maria River near Date Creek Ranch. We recommend this species be considered in the BA prepared for the purpose of section 7 consultation.

Proposed Gillespie SESA (3,970 acres)

The southwestern willow flycatcher (*Empidonax traillii extimus*), the Yuma clapper rail (*Rallus longirostris yumanensis*), and the yellow-billed cuckoo (*Coccyzus americanus*), may be present in the action area, likely along the Gila River. Both the flycatcher and rail are listed as

endangered under the ESA, while the cuckoo is a candidate for listing. We recommend these listed species be considered in the BA prepared for the purpose of section 7 consultation. We recommend inclusion of candidate species in the event that its status may change prior to project completion.

Additionally, this project could conceivably provide habitat for the Tucson shovel-nosed snake (*Chionactis occipitalis klauberi*). On July 29, 2008, the Service published a 90-day finding that a petition to list the Tucson shovel-nosed snake presented substantial information indicating that listing the species may be warranted. Again, we recommend consideration in the BA in the event the species' status changes prior to project completion.

Proposed SESAs within California:

Proposed Pisgah (26,282 acres) and Iron Mountain (109,642 acres) SESAs

Potentially Significant Impacts to Desert Tortoises and their Habitat

Based on the recently released USGS desert tortoise habitat suitability model (Nussear et al. 2009) and the location of the SESA boundaries, we estimate that the majority of the proposed Pisgah and Iron Mountain SESAs contain potential desert tortoise habitat that could be lost due to development of large-scale solar energy facilities. Depending on the need to install or upgrade transmission facilities, we anticipate potential additional losses of habitat outside of the proposed SESAs, including impacts to the Ord-Rodman and Chemehuevi designated critical habitat units. Within the PEIS cumulative effects analysis, we recommend that the BLM and DOE consider these habitat losses in combination with other sources of existing and reasonably foreseeable habitat loss in the Western Mojave and North Colorado recovery units. Given the difficulty and duration of restoration of desert tortoise habitat following large-scale disturbances, we recommend that the BLM consider a sufficient time scale when analyzing the significance of the effects of habitat loss on the desert tortoise.

In 2007, LDS transects were performed by the Service's Desert Tortoise Recovery Office in areas that overlap portions of the proposed Pisgah SESA, and estimated a density of 3.5 desert tortoises per square kilometer over the 2,682 square kilometers that their survey covered (L. Allison, Service, pers. comm. 2009). If we assume that the density across the proposed Pisgah SESA is similar to that within the LDS survey area, full build-out (i.e., development of all suitable habitat) of the proposed Pisgah SESA has the potential to result in adverse impacts to as many as 260 desert tortoises through direct injury and mortality or through adverse effects associated with translocation. LDS surveys of the Chemehuevi Desert Wildlife Management Area (DWMA), immediately adjacent to the proposed Iron Mountain SESA, estimated a desert tortoise density of approximately five individuals per square kilometer within the 4,038 square kilometer DWMA. While these surveys covered areas of good and poor areas of the DWMA, it is likely that overall average density within the proposed Iron Mountain SESA is less because much of the SESA is at very low elevation. Regardless of the density estimate, the large size of the proposed SESA and the amount of potential desert tortoise habitat within it means that full build-out of the proposed Iron Mountain SESA would potentially impact from several hundred to more than 1,000 desert tortoises.

In addition, fragmentation from development of the proposed Iron Mountain and Pisgah SESAs could potentially affect population connectivity and long-term genetic exchange and demographic augmentation between desert tortoise populations, including restriction of gene flow between DWMAs. The construction of large-scale solar energy projects within the proposed Pisgah SESA could potentially exacerbate fragmentation of habitat between the Ord-Rodman and Superior-Cronese DWMAs. Based on a review of the USGS desert tortoise habitat model, development of some higher elevation portions of the Iron Mountain SESA are likely to result in the loss of some of the higher quality desert tortoise habitat between the Pinto Mountains and Chemehuevi DWMAs. This loss may add to existing restrictions in gene flow associated with the very low elevation areas around Bristol, Cadiz, and Danby Lakes. We must stress that we do not know the current level of gene flow between any of these units, nor do we know how restriction of gene flow would affect our ability to recover the desert tortoise and provide for long-term population stability within DWMAs. However, there is evidence that gene flow has historically occurred between populations over large portions of the Mojave Desert, which may have important evolutionary consequences for the species.

Potential Impacts to Migratory Birds, Mojave Tui Chub, and Riparian Habitats

Depending on the types of solar technologies accommodated by the proposed SESAs, the BLM may need to investigate potentially significant impacts to riparian and aquatic resources at Camp Cady, Afton Canyon, and at other springs and seeps near these proposed SESAs. The USGS ground water flow model for the Mojave River identifies areas near Troy Lake in the western portion of the proposed Pisgah SESA as providing additive recharge for the ground water system that supports riparian and aquatic communities at Camp Cady and Afton Canyon (Stamos et al. 2001). This regional ground water system interconnects with the floodplain aquifer of the Mojave River. The existing Mojave River ground water flow system is currently in a state of overdraft due to increases in pumping since the 1940s (Stamos et al. 2001). Cumulative overdraft in this portion of the Mojave River Basin between 1950 and 1999 amounted to 1.1 million acre-feet (Stamos et al. 2001). Additive pumping due to large-scale, wet-cooled, solar facilities within some portions of the proposed SESA could potentially exacerbate the ground water overdraft in this area and possibly result in further degradation of riparian and aquatic habitats along the Mojave River. Any loss or degradation of these habitats would negatively impact a variety of neotropical migratory bird species that utilize these areas as stopover sites during migration or as nesting areas. Camp Cady also provides artificial refugia for the federally endangered Mojave tui chub. Reduction in ground water resources could significantly impact these refugia by making it difficult to pump water. Therefore, the PEIS should fully analyze the potential for significant impacts to these ground water dependent resources.

Proposed Imperial East SESA (12,830 acres)

Desert Tortoise

The USGS desert tortoise habitat model does not cover the proposed Imperial East SESA, nor is it contained within or adjacent to any LDS monitoring strata analyzed by the Service. The area occurs outside the known distribution of desert tortoise, which we assume is absent from the area.

Potential Impacts to Listed Birds and Wetland and Riparian Habitats

The proposed Imperial East SESA is east of the agriculture in the Imperial Valley, west of the Algodones Dunes, north of the International Boundary with Mexico, and south of Interstate 8. This area encompasses a sensitive wetland region occupied by the federally endangered Yuma clapper rail (*Rallus longirostris yumanensis*) and the State threatened California black rail (*Laterallus jamaicensis coturniculus*). This wetland has formed as a result of leakage from the unlined All-American Canal funded by the Bureau of Reclamation and is operated by Imperial Irrigation District. In planning for the lining of the canal, it was determined that the loss of wetlands of this extent could not be mitigated. The Bureau of Reclamation's chosen alternative (as identified in their Record of Decision of July 29, 1994) was to construct a parallel concrete-lined canal up to Drop 3 but not including the wetland area between Drops 3 and 4. Wetland losses in the lined segments were to be offset with new creation in the wetland area that would remain. This alternative was the subject of the Service's Biological Opinion (February, 8, 1996), in which we concurred that the action was not likely to adversely affect Yuma clapper rails because impacts to the habitat would be avoided. The enhancements required to offset losses along the lined portion are well underway, and both rail species have been detected consistently in the wetland complex. Because of the sensitivity of these areas, we recommend that BLM avoid these areas in future designations of the Imperial East SESA.

Proposed Riverside East SESA (202,295 acres)

The proposed Riverside East SESA is a large and sprawling area mostly on the north side of Interstate 10 (I-10) from Joshua Tree National Park east to the agricultural area around the City of Blythe, California. The central portion of the proposed SESA wraps around and appears to be immediately adjacent to the western, southern, and eastern boundaries of the Palen/McCoy wilderness area. The eastern portion of the proposed SESA in McCoy Wash is between the Rice Valley, Big Maria Mountain and Palen/McCoy wilderness areas, and the agricultural area of Blythe. To the west, the proposed SESA surrounds three sides of the southern Coxcomb Mountains in Joshua Tree National Park and the Palen Dry Lake and dune system including the Desert Lily Preserve and Palen Dry Lake Area of Critical Environmental Concern within the Chuckwalla Valley. The potential location of large-scale solar development within these sensitive and remote desert landscapes poses numerous potentially significant impacts that warrant in-depth analysis in the PEIS.

Potentially Significant Impacts to Desert Tortoises and their Habitat

The Riverside East SESA is located immediately adjacent to Joshua Tree National Park and the Chuckwalla DWMA. LDS density estimates from 2007 were 3.5 and 5.0 desert tortoises per square kilometer, respectively (L. Allison, Service, pers. comm. 2009). Note that this site is in the southern part of the Baker Sink, which occurs at very low elevations, and is not included in the USGS model as potential habitat. Because the proposed SESA shares borders with two DWMA's, the habitat is likely suitable for desert tortoises. Even if tortoises are present at low densities, solar development of a site this large is likely to impact numerous desert tortoises. The analysis below illustrates the potential magnitude of impacts using density estimates from neighboring areas.

Although the proposed SESA shares more of its boundaries with the Chuckwalla DWMA, we used the Joshua tree density estimates based on connectivity with the Pinto Basin. Therefore, under these assumptions, full build-out of the 818 square kilometer Riverside East SESA area could adversely affect approximately 2,865 desert tortoises if we assume that the density here is approximately 3.5 desert tortoises per square kilometer. It is our understanding that species-specific surveys have been conducted for the First Solar Project proposed within this proposed SESA; therefore, we recommend additional surveys and other site-specific information be obtained to help refine proposed SESA boundaries, with a defined process to exclude habitat areas with higher function and value where needed to achieve biological objectives on a regional scale. Prioritizing areas with lower population densities for development is imperative to maintain a reasonable level of survival for translocated individuals. As discussed above, the BLM and DOE need to thoroughly assess the effects of translocation on recipient and translocated populations of desert tortoises, as well as the availability of receiver sites where large scale translocation efforts are deemed likely to be successful.

Northern and Eastern Colorado Desert Coordinated Management Plan Context

The proposed Riverside East SESA occurs within the plan area for the BLM's Northern and Eastern Colorado Desert Coordinated Management Plan (NECO; BLM 2002), which is one of six regional amendments to the California Desert Conservation Area (CDCA) Plan. The NECO plan focused on several aspects of BLM's multiple use mandate including biological considerations. Stated biological purposes of the NECO plan include preventing the need for new listings as special status species (BLM 2002; p. 2-12), protecting connectivity between protected communities (BLM 2002; p. 2-58), and considering the fragmenting effects of new projects.

Under NECO, the term "Multi-species Conservation Zone" was defined to include existing restricted lands (BLM Wilderness Areas, Joshua Tree National Park, and Chocolate Mountain Aerial Gunnery Range lands), DWMA's, and Wildlife Habitat Management Areas (WHMA's). WHMA's identified some of the areas that support special status species and their habitats including dune, playa, and desert dry wash communities that would likely require special consideration, protection, and/or management (BLM2002; p. 2-2). Some regulatory elements were applied to WHMA's, such as closure of some routes of travel and closure of some dune and playa areas (Palen and Ford Dry Lake and associated dune systems) and requiring mitigation in some WHMA's as a disincentive to development in these locations (e.g., 3:1 habitat compensation ratio for disturbance to desert dry wash woodland communities) (BLM 2002; pgs. 2-57 and 4-83). A large portion of the proposed Riverside East SESA overlaps with several WHMA's (BLM 2002; Map 2-21), which may preclude implementing or achieving the conservation objectives for many of the approximately 60 special status plants, animals, and natural communities in the NECO plan (BLM 2002; p ES-1). The PEIS should fully analyze the extent to which these conservation objectives would not be realized, after application of all feasible mitigation measures to avoid and minimize the significance of these adverse effects.

NECO Wildlife Habitat Management Areas

Along I-10 between the Chuckwalla DWMA and the Chuckwalla Valley and the Chemehuevi DWMA to the north is a WHMA with the specific role of providing connectivity for the desert tortoise between these areas (BLM 2002; Map 2-21). The Riverside East SESA overlaps this

WHMA on the north side of I-10, potentially disrupting desert tortoise connectivity anticipated in NECO as generally recommended in the desert tortoise recovery plan (Service 2008c).

The proposed Riverside East SESA also overlaps most of Palen and Ford dry lakes and nearby dune systems and their associated sand source and transport corridors, which are designated as a combination of WHMAs: dune and playa, desert dry wash woodland, and multi-species (BLM 2002; Map 2-20, 3-3, and 2-21). Dune systems generally support high biological diversity with unique and often endemic species assemblages (Andrews et al 1979; Crawford 1988; Pavlik 1985; Pitts et al 2009; Crawford and Seely 1987; Holm and Scholtz 1980). Some of the species unique to sand dune systems are included in NECO's list of special status species such as the Mojave fringe-toed lizard (*Uma scoparia*).

The proposed Riverside East SESA does not appear to consider the protection of these dune systems and their associated sand source and sand transport corridors as reflected under NECO. If full build-out occurs within this proposed SESA, the development would likely alter and permanently degrade these large dune systems. NECO requires mitigation in these dune and playa areas to "discourage projects on these very rare communities" (BLM 2002; pgs. 2-57 and 4-83). Designating a SESA on these dune systems and playas appears to contradict the intended purpose of the WHMA designation and would result in permanent alteration of these unique habitats. Further, the proposed SESA on dune and playa WHMAs appears to be in conflict with a major intended purpose of NECO to help avoid threats and alleviate the need for potential future listing of species since dune systems are likely to contain high biodiversity with many restricted species (e.g., the Mojave fringe-toed lizard and other endemic or undescribed taxa).

Other areas of the proposed Riverside East SESA such as parts of the McCoy Wash area and portions south of I-10 within the SESA are designated as desert dry wash woodland and multi-species WHMAs (BLM 2002; Map 2-21 and 3-3). Proposing SESAs over these WHMAs appears to conflict with the intended purpose of discouraging projects that would degrade and eliminate this high function and value wildlife habitat (BLM 2002; p. 3-29). Desert dry wash woodlands contain high species richness, especially for migratory songbirds and resident game bird species. The desert dry wash woodlands of eastern Riverside County have been identified by the Audubon Society as an Important Bird Area (IBA) (Cooper 2004) and the Ironwood forest in the upper reaches of McCoy Wash were identified by the BLM as a Unique Plant Assemblage in the 1980 CDCA Plan (BLM 1980). The BLM and DOE should consider effective avoidance and mitigation measures for these natural communities within the proposed Riverside East SESA. These dry wash woodlands typically occur along washes and in floodplains that pose feasibility and logistical problems to solar development. Therefore, a detailed analysis in the PEIS is needed to determine the applicability of particular solar technologies and other mitigation measures that would be less disruptive to the many braided wash systems that typify McCoy Wash and other areas of the SESA.

In general, we recommend proposing SESAs in areas that do not overlap with the specific resources that the WHMAs were established to conserve.

Fragmentation

As described above, the size, location, and shape of the proposed Riverside East SESA appears to maximize fragmentation of wildlife populations north and south of I-10 for more than 40 miles. We expect that there are several existing culverts and overpasses that may be used by wildlife to move across I-10 where the Riverside East SESA is proposed and recommend that information relative to existing crossings and wildlife species that may be using them is analyzed in the draft PEIS.

The proposed Riverside East SESA closely surrounds the southern end of the Coxcomb Mountains in Joshua Tree National Park. Developing solar energy projects in this area may affect the use of the mountains by desert bighorn sheep (*Ovis canadensis nelsoni*). We request that the PEIS provide information about the use of the southern end of the Coxcomb Mountains by desert bighorn sheep and an analysis of effects on desert bighorn sheep resulting from project development in this area, including connectivity to other desert bighorn sheep populations in nearby mountain ranges.

Proposed SESAs within Nevada:

Proposed Amargosa Valley SESA (32,699 acres)

Potentially Significant Impacts to Desert Tortoises and their Habitat

The federally listed desert tortoise (Mojave population) may be present within the proposed Amargosa Valley SESA. Specific information on density of desert tortoises for the proposed Amargosa Valley SESA is not currently available. LDS transects have been conducted south of this SESA; however, extrapolating those densities to this particular area would not be an appropriate use of the data. A number of desert tortoises, however, were observed anecdotally along U.S. Highway 95 between Nevada State Route (SR) 373 (SR 127 in California) in Amargosa Valley and Indian Springs. The USGS model identifies the proposed Amargosa Valley SESA as potential desert tortoise habitat (Nussear et al. 2009); therefore, we recommend site-specific surveys to estimate desert tortoise densities prior to any solar energy development projects. If you determine that desert tortoises occur within the SESA, we ask that you disclose project impacts to the desert tortoise and its habitat, and provide avoidance, minimization and mitigation measures for impacts to desert tortoise as appropriate in the PEIS.

Potential Impacts to Ground Water and Ground Water Dependent Species

The Service's Nevada Fish and Wildlife Office works closely with the BLM on ground water issues relative to renewable energy development within and adjacent to the Amargosa Desert hydrographic basin and previously submitted two memoranda to the BLM's Southern Nevada District Manager regarding our concerns. These include the following:

- The Ash Meadows National Wildlife Refuge is located within the Amargosa basin and encompasses 23,000 acres of spring-fed wetlands. The refuge is a complex of thermal springs and was established to protect 12 federally listed threatened and endangered plant and wildlife species, including the endangered Devils Hole pupfish (*Cyprinodon diabolis*). Devils Hole is a 40-acre disjunct unit of Death Valley National Park that

occurs within the boundaries of the refuge. The refuge provides habitat for at least 24 plants and animals that occur nowhere else in the world.

- The Ash Meadows region is one of the major discharge areas within the regional Death Valley ground water flow system (of which the Amargosa basin is a subunit) of southern Nevada and adjacent California. Ground water recharge relies primarily on precipitation within the basin, and discharge is influenced by climatic conditions and ground water pumping. These factors also impact the water level in Devils Hole.
- Ground water development in the Amargosa basin in the 1960s and early 1970s was determined to have had a negative impact on the water level in Devils Hole and thereby population viability of the pupfish. A Supreme Court decision in 1976 upheld a lower court ruling that established a minimum water level threshold for Devils Hole in order to protect the pupfish. This decision together with the State-based water right at Ash Meadows and Devils Hole underpins the Federal interest.
- Based on the perennial safe yield relative to the number of existing water rights, the Nevada State Engineer has determined that the Amargosa basin is currently over-allocated (i.e., the volume permitted under existing rights exceeds that which is available by about 33 percent). In response, he has instituted a moratorium on the approval of applications for new water rights and the ability to transfer rights or change points of diversion will be limited. Recent rulings (Ruling 5750 in 2007; 5971 in 2009) and Order 1197 (in 2008) restrict ground water pumping within this basin.
- Service, National Park Service, and USGS hydrologists are greatly concerned with the potential negative effects on the ground water flow system, the species and ecosystems that it supports, and the public interest that could be impacted over time, especially in light of the multitude of proposed renewable energy projects that utilize ground water intensive technologies.
- The PEIS analysis should consider the interconnectedness of the regional ground water basins and the aquatic and terrestrial ecosystems they support. While ground water pumping for one project may have near-term, obvious effects, another project may have effects that are not evident for many years, even decades. The cumulative impacts to ground water and aquatic and biological resources that are dependent upon this system are likely to be significant.
- The PEIS and cumulative effects analyses will be critical in bringing together all of the information relative to the solar technologies being proposed, the amount of ground water necessary to support development and operations of facilities, and other impacts to the environment. The PEIS should explore all possible alternatives and technologies to minimize significant impacts.

The Service was recently petitioned to list the Amargosa toad (*Bufo nelsoni*), a toad species endemic to the Oasis Valley, and 45 species of spring snails under the ESA. Solar development has the potential to directly or indirectly impact 10 of the 45 species of springsnails in the

proposed Amargosa Valley SESA. These species are the Crystal springsnail (*Pyrgulopsis crystalis*), Ash Meadows pebblesnail (*P. erythropoma*), Fairbanks springsnail (*P. fairbanksensis*), Elongate gland springsnail (*P. isolatus*), Distal gland springsnail (*P. nanus*), Median gland Nevada pyrg (*P. pisteri*), Sporting goods tryonia (*Tryonia angulata*), Point of Rocks tryonia (*T. elata*), Minute tryonia (*T. ericae*), and Amargosa tryonia (*T. variegata*).

The Amargosa toad and springsnail species are most at risk from habitat loss and the depletion of ground water resources within their respective hydrologic basins. We recommend that the analysis for this study area include the potential direct and indirect effects to these species and their habitat from the use of ground water associated with solar energy production and maintenance of facilities. We also ask that proposed energy development projects be consistent with the goals and objectives of the multi-agency conservation agreement and its strategy for the Amargosa toad (NDOW 2000). Though no legal protection currently exists for these species, the PEIS should consider incorporating measures to avoid and minimize impacts to these species and their habitats in the interest of avoiding potential future listings.

Proposed Delamar Valley SESA (17,932 acres)

Desert Tortoise

Although the proposed Delamar SESA is not covered by the USGS desert tortoise habitat model, nor is it contained within or adjacent to any LDS monitoring strata, the desert tortoise may occur in low densities in the south portion of study area. Surveys should be conducted to assess impacts to the desert tortoise and its habitat. The PEIS should provide desert tortoise avoidance, minimization, and mitigation measures as appropriate.

Potential Impacts to Ground Water and Ground Water Dependent Species

As discussed above and in our previous comments on the subject project PEIS, potential long-term hydrological effects and impacts to listed and sensitive species as they relate to solar energy projects should be carefully considered. Solar energy projects in the proposed Delamar Valley SESA may affect listed and sensitive species dependent on the White River Valley regional ground water flow system. This system is comprised of the pluvial White River, which extends from Ely in central Nevada to the Moapa Valley in southern Nevada. Small changes in ground water levels, water quality, or flow patterns may impact desert fish species, as many inhabit spring systems that these flow systems recharge. Listed desert fishes, including the White River springfish (*Crenichthys baileyi baileyi*), Hiko White River springfish (*Crenichthys baileyi grandis*), Railroad Valley springfish (*Crenichthys nevadae*), Pahump poolfish (*Empetrichthys latos*), Pahrnagat roundtail chub (*Gila robusta jordani*), White River spinedace (*Lepidomeda albigallis*), Big Spring spinedace (*L. mollispinis pratensis*), and Moapa dace (*Moapa coriacea*), are dependent on recharge from the White River ground water flow system.

Ground water pumping from the system underlying the proposed Delamar Valley SESA has the potential to indirectly affect sensitive species located in adjoining areas such as Pahrnagat Valley. Decreases in water availability within Pahrnagat Valley could adversely affect the foraging and nesting habitat of the endangered southwestern willow flycatcher (*Epidonax traillii extimus*) and candidate, yellow-billed cuckoo (*Coccyzus americanus*). In addition, the Hubbs pyrg (*P. hubbsi*), Pahrnagat pebblesnail (*P. merriami*) and Grated tryonia (*T. clathrata*) (3 of

the 45 springsnails identified in the petition) may be indirectly affected by ground water withdrawal from this system. We recommend that the analysis of this SESA consider the potential indirect effects to these species and their habitat from the use of ground water associated with solar energy production and maintenance of facilities.

Migratory Birds

The PEIS should evaluate solar projects in the proposed Delamar Valley SESA for potential impacts to migratory birds. In particular, a species identified as a priority species by the Partners in Flight Nevada Working Group, Scott's oriole (*Icterus parisorum*) breeds in Yucca forests within the proposed Delamar Valley SESA. Concerns over the loss of Mojave scrub habitat, particularly Joshua tree stands, have resulted in its selection as a species of priority focus for the Nevada Partners in Flight, Bird Conservation Plan (PIF 1999). We recommend Joshua tree stands be avoided and land clearing, or other surface disturbance be conducted outside the avian breeding season to avoid potential destruction of bird nests or young, or birds that breed in the area. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Proposed Dry Lake SESA (16,516 acres)

Potential Impacts to Desert Tortoises and their Habitat

The proposed solar energy projects in the proposed Dry Lake SESA may affect the desert tortoise. LDS transects have been sampled in the vicinity of the proposed Dry Lake SESA, which is immediately adjacent to the Mormon Mesa desert tortoise critical habitat unit and identified as potential habitat by the USGS model. Results of LDS yield density estimates of 1.6 to 3.2 desert tortoises per square kilometer over the survey area (Service 2008a, L. Allison, Service, pers. comm. 2009). Applied across the proposed Dry Lake SESA, full build-out of this area has the potential to result in adverse effects to 107 to 213 desert tortoises through direct injury, mortality or translocation. Avoidance, minimization and mitigation measures for impacts to desert tortoise should be included as appropriate in the PEIS.

Sensitive Plants

The threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*), listed as critically endangered by the State of Nevada under Nevada Revised Statutes 527.260 and designated as a BLM special status species may occur in or near the Dry Lake SESA. As a State listed plant, this species may not be removed or destroyed at any time by any means except under special permit issued by the State Forester (NRS 527.270). Consideration of this species during project planning and early coordination with the State is important to assist with species conservation efforts and to prevent the need for Federal listing actions in the future.

We are concerned that the solar projects located within the proposed Dry Lake SESA may impact at-risk plant species tracked by the State of Nevada's Natural Heritage Program (Heritage Program). In particular, populations of the rosy two-tone beardtongue (*Penstemon bicolor* subsp. *roseus*) may occur within the proposed Dry Lake SESA. We recommend that a qualified

botanist survey for this species prior to any construction activities within the study area. If individuals are located, we recommend individuals or populations be avoided through fencing and flagging of the area, including an appropriate buffer zone.

Potential Impacts to Groundwater and Water-dependent Species

As mentioned above, springsnails may be indirectly affected by ground water withdrawal from solar projects. The springsnail Flag pyrg (*P. breviloba*), is also included in the springsnail petition, and its habitat may be affected from the use of ground water associated with solar energy production and maintenance of facilities. We recommend that the analysis for this study area include the potential indirect effects to this species and its habitat from the use of ground water associated with solar energy production and maintenance of facilities.

Migratory Birds

The proposed solar energy projects in the Dry Lake SESA may affect migratory birds such as the Le Conte's thrasher (*Toxostoma lecontei*), a bird of conservation concern (Service 2008b), and crissal thrasher (*Toxostoma crissale*). Both species have been identified as priority species in the Partners in Flight Nevada Bird Conservation Plan (in prep). The crissal thrasher occurs in mesquite and other brush along desert washes. The Le Conte's thrasher occurs in saltbush and creosote bush scrub. Therefore, we recommend that areas of mesquite and saltbush within the proposed Dry Lake SESA be avoided. If these habitat types cannot be avoided, minimization and mitigation measures for potential impacts to Le Conte's thrasher and crissal thrasher should be included in the PEIS.

Proposed Dry Lake Valley North SESA (49,775 acres)

Desert Tortoise

Desert tortoises do not occur within the Dry Lake Valley North SESA.

Sensitive Plants and Wildlife

The proposed solar energy projects in the Dry Lake Valley may affect Blaine fishhook cactus (*Sclerocactus blaneii*). Dry Lake Valley is one of three known locations in Nevada for this species. This cactus is considered very rare at all of its known locations. It is one of the most desirable species in a genus prized by cactus collectors and the locations of most of its populations are well known and appear to have declined appreciably over the past two decades. This rare species is also known from Iron County, Utah, where one of its known populations has been lost to residential development. The Dry Lake Valley population, with 14 known individuals, is currently the largest known population of this species. Thorough surveys by a qualified botanist should be conducted for Blaine fishhook cactus prior to any ground disturbing activities. A qualified botanist should be on-site for construction activities in Dry Lake Valley to ensure that Blaine fishhook cactus is adequately protected. Individuals located within the project area should be avoided through fencing and flagging of the area, including an appropriate buffer zone. If construction impacts are unavoidable, a qualified botanist should develop and implement a plan to salvage and transplant individuals.

We are concerned that the solar projects located within the Dry Lake Valley North SESA would impact at-risk plant and animal species as identified by the Heritage Program. In particular, Eastwood milkweed (*Asclepias eastwoodiana*) and Desert Valley kangaroo mouse (*Microdipodops megacephalus albiventer*) may occur within the Dry Lake Valley North SESA. A qualified botanist should survey the project area for Eastwood milkweed prior to any construction activities within the SESA. If the species is located, individuals or populations should be avoided through fencing and flagging of the area, including an appropriate buffer zone. We also recommend that surveys be conducted for the Desert Valley kangaroo mouse. If this species is determined to be present within the Dry Lake Valley North SESA, avoidance, minimization, and mitigation measures for this species should be included as appropriate in the PEIS.

Proposed East Mormon Mountain SESA (7,418 acres)

Potential Impacts to Desert Tortoises and their Habitat

The proposed solar energy projects in the proposed East Mormon Mountain SESA may affect the desert tortoise. The proposed East Mormon Mountain SESA is located between the Mormon Mesa and Beaver Dam Slope DWMAs. LDS density estimates from 2007 were 3.7 and 1.3 desert tortoises per square kilometer, respectively (L. Allison, Service, pers. comm. 2009). Because this proposed SESA is not separated by elevated areas from the Beaver Dam Slope strata, and assuming that there is therefore more connectivity to this critical habitat unit, we have applied the density estimate that corresponds to the Beaver Dam Slope to this proposed SESA. Accordingly, about 30 desert tortoises have the potential to be adversely affected by full build-out of the East Mormon Mountain SESA. Avoidance, minimization and mitigation measures for direct impacts to desert tortoise and indirect effects to adjacent critical habitat as a result of placement of solar projects within the proposed East Mormon Mountain SESA should be identified in the PEIS.

Candidate Plant Species

The Service is concerned about potential impacts to the Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*). In 2007, the Las Vegas buckwheat was designated as a candidate species under the ESA. A candidate species receives no legal protection under the ESA, but could be proposed for listing in the near future. We are concerned about the status of the Las Vegas buckwheat because approximately 95 percent of this species' historic range has been lost to development or other factors.

Currently, about 890 acres of occupied Las Vegas buckwheat habitat exist, of which more than 50 percent is subject to development. We recommend that a qualified botanist survey for the Las Vegas buckwheat prior to any construction activities within the SESA. If individuals are located within the study area, they should be avoided through fencing and flagging of the area, including an appropriate buffer zone. Consideration of this plant species during project planning and early coordination with the State and the Service is important to assist with species conservation efforts and to prevent the need for Federal listing actions in the future.

Proposed Millers SESA (19,205 acres)

Desert Tortoise

Desert tortoises do not occur within the proposed Millers SESA. The Millers SESA is not covered by the USGS desert tortoise habitat model, nor is it contained within or adjacent to any LDS monitoring strata analyzed by the Service.

Sensitive Plants

We are concerned that solar energy development within the proposed Millers SESA may impact the candelaria blazingstar (*Mentzelia candelariae*), a species included on the Heritage Program's watch list. We recommend that a qualified botanist survey for this species prior to any construction activities within the SESA. If individuals are located, we ask that you avoid individuals or populations through fencing and flagging of the area, including an appropriate buffer zone.

Migratory Birds

We are concerned that solar projects located within the proposed Millers SESA may impact migratory birds. In particular, a rest area with a small stand of cottonwood occurs adjacent to Highway 95/SR6. The stand of cottonwoods is used as a stopover site for migratory birds such as vireos and warblers and is a popular site for bird watchers. Based on the Nevada SESA map, it is unclear whether or not this particular cottonwood stand would be affected by the solar projects. We recommend that this area be avoided.

Proposed Gold Point SESA (5,830 acres)

Other than our general concern for migratory birds, we are not aware of any potential impacts to federally listed or sensitive species from placement of solar projects within the proposed Gold Point SESA. Desert tortoises do not occur within the proposed Gold Point SESA.

Proposed SESAs within New Mexico:

For all three Proposed SESAs within New Mexico: Afton (55,810 acres), Mason Draw (17,802 acres), and Red Sand (46,972 acres) SESAs

Aplomado Falcon

Potential significant impacts to the northern aplomado falcon (*Falco femoralis septentrionalis*) and their habitats could occur at each of the three proposed SESA sites in New Mexico.

A northern aplomado falcon reintroduction program began in 2006 in southern New Mexico under section 10(j) of the Endangered Species Act. Between 2006 and 2008, 120 aplomado falcons were reintroduced into several sites in southern New Mexico, and additional reintroductions are planned during the next several years in southern New Mexico.

Our understanding of northern aplomado falcon ecology indicates that a sustainable falcon population is likely to be detrimentally affected by the alteration and loss of grassland habitat. Changes or losses of grassland habitats in New Mexico will affect species that are grassland

adapted. As such, grassland conservation is critical in conserving northern aplomado falcons and other grassland birds in New Mexico. Northern aplomado falcons are associated with savannas and grasslands with a sparse canopy of mature woody vegetation. In New Mexico, northern aplomado falcons are associated with semi-desert grasslands in the Chihuahuan Desert. These grasslands are characterized by scattered yuccas, mesquite, and cactus. The Service recommends that BLM and DOE avoid savannas and grasslands with a sparse canopy of mature woody vegetation. In addition, impacts to mature trees containing other raptor or raven nests should be avoided because aplomado falcons use this highly limited resource for their nests.

Identification of suitable habitats and pre-activity surveys for the northern aplomado falcon should be conducted during project planning and typically include systematic observations in suitable habitat for territorial northern aplomado falcons and/or nest sites. Pre-activity surveys should be conducted by qualified, permitted individuals in accordance with protocols that are recognized by the Service and/or the New Mexico Department of Game and Fish (NMDGF). Currently, protocol guidance is contained in the Interim Survey Methodology for the northern aplomado falcon (*Falco femoralis septentrionalis*) in Desert Grasslands (USFWS 2003).

The BMPs are recommended measures that, if implemented as part of the proposed action, would to the extent practicable, avoid, minimize, and mitigate for adverse effects of that proposed action on the northern aplomado falcon. However, even with these BMPs in place, there may be adverse effects that may remain and require initiation of formal conference. The inclusion of BMPs into the project proposal would streamline any formal conference that may be required.

BMPs and Recommendations to avoid and minimize impacts to northern aplomado falcon include the following:

1) Project Planning:

Roads, fences, security zones, surveillance sites, and other facilities that would require land clearing and have associated noise and artificial lighting components should be located at least 0.5 miles outside of any northern aplomado falcon territory or an active reintroduction site. Northern aplomado falcon home range size is estimated to be about 8,400 acres. For management purposes, this can be described as a circle with a radius of two miles around a particular habitat feature (e.g., a nest site or the preferred roosting site of a territorial northern aplomado falcon).

Firebreaks, fuels reduction, or other improved access for fire suppression should be incorporated, as appropriate in the placement of facilities. Facilities should not be located between northern aplomado falcon nests and their important forage areas such that movement between the two is compromised.

Pre-construction surveys should be conducted to identify any northern aplomado falcon territories in or adjacent to project areas located in or near suitable habitat. Presence/absence surveys may be conducted, or the presence of the northern aplomado falcon in the habitat area will be assumed.

All personnel that will be involved with the on-the-ground construction or maintenance for the proposed action should receive training in the species, the agreed upon BMPs, and the role of the construction monitor.

During construction or maintenance activities in or within 0.5 miles of a northern aplomado falcon territory or an active re-introduction site (or such distance that noise, light, or other effects reach the territory or site), a construction monitor with authority to halt construction at any time the appropriate BMPs are not being properly implemented as agreed to should be present on site.

New roads in the vicinity of northern aplomado falcon territories and other important habitat areas should be avoided to reduce effects of human activity. Existing roads used to access new or existing facilities may need to be closed to other access to protect important northern aplomado falcon habitat.

If an active territory is discovered during the planning phase of a proposed permanent facility, alternate locations for the facility should be considered for feasibility/use.

2) Construction/Maintenance:

Construction activities for roads, fences, or other facilities that must be built closer than .05 mile to an occupied northern aplomado falcon territory should occur between August 1 through January 31 to avoid the northern aplomado falcon breeding season. Staging areas for equipment and supplies should be as far as practicable from northern aplomado falcon habitats.

Maintenance activities for facilities may occur at any time; however, for major work on roads or fences where significant amount of equipment will be required, the August 1 through January 31 period is preferred.

Large, open-topped liquid storage containers will not be allowed on job sites as they can pose a drowning risk to northern aplomado falcons.

3) Post Construction:

The need for and extent of site restoration should be determined in coordination with the landowner/manager and the extent of impacts to northern aplomado falcon habitat and connectivity.

A restoration plan should be developed during project planning and provide an achievement goal to be met by the restoration activity.

The project management plan should provide a report describing the implementation of the BMPs and their effectiveness. This report should be completed at the completion of the project and posted to the BLM and DOE home websites. Documentation of completion of any mitigation actions should be included in the report.

4) Facility Operations:

Security/stadium lighting along fences and other facilities should be designed to minimize light pollution beyond the designated security zone while achieving light levels needed for operational purposes. Because directed lighting for security zones can extend ambient light levels well over 900 feet away from the source, the effects of lighting are widespread. Based on our lack of specific data on a “safe” level of light pollution, security lights should not shine onto habitat areas at a level greater than 1.5 foot candles. All lights should be shielded from the top to prevent up-lighting.

5) Other Mitigation Measures:

Shrub encroachment and non-native vegetation are significant concerns in northern aplomado falcon habitat. Potential mitigation to prevent shrub encroachment and non-native vegetation is funding to contribute to native grassland restoration programs.

Providing funds for surveying for northern aplomado falcons, monitoring of known northern aplomado falcon territories, inventorying suitable habitat, and reintroducing aplomado falcons in New Mexico is an appropriate option.

Recommendations to Minimize Impacts to Wildlife and Their Habitats at Construction Sites

Roads should be designed to appropriate standards.

Construction and maintenance activities should be conducted during daylight hours only to avoid noise and lighting issues during the night. If construction or maintenance work activities would continue at night, all lights should be shielded to direct light only onto the work site, the minimum wattage needed should be used, and the number of lights should be minimized. Noise levels for day or night construction and maintenance should be minimized. All generators should be in baffle boxes (a sound-resistant box that is placed over or around a generator), have an attached muffler, or use other noise-abatement methods in accordance with industry standards.

The perimeter of all areas to be disturbed during construction or maintenance activities should be clearly marked using flagging or temporary construction fence, and no disturbance outside that perimeter should be authorized. The area to be disturbed should be minimized through scheduling materials deliveries and equipment on site to only those needed for effective project implementation. All access routes into and out of the project disturbance area should be flagged, and no travel outside of those boundaries should be authorized. If new access is needed or existing access requires improvement to be usable for the project, roads should be constructed to accepted standards. To the extent possible, areas already disturbed by past activities or those that will be used later in the construction period should be used for staging, parking, and equipment storage. Waste materials and other discarded materials should be removed from the site as quickly as possible. This should assist in keeping the project area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

Proposed SESAs within Utah:

For all three SESAs within Utah: Proposed Escalante Valley SESA (6,648 acres), Proposed Milford Flats South SESA (6,440 acres), and Proposed Wah Wah Valley SESA (3,676 acres):

Sage-Grouse and Sage-Grouse Habitat

It appears as if the project area encompasses sage-grouse habitat. If sage-grouse habitat is present within the project area, the PEIS should describe potential effects to this species resulting from project activities and habitat removal. We recommend no human disturbance within 2 miles of a lek during the breeding season and maintenance of a 15-25% sagebrush canopy cover and 7 inches or more of grass and forb understory to optimize nesting success. Guidelines, including seasonal and spatial buffers and habitat restoration recommendations, can be found in: the Utah Division of Wildlife Resources' *Strategic Plan for Management of Sage Grouse, 2002*, Publication No. 02-20 and in *Guidelines to Manage Sage Grouse Populations and Their Habitats* (Connelly et al. 2000). If sage-grouse are determined to be within range of disturbance, we recommend that you coordinate with the local Service Field Office to assess the feasibility of potential mitigation measures that could be employed to offset impacts to sage-grouse.

Proposed Escalante Valley SESA (6,648 acres) and Proposed Milford Flats South SESA (6,440 acres):

Utah Prairie Dog

Escalante Valley SESA and Milford Flats South SESA may provide habitat for the Utah prairie dog (*Cynomys parvidens*), a species listed as threatened under the ESA. We recommend that official surveys be conducted for this species as per the Service's approved protocol. The NEPA document should address the proximity of the project activities to any prairie dog colonies, analyze any potential impacts, including indirect impacts, and identify conservation measures. We recommend seasonal and/or spatial buffering to avoid prairie dog areas if they are determined to be within range of disturbance, as well as working with the Utah Field Office to determine additional best management practices for avoiding impacts to the prairie dogs.

Raptors

Raptor management guidelines, especially those developed by the Utah Field Office (Romin and Muck 2002), should be applied to all 24 of the proposed solar energy development areas. These guidelines include raptor protection measures that are designed to ensure that proposed projects will avoid adverse impacts to raptors, including the Peregrine Falcon. Before any projects are initiated, existing raptor nests need to be identified, taking all necessary steps to avoid direct loss of nesting sites or territories. Be aware that raptor arrival at nest sites can occur as early as December for certain species, with nesting and fledging continuing through August. The Utah Field Office recommended a spatial buffer of at least 1.0 mi for threatened and endangered raptors from their nests, 0.5 mi for other diurnal raptors, and 0.25 mi for nocturnal raptor nests. Spatial buffers for all raptor species present in Utah and the West are delineated by Romin and Muck (2002), along with seasonal presence, number of brooding days, fledging days, and post-fledge dependency to nests.

Summary

We appreciate the opportunity to provide additional comments on the inclusion of SESAs as part of the PEIS analysis and offer our perspective on renewable energy development. We request that the BLM and DOE continue to work closely with local Service Field Offices to ensure that fish and wildlife resources can be effectively identified and addressed early in the planning process. In addition, companies intending to utilize the PEIS should plan and develop their projects in close coordination with our field offices. This early engagement should help to streamline any subsequent permitting and consultation that may be necessary. We look forward to continuing working with you on the development of your PEIS.

References and Literature Cited

- Andrews, F.G, A.R. Hardy and D. Giuliani. 1979. The Coleopterus Fauna of Selected California Sand Dunes. California Department of Food and Agriculture, Sacramento, CA. 142 pp.
- Avian Power Line Interaction Committee. 1994. Mitigating bird collisions with power lines: the state of the art in 1994 (being rewritten). Edison Electric Institute, Washington, DC. 78 pp.
- Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines: the state of the art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC, and Sacramento, CA. 207 pp.
- Bureau of Land Management. 1980. The California Desert Conservation area Plan. Bureau of Land Management, California Desert District, Moreno Valley, California 157 pp.
- Bureau of Land Management (BLM). 2002. Northern and Eastern Colorado Desert Coordinated Management Plan: and amendment to the California Desert Conservation Area Plan 1980 and Sikes Act Management Plan with the California Department of Fish and Game. Bureau of Land Management, California Desert District, Moreno valley, California.
- Bureau of Land Management (BLM). 2008. Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Evaluate Solar Energy Development, Develop and Implement Agency-specific Programs, Conduct Public Scoping Meetings, Amend Relevant Agency Land Use Plans, and Provide Notice of Proposed Planning Criteria. Federal Register 73:30908-30912.
- Bureau of Land Management (BLM). 2009a. Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications. Federal Register 74:31307-31309.

Bureau of Land Management (BLM). 2009b. Notice of Proposed Withdrawal and Opportunity for Public Meeting; Arizona, California, Colorado, Nevada, New Mexico, and Utah. Federal Register 74: 31308-31309.

Crawford, C.S. 1988. Surface-active arthropods in a desert landscape: Influences of microclimate, vegetation, and soil texture on assemblage structure. *Pedobiologia* 32, 373-385.

Crawford, C.S. and M.K. Seely. 1987. Assemblages of surface-active arthropods in the Namib dunefield and associated habitats. *Revue de Zoologie Africaine* 101, 397-421.

Desert Tortoise Recovery Office. 2009. Email Correspondence on 7-09-2009 with Linda Allison regarding density of desert tortoises near the proposed Solar Energy Study Areas.

Gehring, J.L., P. Kerlinger, and A.M. Manville II. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. *Journal Ecological Applications* 19(2): 505-514.

Holm E. and C.H. Scholtz. 1980. Structure and pattern of the Namib Desert dune ecosystem at Gobabeb. *Madoqua* 12, 3-39.

Kerlinger, P. 1995. How birds migrate. Stackpole Books, Mechanicsburg, PA. 228 pp.

Mabee, T.J., P.M. Sanzenbacher. 2008. A radar study of nocturnal bird and bat migration at the proposed hatchet ridge wind project, California, fall 2007. Final Report - Prepared for Hatchet Ridge Wind, LLC, Portland, OR and Western Ecosystems Technology, Inc. Cheyenne, WY. February 2008.

Manville, A.M., II. 2004. Prairie grouse leks and wind turbines: U.S. Fish and Wildlife Service justification for a 5-mile buffer from leks; additional grassland songbird recommendations. Division of Migratory Bird Management, USFWS, Arlington, VA, peer-reviewed briefing paper. 17 pp.

Manville, A.M. II. 2007. Comments of the U.S. Fish and Wildlife Service submitted electronically to the FCC on 47 CFR Parts 1 and 17, WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on Migratory Birds." February 2, 2007. 32 pp.

Manville, A.M., II. 2009. Towers, turbines, power lines, and buildings – steps being taken by the U.S. Fish and Wildlife Service to avoid or minimize take of migratory birds at these structures. In C.J. Ralph and T.D. Rich (editors). Proceedings 4th International Partners in Flight Conference: Tundra to Tropic, February 2008, McAllen, TX. 11 pp (in press).

Nevada Division of Wildlife (NDOW). 2000. Conservation Agreement for the Amargosa Toad (*Bufo nelsoni*) and co-occurring sensitive species in the Oasis Valley, Nye County, Nevada.

Nevada Partners in Flight Working Group. 1999. Nevada Partners in Flight Bird Conservation Plan. November 29, 1999.

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, 18p.

Pavlik, B.M. 1985. Sand dune flora of the Great Basin and Mojave Deserts of California, Nevada and Oregon. *Madrono* 32, 197-213.

Pitts, J.P., J.S. Wilson, K.A. Williams, and N.F. Boehme. 2009. Velvet Ants (Hymenoptera: Mutillidae) of the Algodones Sand Dunes of California, U.S.A. *Zootaxa* 2131, 1-53.

Romin, L.A., and J.A. Muck. 2002. Utah Field Office guidelines for raptor protection from human and land use disturbance. U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake. 16 pp.

Stamos, C.L., Martin, P., Nishikawa, T., and Coz, B.F. 2001. Simulation of ground-water flow in the Mojave River Basin, California: U.S. Geological Survey Water-Resources Investigations Report 01-4002, Version 1.1.

U.S. Fish and Wildlife Service. 2008a. DRAFT Range-wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report. Report by the Desert Tortoise Recovery Office, U.S. Fish and Wildlife Service, Reno, Nevada.

U.S. Fish and Wildlife Service. 2008b. Birds of Conservation Concern 2008. U.S. Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp.

U.S. Fish and Wildlife Service. 2008c. U.S. Draft revised recovery plan for the Mojave population of the desert tortoise (*Gopherus agassizii*). U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California. 209 pp.

U.S. Fish and Wildlife Service. 2003. Interim Survey Methodology for the Northern Aplomado Falcon (*Falco femoralis septentrionalis*) in Desert Grasslands. Albuquerque, New Mexico. 16 pages.

Williams, T.C., J.M. Williams, P.G. Williams, and P. Stokstad. 2001. Bird migration through a mountain pass studied with high resolution radar ceilometers, and census. *The Auk* 118(2):389-403. 2001.

Thank you for your comment, John Tull.

The comment tracking number that has been assigned to your comment is SolarM60234.

Comment Date: September 14, 2009 15:27:22PM
Solar Energy Development PEIS
Comment ID: SolarM60234

First Name: John
Middle Initial: C
Last Name: Tull
Organization: Nevada Wilderness Project
Address: 8550 White Fir
Address 2:
Address 3:
City: Reno
State: NV
Zip: 89523
Country: USA
Email: john.wallin@wildnevada.org
Privacy Preference: Don't withhold name or address from public record
Attachment: SPEIS_Comments-tull.doc

Comment Submitted:

Please accept the attached comments on behalf of the Nevada Wilderness Project. Thank you.

John Tull
Conservation Director
Nevada Wilderness Project

John C. Tull, PhD
Conservation Director
Nevada Wilderness Project
8550 White Fir Street
Reno, NV 89523
775-746-7851
john.tull@wildnevada.org



September 16, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

To whom it may concern:

On behalf of the Nevada Wilderness Project (NWP), I wish to provide scoping comments for the Bureau of Land Management's (BLM) Solar Programmatic Environmental Impact Statement (PEIS). Several issues merit consideration during the development of an PEIS, especially with respect to mitigating the impacts of the loss of key wildlife habitat in the Mojave Desert and other regions. I will provide brief, general comments on the PEIS first, then detail site-specific issues related to the Solar Energy Study Areas (SESA) located in Nevada, and, lastly, provide some summary comments. I can make maps of each SESA available to agency staff. I respectfully request that you fully consider the following points in the development of the PEIS.

GENERAL PEIS COMMENTS

First, it is NWP's position that immediate steps are required to combat global climate change, and that a transition to renewable energy production is key to meeting this critical need. Moreover, NWP recognizes that this transition needs to happen rapidly or we will be unable to reverse the catastrophic consequences of climate change. With this in mind, we are committed to making sure that this renewable energy transition occurs in a fashion that is smart from the start. To do this, mitigation must occur to offset the damage to Nevada's wildlife habitats that will occur from accelerated development of renewable energy projects. This mitigation must be accomplished with both a) funding mechanisms and b) additional landscape designations.

It is unclear how the SESAs would be an incentive to solar developers to plan projects within SESAs, since each project will still require an EIS to meet NEPA requirements. It is not clear how this is intended to streamline the current solar application review process, unless certain measures are taken; NWP requests that the BLM:

- Only allow development of solar energy projects within these SESAs once the PEIS has been completed. (Any permits that will be approved under the current administrative review process prior to the PEIS should not be denied, but no new applications outside of the SESAs should be allowed after the PEIS has been finalized.)
- The PEIS should address the cumulative impacts of utility-scale solar projects in SESAs across the Great Basin and Mojave Deserts. Without this, the

conservation benefit of the PEIS process will be dubious and will prevent the PEIS from providing a clear pathway for fast-tracking worthy projects.

- Other permittees who have not developed site plans should be moved to these areas. In conjunction, NWP encourages the BLM to develop a clear, administrative policy to identify and implement strong, well-managed landscape level protections that would offset the loss of wildlife habitat from development of renewable energy. Specific administrative procedures are needed to identify conservation mitigation opportunities that include fiscal mechanisms for landscape-scale restoration along with off-site landscape designations such as Areas of Critical Environmental Concern with mineral withdrawals.
- NWP encourages the BLM to develop a specific policy to deal with concerns about water use in support of utility scale solar in desert environments. We would like to see a means to assure that water resource depletion is not allowed to effect wildlife and their habitats well beyond the development sites for solar.

NWP recognizes that many of the BLM managed lands in Nevada have seen negative cumulative impacts from various land uses that have fragmented, degraded or destroyed wildlife habitats, especially in southern Nevada. NWP values the designation of areas dedicated to solar development to help reduce global climate change and to improve our country's national security. But we also recognize these designations are single-use management activities because utility-scale solar projects are not compatible with many other uses, such as primitive recreation or wildlife management.

Because fencing and clearing of the ground surface is typically required, these actions will alter the fragile Mojave and Great Basin Desert landscapes in Nevada in ways that cannot be restored to their native condition. As noted above, appropriate mitigation through landscape protections will best be achieved by administratively designating Areas of Critical Environmental Concern (ACEC) unless the agency develops other administrative designations that could better provide permanent habitat conservation of valuable landscapes. These ACECs would need strong, permanent mineral withdrawals and management language that clearly specifies the value of wildlife habitat as the priority purpose of these set-asides.

SITE-SPECIFIC ISSUES

In this section, I provide some information about conservation concerns that I have identified for each of the SESAs. I also provide suggestions for how some of the SESAs might be improved and ways that impacts on the ground might be lessened or addressed with further research into the on-the-ground conditions at the SESA. I have organized these by Field Office.

Briefly, NWP filtered the sites against available biological data including Nevada Natural Heritage Program (NNHP) data, Nevada Department of Wildlife (NDOW) data, and data from other conservation groups using a Geographic Information System. The biological information from this filtering process provides valuable baseline information for each SESA and is useful in identifying potential wildlife conflicts. Only species that have some conservation concern within the state (e.g., NDOW species of concern or species where limited information is available on their overall state). NWP also examined SESAs against a composite model of species diversity for Nevada that we produced using Southwest Regional GAP Analysis Project 30-m wildlife habitat models. This model included all models available for profiled species in Nevada's Wildlife Action Plan and species that were in the NNHP dataset but not in the Wildlife Action Plan. Overall, 96 species were used after removing several problematic species or models (e.g., no bat species were included

because their habitat models were too general to be informative). This will be referred to as the biodiversity model below.

Battle Mountain Field Office

Gold Point: There were no records in the NNHP dataset. The long-nosed leopard lizard is listed in the NDOW data. Overall, there are very few apparent conflicts from the data. The biodiversity model shows low overall diversity for the site relative to other study areas.

Millers: There were no NNHP records, but desert horned lizard and long-nosed leopard lizard are present from NDOW data. This solar study area lies north of Hwy 6/95 and northwest of the Miller's rest stop, an important bird migration stop and birding location; consideration of possible impacts on migratory birds should be included. This a site that has already sustained a fair amount of developmental impacts from mineral exploration and roads. The northeast portion is comprised of stabilized dunes, habitat rich in small mammal diversity and worth trying to avoid due to the preponderance of important vertebrate and invertebrate species often found in these sites (e.g., pallid kangaroo mice, desert kangaroo rat, dune beetles, etc.). Although there are no records present in the available datasets, this is likely an unstudied area that would benefit from investigation. NWP recommends that the stabilized sand dunes be explicitly excluded from the Millers SESA.

Ely Field Office

Dry Lake Valley North: Eastwood milkweed appears in the NNHP dataset for the area and should be avoided. The dark kangaroo mouse, desert horned lizard and burrowing owl are present based on the NDOW data. Burrowing owl colonies and dark kangaroo mice areas should also be avoided. We can assist in defining these exclusions by providing maps under separate cover. Overall, this site has numerous roads and a relatively high incidence of annual grass invasion along the east based on modeling of annual grasses for Nevada by NNHP. The prevalence of several rare or important species warrants careful monitoring of impacts from development.

East Mormon Mountain: A small population of Las Vegas buckwheat has been identified at this site, and measures to avoid this species should be made. A model of desert tortoise habitat indicates that this area is good habitat for the species. Recent fires to the north and west of the SESA might be worth consideration for development if site suitability for solar exists. It might be possible to adjust the site so desert tortoise habitat that has not already burned is removed and replaced with areas that are burned. Additionally, this site falls within The Nature Conservancy's "Meadow Valley Wash - Muddy River - Mormon Mesa" priority landscape. Transmission already exists at the site, so it could provide utility-scale solar to the grid with minimal development of transmission.

Delamar Valley: There are no obvious conflicts from the available data. The site is placed along the planned SWIP corridor, so transmission has to be developed before the site can be available for solar development. Much of the SESA is on a dry lakebed. It should be noted that bighorn migration corridors to the south between the Desert Refuge and the Delamar and Meadow Valley Ranges may be negatively affected by future transmission development associated with this site. NWP would like to work with NDOW, USFWS, the BLM and other appropriate agencies to ensure landscape permeability for bighorn sheep as transmission development proceeds.

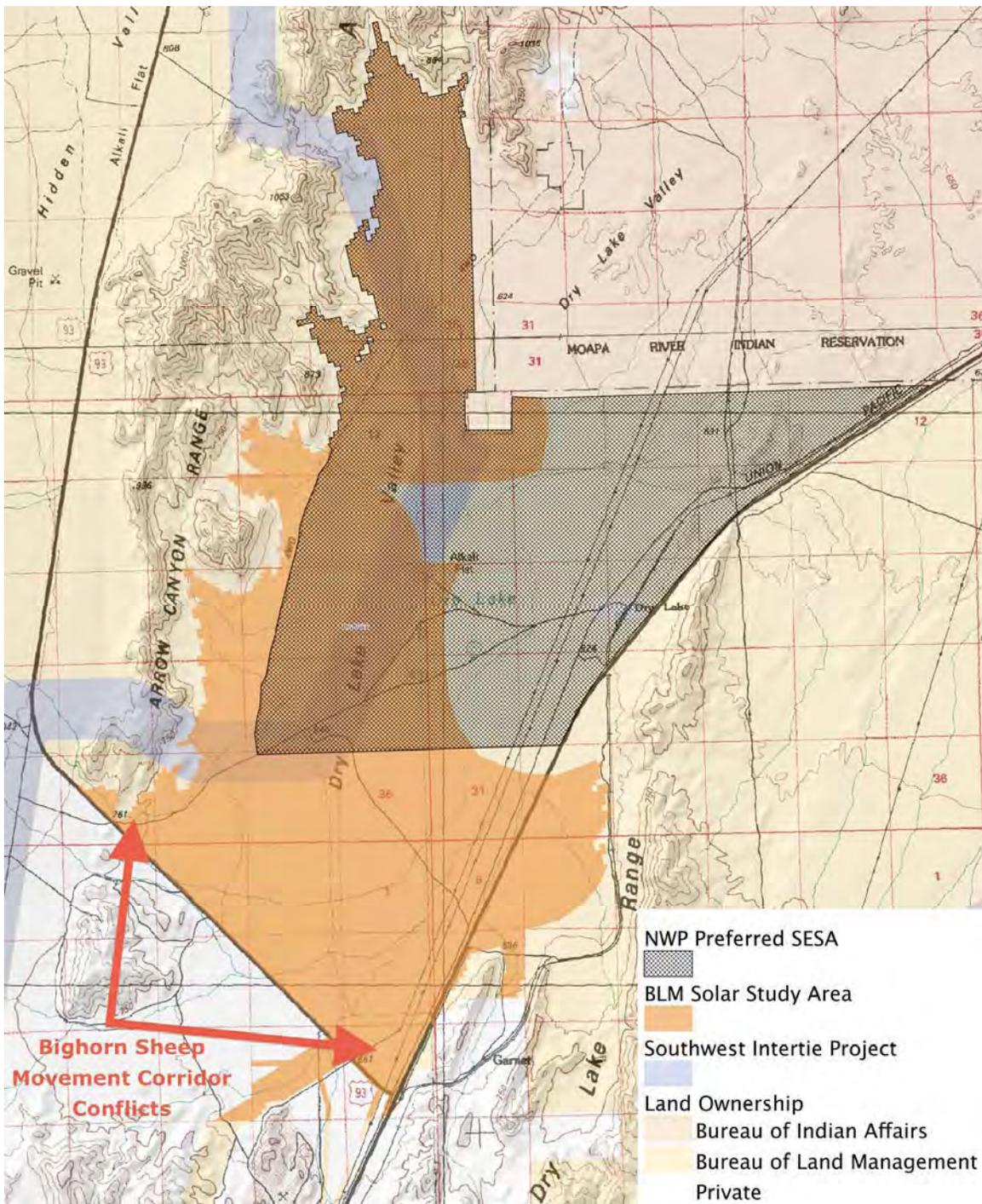


Figure 1. Dry Lake proposed alternative Solar Energy Study Area, Nevada. Cross-hatched area represents the NWP proposed SESA.

Dry Lake: This SESA has desert tortoise and rosy two-tone beardtongue from the NNHP data. Several intersections occur with NDOW mapped movement corridors for desert bighorn sheep, but wildlife corridors are supposed to be excluded in SESA designation. Adjustments should be made to exclude those corridors. The NDOW data shows the presence of the banded Gila monster, common chuckwalla, desert banded gecko, desert horned lizard, desert night lizard, LeConte's thrasher, long-nosed leopard lizard, sage sparrow and western banded gecko. The proximity to Las Vegas and existing transmission development in the area make this one of the more heavily inventoried SESAs in Nevada; it also makes this an area that has seen

impacts from exurban activities that are damaging to the quality of wildlife habitats (an example of cumulative impacts). Because rocky outcrops are high-quality habitat for many of the lizard species of conservation concern and because solar energy construction may require the removal these large boulders, NWP recommends the BLM explicitly exclude rock outcrops from the SESA. The area also shows high biodiversity potential, typical of much of the Mojave Desert. Because of the many species showing up in the southern portion of this SESA, it would seem more feasible to limit the site to the northern portion of the current SESA. A preferred alternative SESA is depicted above where the northern portion is kept and the SESA is extended to the east following I-15 and the Moapa Valley Indian Reservation, shown as black cross-hatching (figure 1). This configuration would avoid bighorn movement corridors and not press up against bighorn habitat in the Arrow Canyon Range. Additionally, some of the more sensitive species found in the south of the current SESA are excluded. The alternative SESA is approximately 13,500 acres.

Amargosa Valley: Desert tortoise (NNHP), desert horned lizard, desert iguana and long-nosed leopard lizard (NDOW) are recorded on the site. The SESA is well outside of the buffer zone established by the Nevada State Water Engineer to protect the endangered Devil's Hole pupfish, although there is still considerable controversy over the biological meaning of that buffer. There are several disturbances on-site, including a railway grade and roads that bisect the site making it a relatively fragmented area. There are no other identifiable conflicts from our filtering, and the site shows only moderate biodiversity in the biodiversity model.

SUMMARY COMMENTS

The Nevada Wilderness Project appreciates the opportunity to provide our comments on the sites selected for the PEIS. We recognize the scope of the challenge faced by both the general public and the BLM to adequately address these issues in an effective and expeditious manner. However, it is our belief that with great challenges come great opportunities. We urge the BLM to think creatively on how to maximize conservation mitigation opportunities within the development process, and think "outside the box" on how cumulative impacts from energy development on public lands might also yield cumulative benefits from creative conservation mitigation. Seizing this opportunity to make energy development "smart from the start" is critical in this early stage of the renewables boom that is coming to Nevada.

Myself or other NWP staff are happy to meet, discuss or further develop any of the information we have provided on behalf of the Nevada Wilderness Project.

Sincerely yours,



John C. Tull
Conservation Director
Nevada Wilderness Project
8550 White Fir Street
Reno, NV 89523
775-746-7851
john.tull@wildnevada.org
www.wildnevada.org

Thank you for your comment, Joan Taylor, Chair.

The comment tracking number that has been assigned to your comment is SolarM60235.

Comment Date: September 14, 2009 15:27:59PM
Solar Energy Development PEIS
Comment ID: SolarM60235

First Name: Joan
Middle Initial:
Last Name: Taylor, Chair
Organization: California/Nevada Desert Energy Committee of the S
Address: [Withheld by requestor]
Address 2:
Address 3:
City: [Withheld by requestor]
State: [Withheld by requestor]
Zip: [Withheld by requestor]
Country: [Withheld by requestor]
Email: [Withheld by requestor]
Privacy Preference: Withhold address from public record
Attachment:

Comment Submitted:

Ladies and Gentlemen:

On behalf of the California/Nevada Desert Energy Committee of Sierra Club, I would like to convey our concurrence with the analysis and conclusions in the scoping comments being submitted by Wilderness Society et al today regarding the California SESAs.

Thank you for your attention to this important matter.

Very truly yours,

Joan Taylor

Thank you for your comment, Loretta Mitson.

The comment tracking number that has been assigned to your comment is SolarM60236.

Comment Date: September 14, 2009 15:34:23PM
Solar Energy Development PEIS
Comment ID: SolarM60236

First Name: Loretta
Middle Initial: M
Last Name: Mitson
Organization:
Address: p.o. Box 231
Address 2:
Address 3:
City: Manassa
State: CO
Zip: 81141
Country: USA
Email: mitson53@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

I believe that solar development should be treated just like agriculture. We need to support large scale agribusiness as well as small scale family, community (CSA) farms. We need to encourage large scale solar development as well as small scale solar generation on every possible rooftop and home.

BUT, we need to be very careful where we site large scale agribusiness as well as where we site large scale solar energy generators. Utilizing public lands for solar generation is not a good choice.

As an individual who utilizes passive solar collectors on my home, I do not have to be convinced of the viability of small scale solar utilization. I do not believe that the power distribution companies have really explored the possibility and necessity of generating power closer to its point of use. Transporting power over long distances only serves to reduce the net gain of KWH. Ideally solar generators need to be sited closer to the cities, where the production can be maximized.

The Solar Rewards Rebate Program that was instituted in the state of Colorado was a joke. Why was it so? Because it is not in the best financial interest of the power companies to have too much power being generated by the users, because that would cut into their profit. I would be the first to install one on my property if it would even come close to being cost effective. If the Solar Rewards Program was adequately funded instead with the millions of dollars that are earmarked to be squandered on hundreds of miles of high voltage lines, and the cost of acquiring lands for right-of-way, maybe we could get more of the population behind a real grassroots interest in satisfying and generating more of our energy needs right in our own communities.

Lets not "pave paradise and put up a parking lot". There is plenty of private land to use for solar generation. Don't use our public lands for that, or we will never get them back. Public lands are sacred.

Thank you for your comment, Teresa Motley.

The comment tracking number that has been assigned to your comment is SolarM60237.

Comment Date: September 14, 2009 15:52:07PM
Solar Energy Development PEIS
Comment ID: SolarM60237

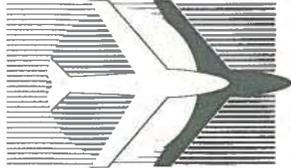
First Name: Teresa
Middle Initial: R
Last Name: Motley
Organization: Clark County Department of Aviation
Address: P.O. Box 11005
Address 2:
Address 3:
City: Las Vegas
State: NV
Zip: 891111005
Country: USA
Email: teresamo@mccarran.com
Privacy Preference: Don't withhold name or address from public record
Attachment: CCDOA Comments to Solar Energy PEIS (Sept 14 2009).pdf

Comment Submitted:

Attached are comments filed by Teresa R. Motley, AICP, Airport Planning Manager, Clark County Department of Aviation (CCDOA).

Please note that CCDOA is filing relevant documents as exhibits for the convenience of the BLM Staff at the Argonne National Laboratory. As indicated in the attached comments, those exhibits are being sent today via U.S. Mail.

LAS VEGAS



McCARRAN INTERNATIONAL AIRPORT

Department of Aviation

RANDALL H. WALKER
DIRECTOR

ROSEMARY A. VASSILIADIS
DEPUTY DIRECTOR

POSTAL BOX 11005
LAS VEGAS, NEVADA 89111-1005
(702) 261-5211
FAX (702) 597-9553
E-MAIL: webmaster2@mccarran.com

September 14, 2009

**VIA ELECTRONIC FILING
EXHIBITS FORWARDED VIA U.S. MAIL**

Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue – EVS/900
Argonne, IL 60439

RE: Comments on Additional Public Scoping for the BLM Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development

Dear Staff:

Clark County Department of Aviation (CCDOA) previously filed scoping comments on behalf of Clark County, Nevada (Clark County or County) in response to the May 29, 2008 Notice of Intent (NOI) for the Programmatic Environmental Impact Statement (PEIS) related to solar energy development on Bureau of Land Management (BLM) administered land in six western states. On June 30, 2009, BLM published a Notice of Availability (NOA) of Maps and Additional Public Scoping for the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (Solar Energy PEIS or PEIS). The County has reviewed the NOA and submits the following additional comments for BLM's consideration as it prepares the PEIS.

BACKGROUND

In its 2008 NOI, BLM announced that it is:

“... considering whether to establish a Bureau-wide solar energy development program to supplement or replace existing BLM solar development policy, and to amend land use plans in the six-state study area to adopt the new program. In addition, the BLM expects to identify BLM-administered land in the six state study area that may be environmentally suitable for solar energy development *and land that would be excluded from such development.*”¹

¹ 73 Fed. Reg. 30908, 30909 (Notice of Intent) (May 29, 2008) (emphasis added).



Clark County Board of Commissioners

Rory Reid, Chair • Susan Brager, Vice Chair

Larry Brown • Tom Collins • Chris Giunchigliani • Steve Sisolak • Lawrence Weekly

In response to that notice, the County filed comments regarding its concerns about the interaction between the Solar Energy PEIS and the County's planned new commercial service airport in the Ivanpah Valley, in Clark County, Nevada (the Southern Nevada Supplemental Airport, or SNSA).

By way of background, in 2004, at the direction of Congress, the United States sold 6,000 acres of public land approximately 20 miles south of Las Vegas in the Ivanpah Valley (the Airport Site) to Clark County for the purpose of developing the SNSA and related infrastructure.² (A map of the relevant lands is provided as **Exhibit A**). Subsequently, in 2002, Congress directed BLM to convey to Clark County an additional 17,000 acres surrounding the Airport Site (the Airport Environs Overlay District) upon final federal approval of the SNSA.³ In that same law, Congress also directed BLM to establish a transportation and utility corridor (the Transportation and Utility Corridor) between Las Vegas and the Airport Site.⁴ In July 2007, BLM withdrew the land to establish the Transportation and Utility Corridor.⁵ At the direction of Congress,⁶ the BLM and the Federal Aviation Administration (FAA) are currently preparing an environmental impact statement (EIS) for the SNSA Project.

Both FAA and Congress have recognized the compelling public interest in developing a new airport in the region.⁷ Moreover, Congress has recognized that because of restricted military airspace, topography, existing development, and constraints at the existing McCarran International Airport, the location in the Ivanpah Valley, Nevada, is likely the only available site in the vicinity of Las Vegas with sufficient available airspace to ensure safe and efficient operation of a new airport that can serve the regional demand.⁸ To that end, in response to BLM's initial NOI, Clark County filed comments recommending against including property that is subject to the pending EIS for the SNSA Project (*e.g.*, the Airport Site, the Airport Environs Overlay District, and the Transportation and Utility Corridor) within the scope of the Solar Energy PEIS.⁹

NEW COMMENTS

² See Ivanpah Valley Airport Public Lands Transfer Act, PUB. L. 106-362 (2000); *see also* **Exhibit A** (area map).

³ See Clark County Conservation of Public Land and Natural Resources Act, PUB. L. 107-282 (2002) at § 501; *see also* **Exhibit A** (area map).

⁴ *Id.*; *see also* **Exhibit A** (area map).

⁵ Letter from M. Chatterton (BLM) to R. Walker (CCDOA), July 2, 2007 (attached as **Exhibit B**).

⁶ See PUB. L. 106-362 at § 5.

⁷ See *Miscellaneous Public Lands and National Forests Bills*, S. HRG. 107-846 (July 30, 2002) at 13 ("One of the most important infrastructure issues facing Southern Nevada is siting a new international airport."); 71 Fed. Reg. 52, 367 (Sept. 5, 2006) (FAA Notice of Intent to prepare an EIS for the SNSA) (identifying a need for a new airport in order to satisfy future commercial aviation demand in the region).

⁸ See, *e.g.*, S. REP. NO. 106-394 at 2 (2000) (recognizing that CCDOA's extensive review concluded that the Ivanpah Valley is "the only option that can accommodate the growing air traffic needs of the region"); *see also* H.R. REP. NO. 106-471 at 3 (1999) ("the Ivanpah Valley is an ideal place to build a new airport").

⁹ See Letter from R. Walker (CCDOA) to Solar Energy PEIS Staff, July 8, 2008 (attached as **Exhibit C**).

In its June 30, 2009 NOA, BLM announced the designation of 24 specific solar energy study areas, which would undergo in-depth environmental analysis.¹⁰ As described in the NOA, none of the 24 study areas is near the SNSA or is likely to create any impacts to any CCDOA aviation facilities. However, the maps published in conjunction with the June 2009 NOA indicate that the *entire* Ivanpah Valley and some portions of the Transportation and Utility Corridor are still being analyzed for solar development in the PEIS.

Clark County continues to have concerns regarding coordination between BLM's Solar Energy PEIS and the pending SNSA project. To that end, the County provides the following comments regarding the scope of the PEIS, and, in particular, the limits on BLM's authority to permit solar development in the Ivanpah Valley.

1. BLM does not own the Airport Site.

The map referenced in the June 2009 NOA identifies the entire Airport Site as being included within the "BLM Lands Being Analyzed for Solar Development in the PEIS." The Airport Site, however, was patented to Clark County in 2004¹¹ and is therefore no longer public land over which BLM has the authority to issue land use authorizations. As a result, BLM must eliminate the Airport Site from the scope of the PEIS.

2. BLM must manage the Transportation and Utility Corridor for the placement of transportation and utilities.

In the 2002 Clark County Conservation of Public Land and Natural Resources Act (Clark County Conservation Act), Congress required BLM to identify the location of the Transportation and Utility Corridor and withdraw the relevant lands from location and entry under the mineral leasing and geothermal leasing laws.¹² The purpose of this provision was to preserve critical rights-of-way for the SNSA. As Congress noted: "This corridor is important, because in order for the new airport to remain economical, it will require significant utility development to come from the north."¹³

BLM is currently obligated to manage the Transportation and Utility Corridor for the placement, on a non-exclusive basis, of utilities and transportation.¹⁴ In this regard, the Transportation and Utility Corridor is exactly the type of special management area that BLM announced in its initial Notice of Intent is "inappropriate for or inconsistent with extensive, surface-disturbing uses" consistent with solar energy development.¹⁵ While BLM may permit compatible rights-of-way within the Transportation and Utilities Corridor, large-scale solar energy development is inappropriate in these lands because it

¹⁰ 74 Fed. Reg. 31307, 31308 (Notice of Availability) (June 30, 2009).

¹¹ See Patent No. 27-2004-0104 (attached as **Exhibit D**).

¹² See PUB. L. 107-282, § 501(b).

¹³ See e.g., *Miscellaneous Public Lands and National Forests Bills*, S. Hrg. 107-846 (July 30, 2002) at 13.

¹⁴ Letter from M. Chatterton to R. Walker, July 2, 2007 (**Exhibit B**).

¹⁵ Compare 73 Fed. Reg. at 30910.

is incompatible with the type of linear transportation and utility infrastructure contemplated by the Clark County Conservation Act to exist within the corridor.

For these reasons, BLM should eliminate the Transportation and Utility Corridor from the scope of the PEIS.

3. Congress directed specific terms for the future use and management of the 17,000 acres surrounding the Airport Site.

By statutory mandate, upon final approval of the SNSA project, title to the 17,000 acres surrounding the Airport Site shall be transferred without consideration to Clark County as an Airport Environs Overlay District. For BLM to now include the Overlay District in a programmatic-level study, *the sole purpose of which is to expedite utility-scale development of solar energy projects*, would be entirely inappropriate. First of all, there are many airport facilities that are planned to be constructed in the Overlay District, including, but not limited to:

- Construction of a flood control facility (the “North Modified Retention Facility” or North MRF);¹⁶
- Road improvements to/from the North MRF;¹⁷
- Change in base flood elevation on the Roach Lake Playa;
- Construction of drainage channels from the Airport Site, underneath the Union Pacific Railroad (UPRR) and into North MRF;¹⁸
- Construction of a pipeline to transport potable water;¹⁹
- Extension/tie-in to the existing Kern River gas transmission line and construction of a natural gas metering and odorant station;²⁰
- Extension/tie-in to the existing Higgins Substation to provide for backup power;²¹
- Extension/tie-in to the existing Embarq fiber optic line;²²
- Construction of evaporation/disposal ponds for treated wastewater;²³
- Construction and use of temporary conveyor belts from the Goodsprings MRF to the Airport Site, from the North MRF to the Airport Site, and from the Primm Quarry to the Airport Site;²⁴
- Burial of the UPRR communication line;²⁵
- Relocation of transmission line(s) as needed to eliminate aviation hazards; and

¹⁶ See Conceptual Planning Report (Dec. 2008) Exhibit III-6 (attached as **Exhibit E**). Note that, per Section 8 of the Addendum to the Conceptual Planning Report, CCDOA no longer intends to construct the initially proposed Jean Basin.

¹⁷ See Conceptual Planning Report (Dec. 2008) Exhibit III-6 (attached as **Exhibit E**).

¹⁸ See Conceptual Planning Report (Dec. 2008) Exhibit III-7 (attached as **Exhibit E**).

¹⁹ See Conceptual Planning Report (Dec. 2008) Exhibit IX-3 (attached as **Exhibit E**).

²⁰ See Conceptual Planning Report (Dec. 2008) Exhibits IX-8 and IX-9 (attached as **Exhibit E**).

²¹ See Conceptual Planning Report (Dec. 2008) Exhibit IX-15 (attached as **Exhibit E**).

²² See Conceptual Planning Report (Dec. 2008) Exhibit IX-20 (attached as **Exhibit E**).

²³ See Conceptual Planning Report (Dec. 2008) Exhibit IX-23 (attached as **Exhibit E**).

²⁴ See Conceptual Planning Report Addendum 1 (June 2009) Exhibit IX-1 (attached as **Exhibit E**).

²⁵ See Conceptual Planning Report Addendum 1 (June 2009) Exhibit XII-1 (attached as **Exhibit E**).

- Construction of access roads to the Airport.

Preserving space for this infrastructure is critical, because without it, the airport project will not be viable. Second, as noted above, Congress has clearly identified a contrary public use for those lands, and where a tract of public land has been dedicated to a specific use according to any other provision of federal law, BLM is obligated to manage that tract of land in accordance with that law.²⁶ Moreover, when developing and revising land use plans, as is proposed in the Solar Energy PEIS,²⁷ BLM must:

“... consider present and potential uses of the public lands ... and ... coordinate the land use ... planning and management activities of or for such lands with the land use planning and management programs of other Federal departments and agencies ...”²⁸

And finally, the United States (including BLM itself) and Clark County have already spent considerable funds and energy pursuing the SNSA project. While the SNSA project cannot proceed until the environmental approvals are in place, it would be imprudent and impractical for BLM to expend agency time and resources to now also examine the merits of using the Overlay District for entirely separate purposes in the Solar Energy PEIS.

Of note, it is conceivable that some solar projects could be co-located in the Overlay District without compromising aviation safety and efficiency and without interfering with specific airport infrastructure. In such event, however, BLM can still conduct a site-specific EIS of that particular solar project in close coordination with FAA and Clark County.

4. Other lands outside the Overlay District have been identified for airport infrastructure.

The SNSA project will also require the construction of ancillary facilities and the use of public lands outside of the Airport Site (which the County currently owns) and the Airport Environs Overlay District (which the County will have the right to acquire once the environmental approvals are complete). For example, in coordination with the Clark County Regional Flood Control District, CCDOA has identified the need to construct flood control facilities (specifically, modified retention facilities or MRFs) to minimize the amount of water that would be collected and stored adjacent to the proposed SNSA

²⁶ 43 U.S.C. § 1732(a) (“The Secretary shall manage the public lands under principles of multiple use and sustained yield, in accordance with the land use plans developed by him under section 1712 of this title when they are available, except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law.”)

²⁷ As noted in BLM’s 2008 NOI, one outcome of the Solar Energy PEIS could be to amend some of BLM’s existing Resource Management Plans. 73 Fed. Reg. at 30910.

²⁸ 43 U.S.C. § 1712(c); *see also* 43 C.F.R. § 1610.0-8 (development and amendment of resource management plans must be consistent with the principles of Section 202 of the Federal Land Policy and Management Act).

after large storm events.²⁹ In addition, the County will need to acquire appropriate rights from BLM to permit the increase in base flood elevations on the Roach Lake Playa for those portions of the playa that are outside of the Airport Environs Overlay District.³⁰ Clark County will file applications this month with the BLM Las Vegas Field Office to secure necessary rights for the proposed MRFs and the increase in base flood elevation in the Roach Lake Playa. A map depicting the boundaries of the proposed right-of-way applications is provided as **Exhibit F**.

Congress has directed BLM and FAA to jointly conduct an environmental review not just for the proposed airport, but also for any necessary airport infrastructure. Therefore, for the same reasons enumerated above, any lands identified for use for airport infrastructure should not be included in the scope of the Solar Energy PEIS. This issue is particularly relevant because BLM has already received applications for solar energy projects that would directly conflict with some of these facilities and land uses.³¹

5. Solar projects have the potential to create aviation hazards.

In addition to our specific concerns regarding the SNSA project, Clark County also has a general concern that the PEIS includes no general measures addressing aviation safety as a whole. This is critical because one of the key tenets of Executive Order 12212 (Actions to Expedite Energy-Related Projects) is that federal agencies shall take all actions necessary to accelerate the completion of energy-related projects “while maintaining *safety*, public health, and environmental protections.”³²

Certain solar technologies have been demonstrated to pose a threat to aviation safety. For example, reflective mirrors used in certain solar technology can cause dangerous glare issues; similarly, other technologies may generate thermal plumes that pose dangers to aircraft in flight. Both Clark County and FAA noted these issues in recent scoping comments on the proposed Ivanpah Solar Electric Generating System Project in the Ivanpah Valley in California.³³ The expert report filed by Clark County notes that: “The close proximity between the [proposed solar project] and flight paths means it is likely that at some point the aircraft will be in line with reflective mirrors pointed at the receiver

²⁹ See Conceptual Planning Report (Dec. 2008) Exhibit III-6 (attached as **Exhibit E**).

³⁰ See Conceptual Planning Report (Dec. 2008) Exhibit III-8 (attached as **Exhibit E**). Because the proposed airport platform will reduce the surface area of the existing Roach Lake Playa from approximately 5.4 square miles to about 2.0 square miles, the SNSA project is expected to increase base flood elevations on the Roach Lake Playa in a 100 year storm event. Note, however, that while it is not indicated on Exhibit III-8, changes in base flood elevation are also anticipated within the Airport Environs Overlay District, both in the remainder of Roach Lake Playa south of Airport site and also west of Union Pacific RR.

³¹ See, e.g., BLM Serial No. NVN 083129 (application by Cogentrix for a solar facility; this application will conflict with the ROW application for the Lucy Gray MRF).

³² Exec. Order 13212 at § 2, 66 Fed. Reg. 28357 (2001) (emphasis added).

³³ See Letter from T. Arnold (CCDOA) to C. McFarlin (California Energy Commission) re: Comments on the Preliminary Staff Assessment for the Proposed Ivanpah Solar Electric Generating System Project (07-AFC-5) (Jan. 23, 2009) (attached as **Exhibit G**) and exhibit thereto (Letter from D. Kessler (FAA) to G. Meckfessel (BLM) re: Proposed Ivanpah Solar Electric Generating System (Jan. 2, 2008)).

tower. Any 'spillage' of the beam would then be focused directly on the aircraft. This glare could then potentially blind a pilot during this critical phase of flight."³⁴

As illustrated by Clark County's expert report, solar projects can have serious adverse effects on aviation. This is true not just for Clark County, but for all existing and planned aviation facilities. The specific effect on aviation facilities, however, depends on a number of variables, including the type of solar technology used, the terrain, flight paths, and the type of aircraft at issue. For this reason, the Solar Energy PEIS should include specific planning criteria to ensure that before approving any applications for the development of solar energy technology near any existing or proposed aviation facility, BLM *first* conducts a case-by-case examination of the specific solar project to identify any potential adverse effects to aviation. For example, BLM should not issue any final approval for a proposed solar development project until the project applicant has satisfied any notice obligations under 49 U.S.C. § 44718 and FAA has issued a hazard / no hazard determination under 14 C.F.R. Part 77, if applicable. Many solar projects may not trigger automatic review under FAA regulations due to the low height of many solar technologies, however. Therefore, BLM also should ensure that the PEIS put some process in place to guarantee that *all* solar projects (including those that do not automatically trigger review under 14 C.F.R. Part 77) are examined sufficiently to identify whether the project would interfere with air navigation. Ideally, the PEIS should require close coordination in such instances between the BLM, FAA and the relevant airport proprietor.

CONCLUSION

For the reasons detailed above, we urge BLM to take the following steps in the Solar Energy PEIS:

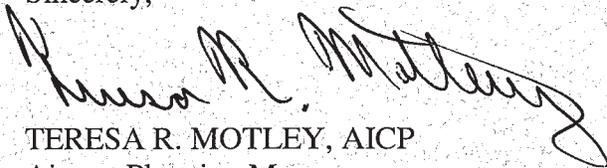
- (1) Eliminate the Airport Site from the scope of the PEIS;
- (2) Eliminate the Transportation and Utility Corridor from the scope of the PEIS;
- (3) Eliminate the Airport Environs Overlay District from the scope of the PEIS;
- (4) Eliminate all other lands proposed to be used for SNSA facilities from the scope of the PEIS: and
- (5) Include new planning criteria and/or processes to ensure that when reviewing an application to develop any solar project near any existing or proposed airport, BLM will first examine each proposed solar project on a case-by-case basis to ensure that the particular project would not conflict with the airport or aviation facility and/or would not create hazards to air navigation.

³⁴ See *id* and exhibit thereto (Memorandum re: impacts from Ivanpah Solar Electric Generating System, Jan. 23, 2009).

Clark County has already provided significant documentation regarding the SNSA Project to the BLM Project Manager for the SNSA EIS and the BLM Las Vegas Field Office. However, for the convenience of the staff in the Argonne National Laboratory Office, Clark County is providing relevant documents as exhibits to these comments. (Due to the size of these documents, Clark County is providing the exhibits by U.S. mail only, and not also through the online comment form). If additional documentation related to the SNSA Project would be helpful at any point during BLM's preparation of the Solar Energy PEIS, Clark County would be pleased to provide electronic or hard copies, as appropriate.

I appreciate your attention to these concerns. Please feel free to contact Robert Tweedy of my staff directly at (702) 261-5175 with any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Teresa R. Motley". The signature is fluid and cursive, written over the printed name.

TERESA R. MOTLEY, AICP
Airport Planning Manager

Encl. (filed by U.S. Mail only)

cc: Randall Walker
Rosemary Vassiliadis
Robert Tweedy
Jeffrey Steinmetz
Philip Rhinehart

Thank you for your comment, Richard Grainger.

The comment tracking number that has been assigned to your comment is SolarM60238.

Comment Date: September 14, 2009 15:57:50PM
Solar Energy Development PEIS
Comment ID: SolarM60238

First Name: Richard
Middle Initial:
Last Name: Grainger
Organization:
Address:
Address 2:
Address 3:
City: Altadena
State: CA
Zip: 91001
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Dear BLM,

In the spring of 2009, I was visiting the BLM area located about eight miles east of Blythe, CA to explore where in World War II Gen. Patton held his tank warfare training exercises. I was also there to photograph desert wildlife and spring flowers, as I have done this for several decades now in the California deserts.

While there, I came across several wildlife biologists who were conducting desert tortoise surveys for a solar construction project I was told was called Solar Millennium. Using the Solareis.gov website, I see that this area is designated the Riverside East Solar Energy Study Area.

The area where the wildlife surveys were being conducted for solar development was undisturbed except for the historical artifacts and tank tracks left from Gen. Patton's tank maneuvers. This area was also filled with numerous wildflowers, snakes, lizards, birds, and significant archaeological sites.

To reach this area, I had to drive past several miles of abandoned farmlands and previously bulldozed industrial sites that are located close to Interstate 10.

Why are pristine and valuable BLM lands being considered for solar development when there are already disturbed lands adjacent and available for these projects?

The BLM should not give away high-quality public lands for private development when there are suitable, previously degraded lands available for solar projects.

Sincerely,

Richard Grainger
Altadena, CA

Thank you for your comment, Robert Bendick.

The comment tracking number that has been assigned to your comment is SolarM60239.

Comment Date: September 14, 2009 16:04:07PM
Solar Energy Development PEIS
Comment ID: SolarM60239

First Name: Robert
Middle Initial:
Last Name: Bendick
Organization: The Nature Conservancy
Address: 4245 Fairfax Drive
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22203
Country: USA
Email: rbendick@tnc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar Study Area Letter 9-14-09.pdf

Comment Submitted:

September 14, 2009

Mr. Bob Abbey
Director
Bureau of Land Management
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Dear Mr. Abbey:

Thank you for the opportunity to comment on the Solar Energy Study Areas being considered in the context of the Programmatic Environmental Impact Statement for Solar Energy Development (Solar PEIS). The Nature Conservancy strongly supports a strategy that would identify areas for the development of renewable energy that minimize conflicts with other land uses including habitat values and that could serve as a tool to expedite development of solar and wind energy resources.

The Nature Conservancy is an international nonprofit organization dedicated to the conservation of biodiversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 states and in 30 countries with the support of approximately one million members. To date, we have helped conserve more than 117 million acres and 5,000 river miles around the world. The Conservancy owns and manages approximately 1,400 preserves throughout the United States—the world's largest private system of nature sanctuaries. However, we recognize that our mission cannot be achieved by protected areas alone; thus, our projects increasingly seek to accommodate compatible human uses, especially in the developing world, to assure that protection of nature contributes to human well-being.

The Nature Conservancy supports the development of renewable sources of energy to mitigate the increasing threat of climate change. However, we also recognize that some of these renewable sources will require much larger land areas to produce the same amount of energy as the fossil fuel sources that they replace. Therefore, the Conservancy puts high priority on public policies and land management decisions with respect to the location and operation of renewable energy facilities (and the associated transmission infrastructure) that will protect habitat, ecological processes and biodiversity from adverse effects.

In addition to the general concepts on the renewable energy zone approach set forth below, we are also attaching comments with respect to some of the specific areas that were identified in the maps provided on the Bureau's web site as noticed in the *Federal Register* on June 30, 2009.

Approach. We strongly support the Bureau's decision to identify and study areas that may direct solar energy development to the most appropriate locations on the public lands. We favor this approach because it allows the Bureau to:

- Focus its resources on processing applications for renewable energy facilities in the most appropriate places;
- Meet its multiple-use mission, including natural resource protection, by identifying specific, delineated areas where renewable energy development will be allowed; and
- More accurately predict the cumulative impacts of development because the locations and aerial extent of development can be defined.

In addition to the Solar Energy Study Areas identified for re-scoping in the PEIS, there are a number of other larger areas (meeting the Bureau's own minimum-size criteria for identifying solar energy study areas) which the Bureau has identified and with respect to which the Bureau is processing applications for solar facilities on an expedited basis. These areas may be more important ecologically than the selected study areas. It is, therefore, not appropriate to eliminate focused consideration of development in these larger areas in this PEIS, especially since the cumulative effects of permitting facilities in these locations may overwhelm the effects of facilities within the study areas.

The Bureau's explanation of the proposed status of these areas relative to the solar energy study areas and the other areas under consideration for development in the Solar PEIS is not clear. In particular, it is not clear how the Bureau will treat applications in these other areas, and how it will handle, for example, the analysis of cumulative effects for individual projects outside the study areas. If the Bureau continues to accept and process applications in the "other areas under consideration for development," this will undermine the benefits described above for the low conflict renewable energy zone approach.

Following completion of the PEIS, we would urge that the Bureau direct future applications only to those areas identified as low-conflict Solar Energy Zones in the PEIS. The actual development in those areas should be carefully monitored and studied for impacts. In the future, if additional areas are required for development of solar energy, the increased understanding of impacts of these developed zones should help inform another analysis to determine where additional renewable energy should be located.

Criteria. We appreciate the Bureau's explication of the criteria used to identify the solar energy study areas. We offer the following comments on the criteria used by the Bureau:

Minimum Size. The Bureau should consider reducing the minimum size of 2,000 acres that was considered for solar energy study areas.

- While concentrating solar facilities typically require approximately 2,000 acres in order to be economically viable, our understanding is that utility-scale photovoltaic facilities can be cost effective on much smaller acreage, requiring as little as 160-200 acres for a viable facility.
- In general, the Bureau's scattered and checker-board parcels are challenging to manage and may have lower attractiveness for concentrating solar development than the Bureau's large, contiguous parcels. However, these smaller parcels, especially those near transmission and distribution lines, and within urban and disturbed areas (see below), may provide enhanced

value and expedited siting opportunities, allowing the Bureau to meet its multiple-use mission while contributing to the national goals of greenhouse gas reduction, energy independence and economic recovery.

- If our recommendation for a smaller minimum-size were to be implemented, it should be done as a means to reduce fragmentation of intact landscapes and for the siting of projects on lands of lowest conservation value. It will be important to guard against fragmentation of high conservation value habitats by scattered, small projects.

In addition to the sensitive resources that were removed from consideration, we recommend that the Bureau include in its evaluation the following additional criteria to identify and evaluate proposed solar energy study areas:

Adjacency to degraded and impacted private lands that provide little-to-no conservation value.

- Again, we applaud the Bureau for evaluating where development of renewable energy may be appropriate on the lands under its own jurisdiction. This evaluation would be strengthened by evaluating the most appropriate locations for development in the context of the greater landscape.
- Identification of low-conservation value public lands that are adjacent to low-conservation value private lands would allow for expansion of renewable energy development onto private lands, which might offer tax benefits to local governments.

Proximity of solar energy study areas to urbanized development.

- Recognizing that renewable energy is being proposed, in part, to reduce greenhouse gas emissions in our collective efforts to address threats from climate change, there are benefits from siting facilities in the general vicinity of urbanized areas. In particular, the siting of facilities closer to urbanized areas permits the workforce that will be employed by the facility to reduce its commute, reducing greenhouse gas emissions associated with transportation to work. Said another way, it would allow for economic development to occur in communities where infrastructure already exists, and generates needed jobs in fully built but often distressed communities.
- Siting renewable energy facilities close to urbanized areas would also eliminate the need for the development of new housing and associated infrastructure to accommodate the workforce of a plant that is too remote to permit reasonable commuting.

Avoidance of landscape-level biological linkage areas required for the continued functioning of biological and ecological processes. In addition to avoiding existing known wildlife movement corridors — a criterion we strongly support — the Bureau should also evaluate the risk that solar energy study areas will otherwise adversely affect wildlife migration or sever ecological process corridors (e.g., sand movement, ground-water re-charge zones). In particular, analysis of the Amargosa Valley study area indicates that solar energy development may interrupt sources of sand replenishment for the dune system which is essential habitat for several sensitive and rare plant and animal species that depend upon this physical replenishment process.

Avoidance of native corridors that will allow native species to move in response to climate change. We strongly recommend that the Bureau study and attempt to avert the effects of renewable energy and transmission facility siting on impending changes in wildlife migration and plant and animal habitat adaptation and movement needs driven by climate change.

Water Use. Given the extremely dry conditions in the regions likely to host significant solar energy development, even the modest water requirements of dry-cooled concentrating solar and photovoltaic facilities may represent considerable stress on the limited local water resources. In addition, climate change models project that the desert will become even drier in the future, making water resources in the desert all the more precious and subject to overuse. Wet-cooling of solar-thermal facilities may be incompatible with these dry ecosystems. Therefore, we recommend that the PEIS should include a comprehensive evaluation of available water budgets for each respective basin. In addition we recommend that as a pre-condition of being granted a permit, any developer should be required to submit for approval an evaluation of their water supply needs, a proposal for the source of that water, an assessment of potential impacts of their water use on biodiversity, a comprehensive water monitoring plan to monitor any impacts on the local water resources, and detailed mitigation measures for estimated water resource impacts including contingency measures for unforeseen impacts detected by later monitoring. As a condition for operation, the permitted entity should be required to pay for implementation of the approved water monitoring plan.

The Mojave Desert is the driest desert in North America. Its groundwater resources must be carefully managed and frugally used to avoid overdraft. A drop in the water table can seriously threaten desert biodiversity as the plants, animals, and natural communities of the Mojave are dependent on groundwater and groundwater-fed springs for their survival. For the Amargosa Valley, in particular, the water budget must ensure enough water for the critical breeding habitats of endemic species such as the Amargosa Toad in the Oasis Valley and sufficient supplies for biodiversity protection at the Ash Meadows National Wildlife Refuge, the associated conservation lands and for the Amargosa River itself.

Cumulative Impacts. Prior to finalizing priority renewable energy zones, the Bureau should complete a cumulative impact analysis *by eco-region* for development of solar energy facilities within the proposed solar energy study areas. As noted above, the Bureau should include as part of this cumulative impacts analysis an assessment of the contributing cumulative impacts that would occur from developing any of the permit applications for large solar facilities that the Bureau has identified as appropriate to expedite, including those outside the proposed study zones. In addition, the Bureau needs to consider the potential impacts of water use, especially from wet-cooling, as part of the cumulative impacts analysis. The Bureau should determine if specific development criteria for approving a right-of-way permit (or any alternative mechanism for permitting development of solar facilities as determined by the Solar PEIS Record of Decision) are necessary to ensure the Bureau's ability to continue to meet all aspects of its multiple-use mission; if so, the Bureau should describe new policies for permitting solar facilities as part of this Solar PEIS.

Mitigation. The Bureau has the mission of meeting multiple uses on its lands, including resource conservation. In the case of solar development, public land that has been meeting multiple uses will be converted into a single use. The Nature Conservancy believes it is appropriate and necessary for the Bureau to require mitigation of habitat impacts (in addition to mitigation specific to the Endangered Species Act) to allow the agency to continue to meet its resource protection objective while also fulfilling its objective of supporting renewable energy development. We recommend that the Bureau continue to follow a decision hierarchy that seeks to first avoid, then minimize, and then offset adverse

environmental impacts. “Mitigation” refers to the entire hierarchy as identified by the Council on Environmental Quality (CEQ): avoid, minimize, restore, and offset (40 CFR 1500-1508).

Mitigation investment decisions should be based on scientific analyses of the best sites and management and restoration activities to protect and maintain the long-term viability of specific species (e.g., desert tortoise) and for biological diversity in general. In order to “maximize return on investment of limited mitigation funds” we advocate that mitigation dollars be put to the highest and best use for ecosystem protection, enhancement, restoration and or species recovery. In some cases that may mean acquiring critical private lands, in others it may mean carrying out or supplementing existing management actions to abate other critical threats. This will contribute to the Bureau’s mission of protecting the natural resources and biodiversity of the lands it manages.

We would strongly urge the Bureau to adopt a “no net loss” goal for priority species and vegetation values that would be affected by solar energy development. Such a goal would provide clear sidebars for maintaining or enhancing species and vegetation. These sidebars would in turn make transparent and more easily justifiable agency decisions about areas open and closed to solar energy development on public lands, and what mitigation measures may be appropriate.

Should the Bureau adopt such a goal, the Bureau would need to identify and set quantitative objectives for a suite of priority species and vegetation that would be affected by solar energy development. For example, in the San Luis Valley the Bureau may identify active Gunnison’s prairie dog habitat as a priority vegetation/habitat type. To achieve no net loss, the Bureau would then need to set a goal – working with the Colorado Division of Wildlife and other partners - for the amount of active Gunnison’s prairie dog habitat on Bureau-managed lands that must be maintained at any one point in time. If proposed solar development were to cause the amount of prairie dog habitat to “dip below” this objective, it would be appropriate and clearly justifiable for the Bureau to require mitigation measures of solar energy developers.

In order to meet both the consumptive and intensive use objectives *and* the conservation objectives for its land, the Bureau has established a policy (September 30, 2008) that allows for offsite mitigation. The Bureau’s Offsite Mitigation Policy (IM 2008-204) would support using offsite mitigation for solar energy development. As the policy states, “Offsite mitigation is a supplemental mitigation practice...and must be based on the need to address important resource issues that cannot be acceptably mitigated onsite.” Solar energy infrastructure permanently alters the landscape in which it is installed, and the potential for onsite mitigation will be limited. With each project likely to cover hundreds or even thousands of acres, the impact to species and vegetation is likely to be significant, depending on the type and quality of vegetation to be affected. Clearly stating support for offsite mitigation in the EIS will provide the Bureau with the flexibility to manage for species and vegetation in light of solar energy development, thereby assuring that the Bureau’s multiple use mission is met.

Should the Bureau allow for or require the use of offsite mitigation, we would encourage the Bureau to support mitigation on- or off- Bureau lands as the policy describes. Specifically the policy states, “Offsite mitigation may be performed on Federal lands managed by the Bureau or another Federal agency. Offsite mitigation may also occur on non-Federal lands with the agreement of the surface owner or other land management agency when it provides an alternative site for conserving Bureau-managed resources that have been temporarily impacted while activities are occurring on Bureau-managed lands

One tool the Bureau should employ to maximize the value of mitigation investments is Regional Advance Mitigation Planning. RAMP approaches incorporated into siting and mitigation protocols

minimize costs and transaction inefficiencies thereby better protecting conservation values across entire regions. RAMP incorporates a regional rather than individual project approach to evaluating and mitigating for environmental impacts.

Coordination with Other Planning and Assessment Efforts. The *Federal Register* of June 30 indicates that the Bureau made the initial determinations for these solar energy study areas based in part on work done by California's Renewable Energy Transmission Initiative and by the Western Governors' Association Western Renewable Energy Zones and Transmission Study. We applaud the Bureau for considering these efforts in the design of this proposal and would encourage that the many efforts already underway by other federal and state agencies to facilitate renewable energy development in the Western states be coordinated with these designations and the Solar PEIS.

The Bureau should be highly engaged with California's Desert Renewable Energy Conservation Plan (DRECP) and ensure that the final renewable energy zones (including both the criteria for siting and actual locations) are integrated with and correspond to the results of the DRECP. The state and federal agencies need to be aligned to ensure that the final maps defining renewable energy siting and conservation in the California deserts incorporate all uses, are viable, robust and enduring. In addition, federal and state mitigation policies for the use of desert lands by solar facilities are not yet defined; in the past these state and federal policies have differed significantly. If these policies are not clearly defined and congruent, it will be very difficult to assess the environmental impacts—including cumulative effects—of facility siting. The DRECP offers an appropriate vehicle to resolve mitigation—as well as other differences—between state and federal agency policies and to construct a multi-species habitat conservation plan that will assure broad agreement on appropriate sites as well as compensation requirements for the use of public lands.

We understand that the Bureau is embarking on a series of eco-regional assessments for the eco-regions that are most likely to be the location of significant solar energy development. We strongly support the use of eco-regional analysis in making zone designations and developing mitigation strategies for renewable energy development. We urge the Bureau to complete these assessments as quickly as possible so that they may be of maximum value in these decisions. The Conservancy has already completed eco-regional assessments for the Mojave, Sonoran and Great Basin Deserts and we are in the midst of updating those assessments to ensure that they remain relevant to changing threat scenarios. We note that information available through these assessments (as well as assessments that we have completed for other eco-regions) may be of value to the Bureau to more rapidly complete its own assessments and to tailor mitigation strategies for the development of solar energy in the identified areas.

Thank you again for the opportunity to comment on the solar energy study areas and the important strategic approach that you have identified to minimize the impact of renewable energy resources on important conservation values found on federal lands.

Sincerely,



Robert Bendick
Vice President for External Affairs

Enc. Comments on Specific Study Areas in California, Colorado and Nevada

Thank you for your comment, Robert Bendick.

The comment tracking number that has been assigned to your comment is SolarM60240.

Comment Date: September 14, 2009 16:07:17PM
Solar Energy Development PEIS
Comment ID: SolarM60240

First Name: Robert
Middle Initial:
Last Name: Bendick
Organization: The Nature Conservancy
Address: 4245 Fairfax Drive
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22203
Country: USA
Email: rbendick@tnc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: TNC Colorado Chapter Comments.doc

Comment Submitted:

Date: September 14, 2009
To: Solar Energy PEIS Team: Bureau of Land Management and Argonne National Labs
Cc: BLM Colorado State Office: Maryanne Kurtinaitis, Lands and Realty Program Lead and Justice Rhodes,
From: Tim Sullivan, Acting State Director, Colorado Field Office
Subject: **Scoping Comments on Solar Energy Study Areas in Colorado**

Dear PEIS Team:

Thank you for the opportunity to comment on the Solar Energy Study Areas (SESAs). Our comments build on those we submitted to BLM in the form of a “preliminary analysis” on April 14, 2009. At that time, we identified high potential conflicts between solar energy development and natural resource values across the San Luis Valley (SLV) as a whole. This latest set of comments “zooms in” on the four areas that BLM is proposing in the SLV and builds on the preliminary analysis to take into account additional species and vegetation values.

1) We were pleased to see that the areas have only very limited intersections with the high potential conflict areas, from a natural resources perspective, that we identified in the preliminary analysis.

Attachment 1 shows the SESAs overlaid with the high potential conflict areas that we identified in the preliminary analysis. As you may recall, for the preliminary analysis we collected available GIS layers for natural resource values the SLV, identified those that our scientists felt would be *most sensitive* to disturbance by solar energy development, and then overlaid these values. The resulting map included the most significant values from our scientists’ perspectives, and for which we had available data. Specifically these values included:

- Bald eagle roost sites and winter concentration areas
- Bighorn sheep production areas and severe winter range
- Gunnison sage-grouse production Areas, severe winter Range, winter Range, and overall range
- Globally imperiled plants and natural communities as ranked by CNHP
- Riparian areas
- Potential Conservation Areas as identified by the CNHP
- Sandhill crane habitat

Of those values, the only clear intersections with the SESAs include riparian areas for the Los Mogotes East and Antonito South Areas.

According to the preliminary analysis, there is also an intersection between sandhill crane habitat and the Fourmile East SESA. However, we do not believe that the habitat actually extends into Fourmile East given what we know of the terrain, and based on a map of sandhill crane distribution we acquired from USFWS after submitting the preliminary analysis to BLM. For the preliminary analysis, we had mapped a simple approximation of sandhill crane habitat by buffering all conservation easements and wildlife refuges by 1,000 feet. The USFWS map is more accurate and does not appear to intersect the Fourmile East SESA.

2) There are additional intersections between the SESAs and key natural resource values beyond those that we reviewed for the preliminary analysis. We urge BLM to proactively address impacts to these and other natural resource values.

Following the preliminary analysis, we reviewed additional GIS layers with species and vegetation values and noted intersections with the SESAs. We did not review *all* available GIS layers in our possession for possible intersections, but we did expand the list beyond the values that we identified for the preliminary analysis. The values for which we identified intersections with one or more SESAs include:

- Bald eagle winter forage
- Elk highway crossing
- Elk severe winter range
- Gunnison's prairie dog colonies – active
- Gunnison's prairie dog colonies – unknown
- Landscape intactness
- Pronghorn winter concentration
- Riparian areas (also noted in the preliminary analysis)
- TNC portfolio sites

Attachment 2a provides more detail about these intersections and includes considerations for how BLM could address impacts to these resources. Attachment 2b provides maps of these intersections. Attachment 3 shows the full list of GIS layers collected and/or reviewed for intersection with the SESAs.

3) Consider adding or removing SESAs based on the best available information on transmission corridors, combined with knowledge of natural resource values on BLM-managed lands throughout the Valley.

The map of the Solar Energy Study Areas for the San Luis Valley shows “existing designated corridors.” In talking with BLM, we understand these corridors include those that Xcel and the SLV Rural Electric Cooperative identified prior to 1991, which BLM included in its 1991 Resource Management Plan. BLM may have used these corridors when selecting the Solar Energy Study Areas.

There is at least one other more recent map of potential transmission development, however, which Tri-State and Xcel produced as recently as January 2009:

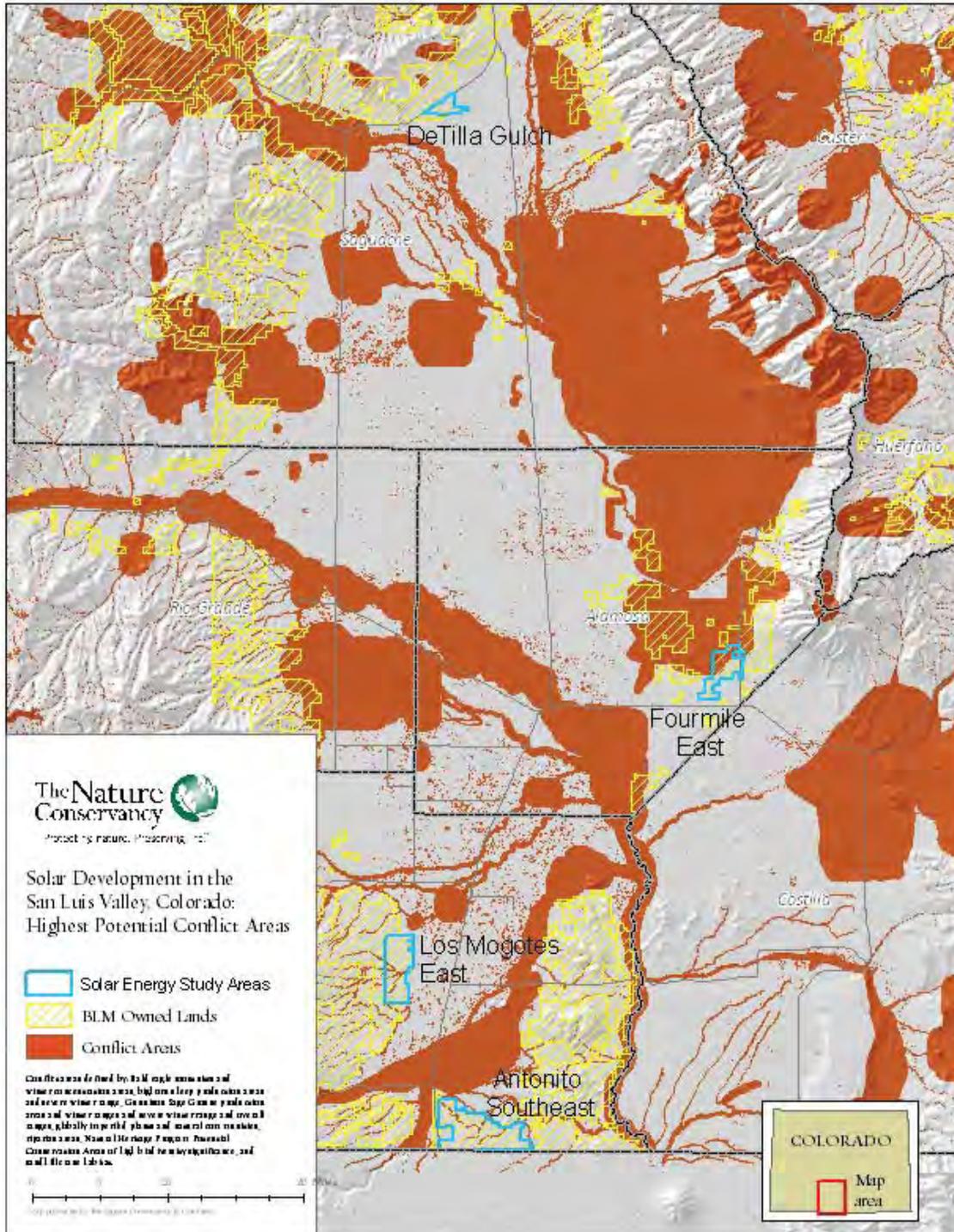
http://www.tristategt.org/Transmission/sanluisvalley/documents/Project_Siting_Updates.pdf.

We wonder if BLM would alter its choices of SESAs based on this updated map, if BLM did not already use this map in identifying the SESAs. Consider revisiting the selection of the SESAs based on the most up-to-date transmission alternatives, to ensure that BLM has selected the most appropriate sites for potential solar energy development based on transmission and potential conflicts with key natural resource values.

4) We hope you will engage us in future conversations about solar energy siting. We appreciated the opportunity to share the preliminary analysis with the BLM State Office and the San Luis Valley Public Lands Center earlier this summer. We hope to continue these conversations, and wish to add real value to BLM's efforts to manage for species and vegetation while allowing for solar energy development. In particular, we have been gaining increasing experience working with BLM and other partners in identifying mitigation opportunities through our "Energy by Design" (EBD) process. As you may be aware, EBD is a science-based process through which we bring together agencies and willing industry partners to identify opportunities to avoid, minimize, reclaim, and offset impacts of development, based on goals for and anticipated impacts to species and vegetation. To date we have applied this process to oil and gas on public and private lands and the methodology is readily applicable to solar and other types of energy development. If BLM would like to discuss the possible application of EBD to the Valley, please contact David Gann at dgann@tnc.org or Megan Kram at mkram@tnc.org.

Thank you for your consideration. Best of luck as you move forward with the PEIS.

Attachment 1. TNC preliminary analysis of high potential conflict areas overlaid with Solar Energy Study Areas. Of the natural resource values included in this map, conflicts exist only for riparian areas within Los Mogotos East and Antonito Southeast. The apparent conflict within Fourmile East is with potential sandhill crane habitat, for which the map was a rough approximation of habitat. A more accurate map that we acquired from USFWS suggests that there is no known conflict with sandhill crane habitat in the Fourmile East SESA.



Attachment 2a. Natural resource values observed to intersect with BLM Solar Energy Study Areas in the San Luis Valley, Colorado.
Yellow highlights = observed intersections using GIS.

See Attachment 2b (separate attachment) for maps of these intersections.

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the BLM Solar Energy Study Areas				Layer source	Considerations for how BLM should address impacts
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Bald eagle winter forage		No	No (east of site)	No	No	Yes	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.	
Elk highway crossing		No	No	Yes	No	No	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.	
Elk severe winter range		No	Yes	No	Yes	Yes	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.	
Gunnison's prairie dog colonies – active		No	Yes	No	No	No	Discuss with CDOW and FWS. TNC is concerned about any net loss of available habitat (includes active and unknown) for this candidate species. Cumulative impacts to this species such as habitat poisoning, changes in land use, and plague have greatly reduced its population numbers and available habitat. Of the states with known prairie dog habitat, Colorado currently maintains by far the largest number of individuals range-wide. Historically, the population strongholds in Colorado included the San Luis Valley and South Park. However, the habitat in South Park has diminished from 670,000 acres prior to 1940 to 40-50 acres currently. [what is in the SLV now vs. what was there historically?] [citation]	
Gunnison's prairie dog colonies – unknown		No	Yes	Yes	Yes	No, but adjacent to western boundary of the site		

		Intersection with the BLM Solar Energy Study Areas						
GIS layers collected	Status of species	Included in TNC prelim. analysis	DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE	Layer source	Considerations for how BLM should address impacts
Landscape intactness	n/a	No	Somewhat intact. Least intact of the four study areas	Relatively intact, bisected by local roads	Highly intact, though its eastern border is adjacent to much less intact land.	Highly intact. Most intact of the four study areas.	TNC	This "cost surface" layer shows the relative degree of intactness (and its inverse - fragmentation) across the state of Colorado based on agriculture, urban development, oil and gas development, and roads (primary, secondary, local and primitive). To maintain habitat functionality, consider setting quantitative objectives for acreage to retain as intact for each of the SESAs, based on objectives for species and vegetation more broadly. Ideally, BLM would retain as much area as possible as intact by guiding or encouraging (via incentives?) development toward less-intact SESAs and areas within SESAs.
Pronghorn winter concentration		No	Yes	No	Yes (western half of the site)	No	CDOW	Discuss with CDOW. Consider setting quantitative objectives for maintenance and enhancement.
Streams	n/a	Yes	No	No	Yes	Yes	TNC adapted from National Hydrography Dataset Plus	Maintain an appropriate distance from streams and riparian areas, ideally as identified by mapping riparian vegetation or floodplains.
TNC portfolio sites	n/a	No	Yes – SLV Grease-wood and Upper SLV	Yes – Great Sand Dunes/San Luis Lakes.	No	Yes - Puncche Valley	TNC	[what to say? Suggesting impact minimization would not be helpful to BLM...]

Attachment 3. Full list of natural resource collected and/or reviewed for intersection with BLM Solar Energy Study Areas in the San Luis Valley. *Yellow highlights = observed intersections using GIS.*

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
PLACES IMPORTANT TO MANY OF THE VALUES BELOW								
TNC portfolio sites		No	Yes	No	Yes	The Nature Conservancy (TNC)	DeTilla Gulch intersects with SLV Greasewood and Upper San Luis Valley. Fourmile east with Great Sand Dunes/San Luis Lakes. Antonito South = Punche Valley.	
LARGE AND INTACT PATCHES OF ECOLOGICAL SYSTEMS								
Viably-sized patches of matrix vegetation types		No	No	No	No	Colorado Nat. Heritage Program (CNHP)	Best and biggest occurrences of TNC Southern Rocky Mountains Ecoregional Assessment	
Landscape intactness		No	Relatively intact, bisected by local roads	Highly intact, though its eastern border is adjacent to much less intact land.	Highly intact. Most of the four study areas.	TNC	This "cost surface" layer shows the relative degree of intactness (and its inverse - fragmentation) across the state of Colorado based on agriculture, urban development, oil and gas development, and roads (primary, secondary, local and primitive).	
RIPARIAN AND AQUATIC								

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)					Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE			
Streams		Yes	No	No	Yes	Yes	TNC adapted from National Hydrography Dataset Plus	Includes all perennial, intermittent, etc. No go 1000 ft from wetlands, lakes,	
RARE PLANTS AND NATURAL COMMUNITIES									
Potential Conservation Areas – B1 and B2		Yes	No	No	Yes	No	CNHP		
G1 and G2 rare plants and natural comms		Yes	No	No	Yes	No	CNHP		
Potential Conservation Areas – B3		No	No	No	No	No	CNHP		
G3 rare plants and natural comms		No	No	No	No	No	CNHP		
OTHER IMPORTANT WILDLIFE VALUES									
Bald eagle roost sites		Yes	No	No	Yes	No	Colorado Div. of Wildlife (CDOW)		
Bald eagle winter concentration areas		Yes	No	No	Yes	No (north and west of site)	CDOW		
Bald eagle summer forage		No	No	No	No	No	CDOW		
Bald eagle winter forage		No	No (east of site)	No	No	Yes	CDOW		
Bald eagle winter range		No	N/R	N/R	No	N/R	CDOW		
Bighorn migration corridors		No	No	No	No	No	CDOW		
Bighorn production areas		Yes	No	No	Yes	No	CDOW		
Bighorn severe winter		Yes	No	No	Yes	No	CDOW		

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)					Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE			
range									
Bighorn summer concentration areas		No	No	No	No	No	No	CDOW	
Bighorn water source		No	No	No	No	No	No	CDOW	
Bighorn winter concentration areas		No	No	No	No	No	No	CDOW	
Bighorn winter range		No	No	No	No	No	No	CDOW	
Bighorn summer range		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Bighorn migration patterns		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Bighorn mineral lick		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Bighorn overall range		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Bighorn winter range		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Elk highway crossing		No	No	Yes (see notes)	No	No	No	CDOW	An elk crossing is mapped along County (?) Road 150 and appears to intersect Fourmile East at its northernmost point along this road.
Elk migration corridors		No	No	No	No	No	No	CDOW	
Elk production areas		No	No	No	No	No	No	CDOW	
Elk severe winter range		No	Yes	No	Yes	Yes	Yes	CDOW	
Elk summer concentration areas		No	No	No	No	No	No	CDOW	
Elk winter concentration areas		No	No	No	No	No	No	CDOW	
Elk limited use areas		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Elk migration patterns		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Elk overall range		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Elk resident population		No	N/R	N/R	N/R	N/R	N/R	CDOW	
Elk summer range		No	N/R	N/R	N/R	N/R	N/R	CDOW	

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)					Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE			
Elk winter range		No	N/R	N/R	N/R	N/R	CDOW		
Gunnison sage-grouse production area		Yes	No	No	No	No	CDOW		
Gunnison sage-grouse severe winter range		Yes	No	No	No	No	CDOW		
Gunnison sage-grouse winter range		Yes	No	No	No	No	CDOW		
Gunnison sage-grouse overall range		Yes	No	No	No	No	CDOW		
Mule deer concentration area		No	No	No	No	No	CDOW		
Mule deer critical winter range		No	No	No	No	No	CDOW		
Mule deer highway crossing		No	No	No	No	No	CDOW		
Mule deer migration corridor		No	No	No	No	No	CDOW		
Mule deer severe winter range		No	No	No	No	No	CDOW		
Mule deer winter concentration area		No	No	No	No	No	CDOW		
Mule deer limited use area		No	N/R	N/R	N/R	N/R	CDOW		
Mule deer migration pattern		No	N/R	N/R	N/R	N/R	CDOW		
Mule deer overall range		No	N/R	N/R	N/R	N/R	CDOW		
Mule deer resident population		No	N/R	N/R	N/R	N/R	CDOW		
Mule deer summer range		No	N/R	N/R	N/R	N/R	CDOW		
Mule deer winter range		No	N/R	N/R	N/R	N/R	CDOW		

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)					Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE			
Pronghorn concentration area		No	N/R	N/R	N/R	N/R	CDOW		
Pronghorn limited use area		No	N/R	N/R	N/R	N/R	CDOW		
Pronghorn migration corridor		No	No	No	No	No	CDOW		
Pronghorn overall range		No	N/R	N/R	N/R	N/R	CDOW		
Pronghorn perennial water		No	N/R	N/R	N/R	N/R	CDOW		
Pronghorn resident population		No	N/R	N/R	N/R	N/R	CDOW		
Pronghorn severe winter range		No	No	No	Yes	No	CDOW		
Pronghorn winter concentration		No	Yes	No	Yes (western half of the site)	No	CDOW		
Pronghorn winter range		No	N/R	N/R	N/R	N/R	CDOW		
Sandhill crane habitat		Yes	No	Yes	No	No	TNC	Represented by a 1-mile buffer of wildlife refuges and conservation easements	
Gunnison's prairie dog colonies – active		No	Yes	No	No	No	CDOW	We don't have this data yet, but hope to collect it. Candidate for listing in this part of the range	
Gunnison's prairie dog colonies – inactive		No	No	No	No	No	CDOW		

GIS layers collected	Status of species	Included in TNC prelim. analysis	Intersection with the SESAs (N/R = GIS layer collected but not reviewed for intersection)				Layer source	Notes
			DeTilla Gulch	Fourmile East	Los Mog. East	Antonito SE		
Gunnison's prairie dog colonies – unknown		No	Yes	Yes	Yes	CDOW	No, but adjacent to western boundary of the site	

Thank you for your comment, Robert Bendick.

The comment tracking number that has been assigned to your comment is SolarM60241.

Comment Date: September 14, 2009 16:16:52PM
Solar Energy Development PEIS
Comment ID: SolarM60241

First Name: Robert
Middle Initial:
Last Name: Bendick
Organization: The Nature Conservancy
Address: 4245 Fairfax Drive
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22182
Country: USA
Email: rbendick@tnc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: TNC CA Chapter Comments w Maps.pdf

Comment Submitted:



**Comments of the California Chapter of The Nature Conservancy
On Solar Energy Study Areas Located in California
Additional Public Scoping for the
Solar Energy Programmatic Environmental Impact Statement
September 14, 2009**

Iron Mountain

- The Iron Mountain study area is the most problematic of the solar energy study areas under consideration in California. The Nature Conservancy recommends that this solar energy study area be eliminated for the following reasons:
 - The Conservancy's Sonoran ecoregional plan, identified very good occurrences of desert sand-verbena interior dune habitat in this study area. These occurrences should be avoided because they are irreplaceable and necessary to sustain the viability and diversity of species in the ecoregion. The Iron Mountain solar energy study area almost entirely engulfs one of the four known occurrences of this habitat in the entire Sonoran Desert in California.
 - The Iron Mountain study area covers a significant portion of Danby Playa, which is the largest intermittently flooded playa lakebed within the Sonoran Desert in California. Playa surfaces are susceptible to wind erosion when disturbed, so any development on a Danby Playa could lead to air quality deterioration.
 - The Iron Mountain study area is surrounded by occupied bighorn sheep ranges. The Bureau's Northern and Eastern Mojave (NEMO) Management Plan identifies important bighorn sheep migration corridors between these ranges. The Iron Mountain solar energy study area overlaps a portion of these known wildlife corridors.
 - The Nature Conservancy's assessment of the Californian portion of the Sonoran Desert (completed in 2009), identified lands that have a high-level of landscape integrity, with low or no fragmentation, and that satisfy at least one of two conservation goals: irreplaceability or ecosystem representation. The Iron Mountain solar energy study area is the most problematic of the proposed study areas in the Californian Sonoran Desert based on an assessment of overlap of the solar energy study areas and these highly intact, high-quality conservation lands.

- The area is located far from any urbanized areas, which would greatly increase the adverse impacts of renewable energy development:
 - Energy development would significantly disturb a remote area, increasing secondary impacts such as the spread of invasive species, construction and use of additional roads, and inappropriate off-road vehicle use.
 - The workforce commute to the facilities would likely be significant, offsetting the greenhouse gas benefits associated with renewable energy facilities
- There are transmission problems (which will both raise costs, lower energy gains, and cause impacts to further areas).
 - The Renewable Energy Transmission Initiative (RETI) identified potential issues and complications with building transmission in this location that “would raise the cost of transmission access for generators seeking to connect in that area.”

Riverside East

- Areas within the Riverside East solar energy study area — especially areas adjoining Bythe and Desert Center — meet many of the criteria that The Nature Conservancy believes are important for siting solar energy facilities in the California Deserts. In particular, this area is close to transmission and is in close proximity to urbanized areas. A portion of the solar energy study area also meets another criterion that we suggested earlier: the study area includes public lands with relatively low conservation value that adjoin disturbed private lands with low conservation value.
- The size of the Riverside East solar energy study area, at 202,295 acres, dwarfs the size of any other solar energy study area and is significantly larger than the combined acreage of solar energy study areas being considered in any other state. The enormous size of this solar energy study area poses potential issues if a large percentage of the study area is developed.
 - The Riverside East solar energy study area lies within a transition zone at the border of two ecoregions: the Mojave Desert and the Sonoran Desert. The location of the transition zone between the ecoregions is likely to shift as the climate changes, and species may be forced to move in order to adapt to this change. Any barrier that prevents natural species movement may threaten the biological diversity of both ecoregions. In addition, populations of plants or animals living within the ecoregional transition zone may be genetically distinct from those found closer to the core of each ecoregion. Preserving this genetic diversity may be crucial to allowing species to adapt to climate change.
- A portion of the western part of the Riverside East solar energy study area surrounds Joshua Tree National Park on three sides. The Fish and Wildlife Service has identified

Joshua Tree National Park as a protected ecological reserve, which they included in the recovery plan for the threatened desert tortoise.

- A portion of the western part of the Riverside East solar energy study area surrounds the Bureau’s Desert Lily Sanctuary, created by The California Desert Protection Act (and an area given administrative protection by the Bureau since 1968). The California Desert Protection Act requires the Secretary of the Interior to “administer the area to provide *maximum protection* to the desert lily.” (emphasis added)
- The long-term viability of existing plants and animals within the Joshua Tree National Park ecological reserve and the long-term viability of the desert lily may be dependent upon habitat, populations or processes that exist outside of the boundaries of the preserves. The Nature Conservancy recommends modifying the boundaries of the Eastern Riverside solar energy study area to ensure the long-term viability of both the Joshua Tree National Park ecological preserve and the Desert Lily Sanctuary.
- The Nature Conservancy conducted an evaluation of the Californian portion of the Sonoran Desert within California in 2009. As mentioned above, this analysis identified lands that have a high-level of landscape integrity, with low or no fragmentation, and that satisfy at least one of two conservation goals: irreplaceability or ecosystem representation. Based on that analysis, significant portions of the Riverside East solar energy study area were identified as high-quality, intact habitat. Based on an assessment of overlap between these very important conservation lands and the solar energy study area, the following portions of the Riverside East solar energy study area are the most problematic:
 - In the western portion of the solar energy study area:
 - a portion of the area immediately west and south of Joshua Tree National Park,
 - the area to the east of Joshua Tree National Park and heading south towards Highway 10
 - In the central portion of the solar energy study area:
 - The northern-most portion of the solar energy study area.
 - In the eastern portion of the solar energy study area:
 - The western-most and northern-most portion of north-eastern section of solar energy study area.
 - The south-western portion of the south-eastern section of the solar energy study area.
 - The Nature Conservancy recommends modifying the Solar Energy Study Area to avoid this high-value and highly intact habitat.
- A portion of the Riverside East solar energy study area contains irreplaceable microphyll woodlands (including Ironwood, Paloverde and Honey Mesquite), a unique Sonoran Desert habitat that is important for bird species. In addition to the habitat value these woodlands provide, they are also important to sustaining the ecosystem function of the washes: the root systems stabilize the washes and banks during flash flooding, which

occurs during the monsoon season, and the trees help to slow the water. This habitat occurs in a portion of the western half of the solar energy study area. The Nature Conservancy recommends modifying the Riverside East solar energy study area to avoid impacts to this habitat and the ecosystem processes.

- As currently configured, the Riverside East solar energy study area severs the connectivity and linkage between the Northern Colorado and Eastern Colorado desert tortoise recovery units that was used in the Draft Revised Recovery Plan to justify combining these two units. This connectivity needs to be maintained.
- Summary of Recommendations for the Riverside East solar energy study area: The current solar energy study area should be modified, reduced, and potentially split into several solar energy study areas, based on an assessment of landscape-level linkages, including wildlife movement corridors, ecological processes, and climate change adaptation needs and to avoid irreplaceable and highly intact habitats.

Pisgah

- Areas within the Pisgah solar energy study area meet many of the criteria that The Nature Conservancy believes are important for siting solar energy facilities in the California deserts. Like the Riverside East area, this study area is close to transmission and also in close proximity to an urbanized area. A portion of the solar energy study area also meets another criterion that we suggested earlier: the study area includes public lands with relatively low conservation value that adjoin disturbed private lands with low conservation value.
- A recently released study [Hannah, L et. al. 2009. Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave. University of California, Santa Barbara, Donald Bren School of Environmental Science and Management] identified the development of the Pisgah Competitive Renewable Energy Zone (CREZ), as identified in the Renewable Energy Transmission Initiative, as potentially the most problematic area for solar energy development when it comes to the long-term survival of the bighorn metapopulation. The Pisgah solar energy study area corresponds with the Pisgah CREZ as defined in RETI. This solar energy study area should be evaluated and modified based on this new information to avoid bighorn sheep migration corridors.
- The eastern and southern portion of the Pisgah solar energy study area overlaps with and almost entirely engulfs some important conservation areas, including one of the few excellent occurrences of the White Margined Beardtongue in the Mojave Desert. The distribution of this imperiled plant is limited in the Western Mojave and this occurrence is on the western edge of its known range (CDFG, 1997b¹; Scogin, 1989²).

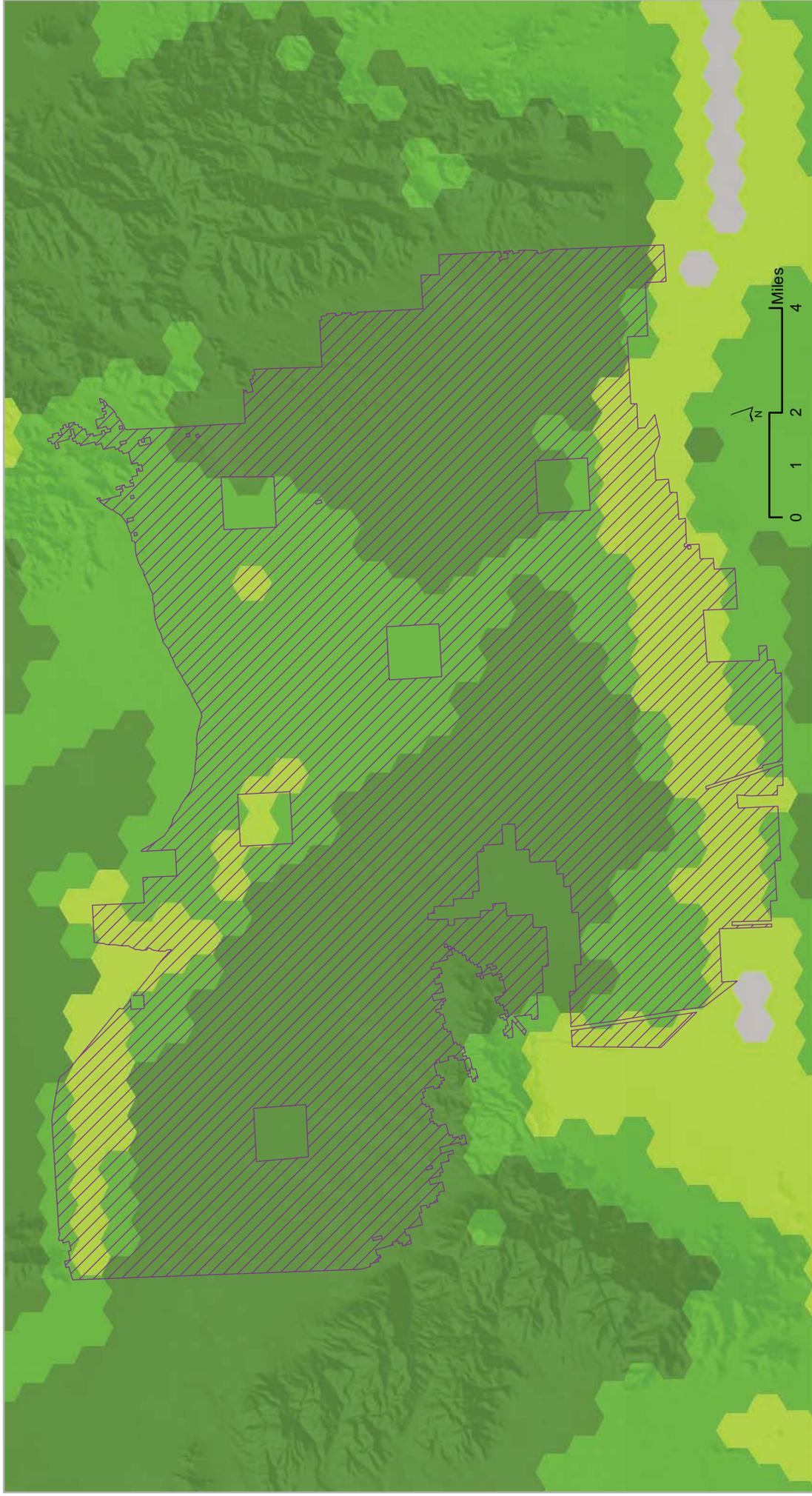
¹ California Department of Fish and Game. 1997b. Natural Diversity Data Base, RareFind Report.

- The drainages and crucifixion thorn woodland in the southern and eastern portion of the Pisgah solar energy study area create good habitat for several Sonoran bird species, allowing for the northernmost and westernmost extensions of these species. As climate changes, the extreme edges of the distribution of these species may be important for adaptation.
- The Pisgah solar energy study area, as currently configured, blocks an important desert tortoise movement corridor along the western edge of the Cady mountains. This wildlife corridor is important for providing connectivity between the Ord-Rodman Desert Wildlife Management Area (DWMA)/ACEC and the Superior-Cronese DWMA/ACEC.

Attached maps:

Iron Mountain
Riverside East
Pisgah

² Scogin, R. 1989. Studies of *Penstemon albomarginatus* in California. Report for Rancho Santa Ana Botanic Garden, Claremont, California.



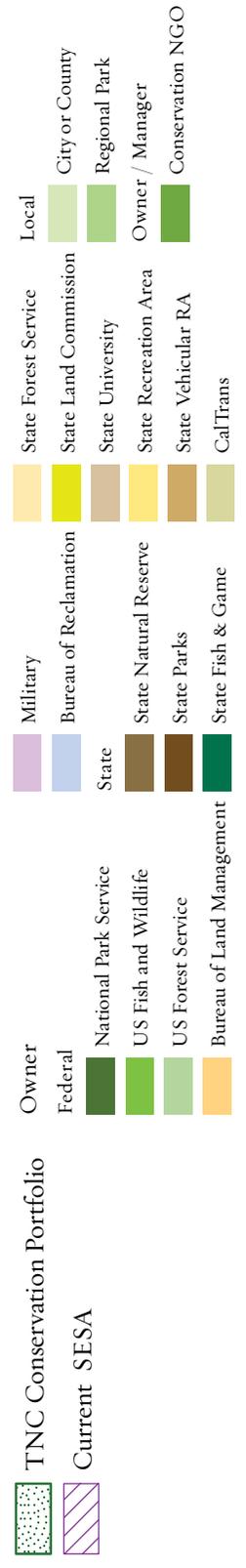
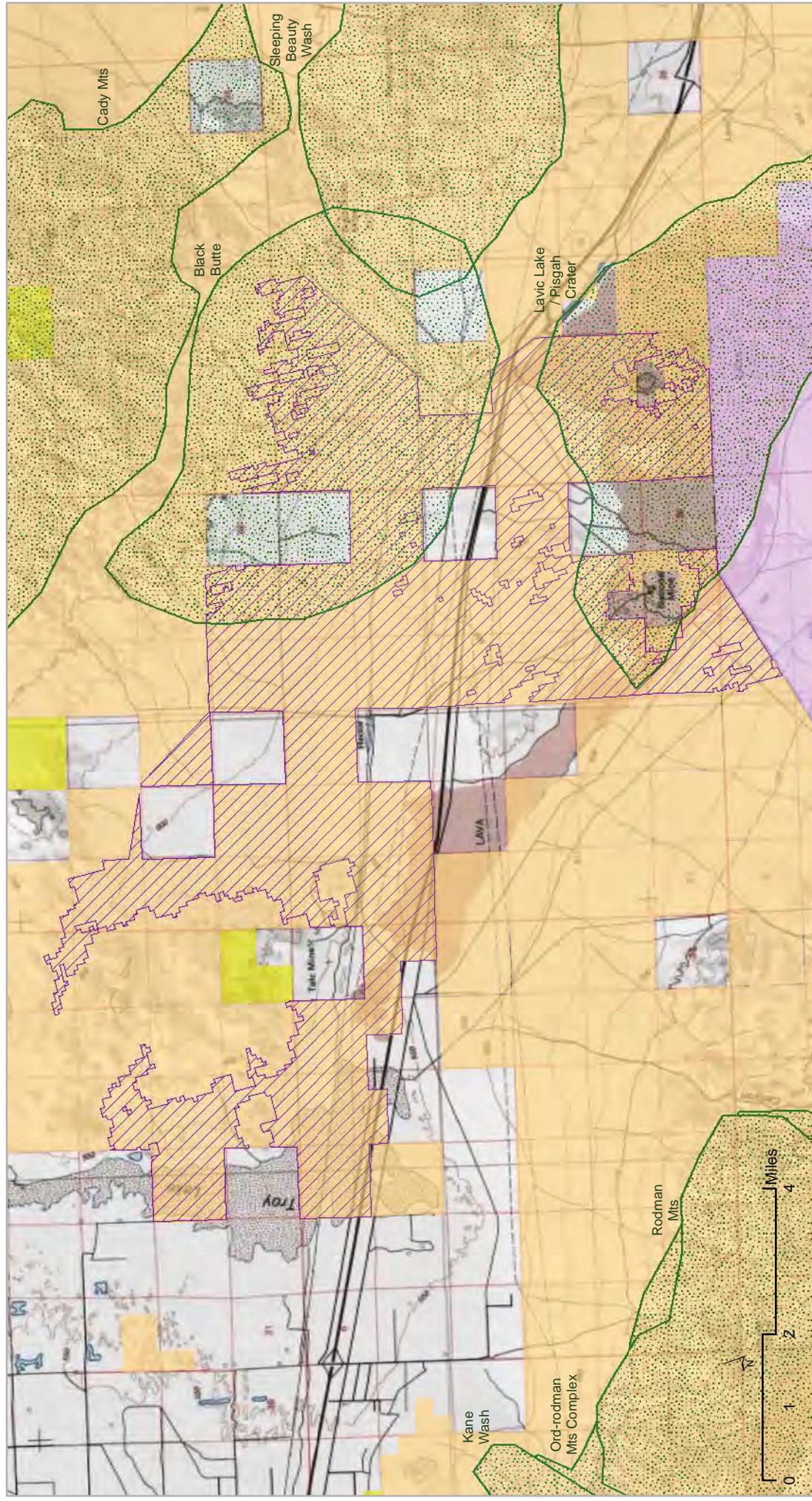
Current SESA

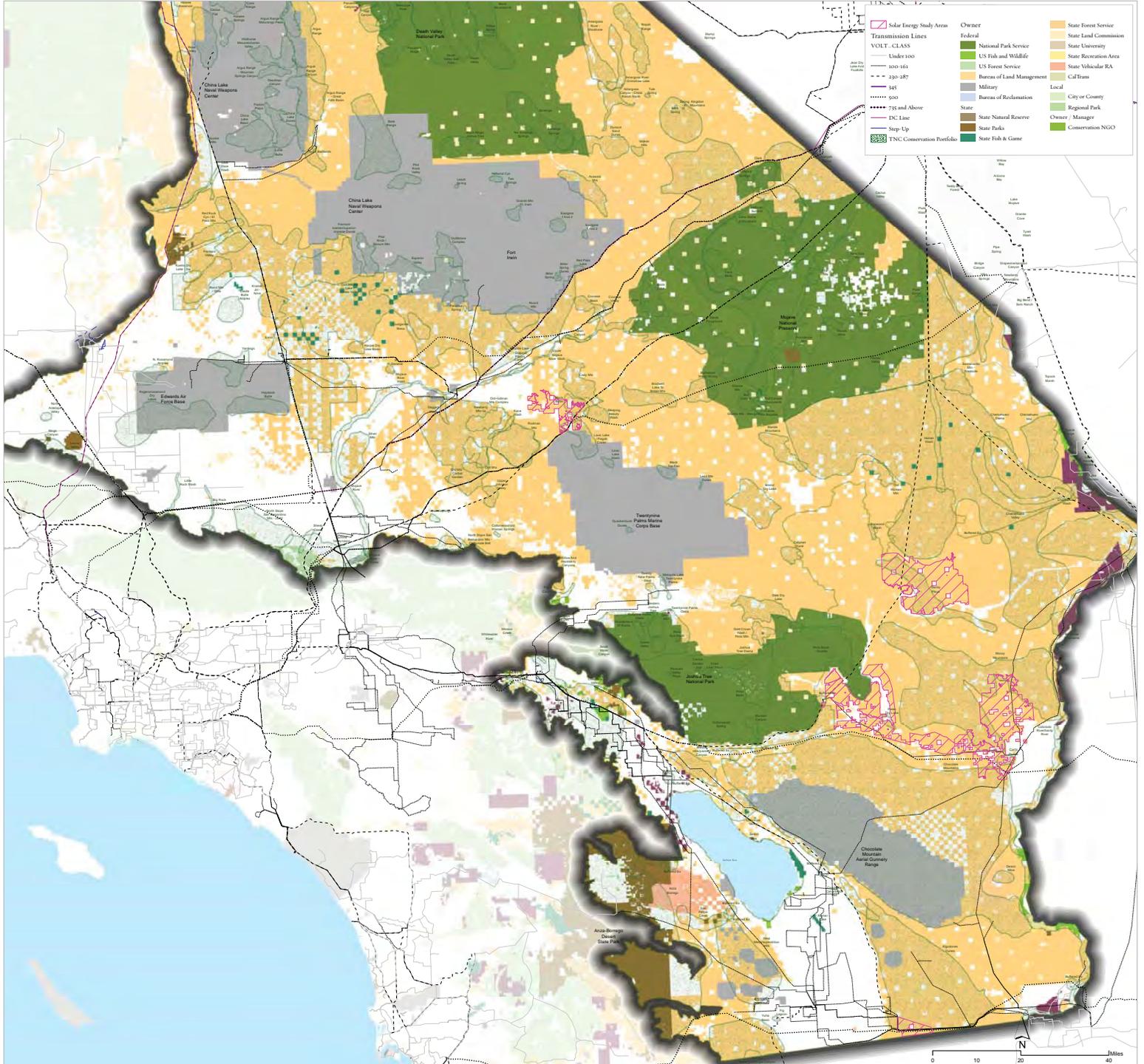
- Category A: Lands that have a high level of landscape integrity (low or no fragmentation) and satisfy at least one of our two conservation goals of irreplaceability and ecosystem representation.
- Category B: Lands that have a high level of landscape integrity or satisfy at least one of our two conservation goals of irreplaceability or ecosystem representation. As such, lands in this category may have high target value but have compromised integrity.
- Category C: Natural areas or open space that are fragmented by roads, sparse rural residential communities, or other human uses, but which may nonetheless contain conservation targets, provide potential habitat linkages, or provide a buffer around Category A.
- Category D: Lands that are dominated by urban communities and agriculture, but which may contain isolated conservation targets or provide habitat for some wildlife species.



Current SESA

- Category A: Lands that have a high level of landscape integrity (low or no fragmentation) and satisfy at least one of our two conservation goals of irreplaceability and ecosystem representation.
- Category B: Lands that have a high level of landscape integrity or satisfy at least one of our two conservation goals of irreplaceability or ecosystem representation. As such, lands in this category may have high target value but have compromised integrity.
- Category C: Natural areas or open space that are fragmented by roads, sparse rural residential communities, or other human uses, but which may nonetheless contain conservation targets, provide potential habitat linkages, or provide a buffer around Category A
- Category D: Lands that are dominated by urban communities and agriculture, but which may contain isolated conservation targets or provide habitat for some wildlife species.





Thank you for your comment, Chuck Bell.

The comment tracking number that has been assigned to your comment is SolarM60242.

Comment Date: September 14, 2009 17:15:34PM
Solar Energy Development PEIS
Comment ID: SolarM60242

First Name: Chuck
Middle Initial:
Last Name: Bell
Organization: Lucerne Valley Economic Development Assoc. (LVEDA)
Address: P. O. Box 193
Address 2:
Address 3:
City: Lucerne Valley
State: CA
Zip: 92356
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

In addition to our June 17, 2008 comments: (below)

BLM's CDCA "Contingent Corridor S" should be rejected as a transmission line corridor due to development and resource/environmental protection designations that have occurred since the 1980 plan - plus the multiple private parcels it would traverse. It would cut through the heart of Lucerne Valley's future area of economic development.

LUCERNE VALLEY ECONOMIC DEVELOPMENT ASSOCIATION (LVEDA)

Re: Solar Energy Development Programmatic EIS – June 17, 2008 - Barstow, Ca.

From: Chuck Bell, Sec.
P. O. Box 193
Lucerne Valley, CA 92356 760 964 3118

Date: June 17, 2008

LVEDA's Mission Statement:

Provide a forum for discussion and action on important community issues – promote infrastructure improvements – work with County and developers to promote development that is both “economic” and compatible with our rural lifestyle, environment and resource availability.

Granted, we have wind and sun which should be shared with our countrymen. But we also have the Mojave Desert which is a treasure unto itself - which cannot be consumed for the benefit of the over-populated urban mess in the coastal basin. We already provide that megalopolis with limestone, cement, aggregate (with its incessant truck traffic), recreation (particularly the resource-consumptive and largest OHV open areas in the world), power line/pipeline corridors, tremendous amounts of acreage for expanding military bases (critical for our nation's defense), public open space, immense areas set-aside for habitat protection, etc. etc. This Programmatic analysis should include a quantitative assessment of the megawatts of solar power that could potentially be generated within the urban areas of demand (ie: roof top and parking lot systems) prior to any further commitment of public land resources to the subsidy of urban areas. It should also take into account the nation-wide options for nuclear plants at locations with sufficient water sources.

This process must include an in-depth survey of Calif. Desert plans and maps – identifying the limited areas available and suitable for solar plants - listing and quantifying the amount of acreage/sq. miles and alignments dedicated to all the land-uses that we already provide s. Calif. - to fully understand why we need a "Solar Energy Siting Element" to our current BLM and County Plans. If this endeavor does that – then it's well worthwhile.

BLM should not displace private sector opportunities – with the cheaper use of gov. land competing w/solar plant options on private land (ie: fallowed agricultural land in s. Cal. counties that cannot otherwise be developed due to water shortages) -

allowing landowners to make the best use of their properties.

We also have to deal with the dilemma "where do we mitigate the impacts of all these proposed projects?"

Thank you for your comment, Erin Lieberman.

The comment tracking number that has been assigned to your comment is SolarM60243.

Comment Date: September 14, 2009 17:16:05PM
Solar Energy Development PEIS
Comment ID: SolarM60243

First Name: Erin
Middle Initial:
Last Name: Lieberman
Organization: Defenders of Wildlife
Address:
Address 2:
Address 3:
City:
State:
Zip:
Country:
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: DEFENDERS SESA COMMENTS_FINAL.pdf

Comment Submitted:

Please see attached comments.



National Headquarters

1130 17th Street, N.W. | Washington, D.C. 20036-4604 | tel 202.682.9400 | fax 202.682.1331
www.defenders.org

September 14, 2009

VIA ELECTRONIC MAIL

HARD COPY W/ ATTACHMENTS TO FOLLOW VIA CERTIFIED CLASS MAIL

Solar Energy PEIS

Argonne National Laboratory

9700 S. Cass Avenue—EVS/ 900

Argonne, IL 60439

Re: Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development. 74 Fed. Reg. 31307 (June 30, 2009)

Introduction

Thank you for the opportunity to comment on the Solar Energy Study Area maps and Programmatic Environmental Impact Statement (“PEIS”). These comments are submitted on behalf of Defenders of Wildlife (“Defenders”), a non-profit public interest conservation organization with over 500,000 members nationally.

Defenders is dedicated to the protection of all native wild animals and plants in their natural communities. We work with local communities, land owners and government leaders to encourage common-sense solutions that protect the interests of wildlife and people.

On June 30, 2009, the Department of Energy and the Bureau of Land Management (“BLM”) (collectively “agencies”) announced the availability of maps depicting 24 solar energy study areas to be analyzed in their joint Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development (“Solar PEIS”). The scope of the Solar PEIS is limited to six states with the highest solar potential: Arizona, California, Colorado, Nevada, New Mexico and Utah. The PEIS must include detailed analyses of the lands within the SESAs, for once the PEIS is finalized, solar projects in the study areas will be permitted on a fast-track basis.

As we transition toward a clean energy future, it is imperative for our future and the future of our wild places and wildlife that we strike a balance between addressing the near-term impact of large scale solar development with the long-term impacts of climate change on our biological diversity, fish and wildlife habitat, and natural landscapes. To ensure that the proper balance is

achieved, we need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and wild lands. These projects should be placed in the least harmful locations, near existing transmission lines and on already disturbed lands.

We are supportive of BLM's approach to this planning process, and support the dual objectives of creating an efficient process for authorizing energy development and conserving sensitive resource areas and minimizing environmental impacts. We applaud programmatic-level planning for the designation of study areas, as well as for the development and implementation of mitigation policy. Given the magnitude of development being considered, strategic planning at this scale has a higher likelihood of leading to sustainable decisions and optimal conservation outcomes as compared to piecemeal decision-making processes at the project or site scale. And while we do have questions about the comparative environmental benefits and risks of zonal versus non-zonal planning, as well as concerns over the analysis of cumulative impacts of multiple-use activities at landscape scales, we appreciate BLM's approach to operate at this scale of analysis.

These comments address and analyze: (1) the use of science-based management to structure solar energy study area decision criteria; (2) the statutory requirements under the National Environmental Policy Act, the Endangered Species Act, and the Forest Land Policy and Management Act; (3) water quality and quantity issues; and (4) state specific criteria used for study area selection.

I. Using science-based management to structure SESA decision-criteria

Defenders supports the effort of the Bureau of Land Management ("BLM") to identify lands that are "best-suited" and "appropriate" for large-scale solar energy development, as well as the statutory policy goal, expressed within the Federal Register Notice of Availability ("FR NOA") of "minimizing environmental impacts."¹ When considering the relatively intense development of some 670,000 acres of solar study areas (we expect that the PEIS will assess a range of development scenarios within the zones) on BLM lands, there will certainly be impacts to biological resources, including sensitive habitat types and associated fish, wildlife and plant populations. The degree of those impacts rests a great deal on how BLM structures siting and mitigation decisions. Given the magnitude of the development and the range of biological resources at risk, it is of utmost importance that BLM clearly define a science-based planning strategy to first avoid, then minimize, and, for truly unavoidable impacts, mitigate impacts to biological resources.

Defenders looks forward to working closely with BLM, as well as other policymakers, to develop a comprehensive conservation planning strategy that will support smart renewable siting decisions, within the context of the Solar PEIS and SESA process, and beyond to other energy production types. The key to building an environmentally sound, legitimate solar development program will be through the consistent and transparent application of science-based planning and decision-making processes, along with well-articulated policy objectives, decision and

¹ The Federal Land Policy and Management Act states that BLM shall "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. § 1732(d)(2)(a).

evaluation criteria that permit stakeholders and the public to understand and support the rationale behind BLM zoning, siting, and mitigation decisions.

According to science in the field of decision-making, there are three essential “ingredients” to science-based management, a concept which BLM appears to embrace:

- Well-defined, measurable standards (i.e. wildlife population or habitat condition targets), developed via public involvement processes
- The employment of science-based analytical tools to evaluate compliance with the standards (e.g. population viability analysis, or the spatially explicit Decision Support System recommended by the Western Governor’s Association)
- Consistent implementation of science-based analysis and decision-making (i.e. dedicated funding for monitoring and science-based adaptive management processes).²

The FR NOA uses qualitative expressions of policy objectives; lands to be developed should be “best-suited” and “appropriate” for solar development. Science-based management of natural resources encourages the development of policy objectives and standards that will give shape to these aspirational goals, as well as the construction of effective and efficient methods to evaluate whether or not the objectives are being met. A second example exists with the statutory objective to “minimize” impacts to the environment. Decisions that are based on clear criteria, including threshold criteria, both for the avoidance and mitigation of impacts to biological resources, are likely to be more structured than decisions that are made absent clear decision criteria. Structured decisions are those where stakeholders can agree upon clear policy objectives, as well as the means of measuring those objectives.

BLM should take the opportunity to avoid controversy and conflict from the outset in this planning and development process. One suggested method, and one that the BLM appears to be using, is to avoid designation and development of land types with known high-conflict values, and instead prioritize low-conflict areas (substantive detail on high-conflict and low-conflict land types are described below). Threatened, endangered and sensitive species habitat; unique habitat features; high integrity terrestrial and aquatic ecosystems; wildlife movement corridors – all should be considered high-conflict land types. On the other hand, disturbed lands (including non-Federal lands) located in proximity to existing infrastructure including road networks and transmission facilities, will enjoy much higher probability of project success and sustainable energy production. Of course, land management decisions are often most challenging for the “places in between,” where values collide and there is not a clear path to avoid conflict. Having a structured decision-making process, with clear criteria that can guide tradeoff decisions, in place for these types of scenarios is essential to achieving sustainable conservation outcomes. We hope that the PEIS analysis and decision-making process will be structured along these lines.

The FR NOA outlines an approach to conserving biological resources that is premised upon the use of incentivized, concentrated development zones (“pushing” development into the study areas, yet not barring it from outside the zones), avoidance of sensitive land types, and

² D.J. Rohlf, *Science, Law, and Policy in Managing Natural Resources: Toward a Sound Mix Rather than a Sound Bite*, 127-142 (2004) in K. Arabas and J. Bowersox, eds. *Forest futures: science, politics, and policy for the next century*. Rowman and Littlefield, Lanham, Maryland, USA.

“comprehensive” mitigation measures. We submit that while this appears to be a logical approach to the conservation of biological resources, the FR NOA is limited in the detailed expression of how this approach will achieve conservation policy goals. Nor do we see an overt expression of how this approach is grounded in sound science, as opposed to the standard application of applying the limited biological information the agency has on hand to zoning decisions. Science-based planning not only applies information to a structured decision-making framework, it recognizes uncertainty and provides methods to fill information gaps and reduce uncertainty concerning the relationship between development and biological resources. The PEIS should clearly articulate the BLM’s measurable conservation policy objectives, the approach to using science to make “smart” policy decisions, as well as the logical relationship between policy objectives, the FR NOA avoidance strategy composed of the withdrawn “sensitive resource areas”, and mitigation strategies.

A primary question is whether the approach of incentivizing development within the zones will actually lead to optimal conservation outcomes. At a landscape level, BLM appears to be assuming that concentrated, incentivized development leads to less impact to biological resources, yet there are many perturbations of development scenarios one could imagine that may lead to more optimal outcomes for biological resources. In fact, there is robust discussion within the conservation science field regarding the relative costs and benefits of concentrated versus dispersed development at these types of planning scales. For example, it is possible that the targeted development of disturbed sites, across BLM planning areas, may yield more optimal conservation outcomes than concentrated development. Naturally, the magnitude of development within the zones is a variable that needs to be assessed in the development of policy options. A robust discussion within the PEIS of how a zoned approach is preferable to a dispersed development program will help in the clarification and understanding of BLM’s conservation policy objectives at the landscape scale. A clear articulation of how the zonal approach will lead to good conservation outcomes should be provided in the PEIS, particularly describing the relationship between development within and outside the zones, assuming that solar development will continue outside of the zones.

Challenges associated with the application of biological information to decision-making are significant. While we applaud the BLM for recognizing sensitive resource areas, we understand that knowledge of BLM managed ecosystems and the components of those ecosystems are limited, as is our understanding of how large-scale energy development will impact the structure, composition and function of desert ecosystems. We note, and applaud the fact, that the BLM is embarking on comprehensive science-driven “ecoregional assessments” of the ecosystems of interest to this planning effort. The need for these assessments validates the fact that biological data, information, and knowledge of these ecosystems is limited. For this reason, we expect the BLM to not only provide information on known biological resources (*e.g.* sensitive species population/habitat conditions) within the study areas, but also a comprehensive discussion of uncertainty (both of baseline biological conditions, as well as in relationships between solar development and biological resources), known information gaps, and processes to collect and apply information future decision-making processes. We expect, for example, a complete inventory of sensitive species population/habitat conditions for all solar study areas, based on our research.

In order to be successful in meeting its conservation objectives, BLM should develop clear, measurable conservation goals that go beyond the FLPMA statutory objective of “minimizing” impacts to biological resources. And while we fully understand that thresholds of acceptable risk to biological resources are often expressions of social values, Defenders has suggestions regarding the use of established affirmative policy goals at BLM’s disposal that can help add structure and science to the SESA decision-making process, and thus lead to better, more sustainable solar policy decisions.

In addition to the statutory guidance provided by the Federal Land Policy Management Act, 43 U.S.C. § 1763, *et seq.* (“FLPMA”), the Endangered Species Act, 16 U.S.C. §1531, *et seq.* (“ESA”), and the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* (“NEPA”) (discussed in detail below), Defenders believes that the BLM has clear, affirmative policy direction to conserve biological resources, including fish and wildlife populations and their habitats, beyond the rather narrow statutory objective of “minimizing” impacts to the environment. Conservation objectives and strategies are found within BLM policy guidance in Special Status Species and Fish and Wildlife policy. Additional guidance for science-based planning and decision-making is found in the Land Use Planning Handbook.

a. BLM Manual – Fish, Wildlife and Special Status Species

The BLM manual establishes objectives and policies for the management of Special Status Species (SSS/6840) and Fish and Wildlife (FW/6500) on BLM lands. It has been our experience that the policy objectives found within these two manuals, although quite useful in terms of providing added direction to BLM decisions, has not been consistently applied.

From the outset it is important to note that Defenders does not support the revisions to the SSS/6840 policy undertaken under the previous administration. On December 15, 2008, the U.S. Department of the Interior, BLM, issued revised guidance on the management of “special status species” under its jurisdiction. The purpose of the SSS/6840 policy is to provide guidance to the BLM personnel regarding the management and conservation of species protected under the Endangered Species Act (ESA), as well as BLM-designated “sensitive species.” Unfortunately, the revised SSS/6840 policy falls far short of this purpose, and instead results in the elimination or diminishment of protections for over 2000 imperiled species, including the Grizzly bear, bighorn sheep, cutthroat trout, and the three-toed woodpecker. Defenders has suggested that the revised manual be rescinded and the previous SSS/6840 policy reinstated.

The objectives of the SSS/6840 policy are twofold: 1) To conserve and/or recover ESA-listed species and the ecosystems on which they depend so that ESA protections are no longer needed for these species; 2) To initiate proactive conservation measures that reduce or eliminate threats to Bureau sensitive species to minimize the likelihood of and need for listing these species under the ESA.

The objective of the FW/6500 policy provides clear, measurable criteria to the BLM as well: “It is BLM policy to manage habitat with emphasis on ecosystems to ensure self-sustaining populations and a natural abundance and diversity of wildlife, fish, and plant resources on the public lands.” Ensuring self-sustaining fish and wildlife populations provides a measurable,

affirmative conservation objective to the BLM that should be used to help structure SESA decisions as well as associated mitigation strategies.

The use of measurable conservation targets and thresholds (*e.g.* self-sustaining populations, minimize the likelihood of listings) adds structure to decision-making processes, and is very much in line with BLM's desire to practice science-based management in solar development policy, as expressed by Department of the Interior leadership, including Assistant Secretary for Land and Minerals Management Wilma Lewis.³ The use of baseline biological information concerning target fish and wildlife population condition (the BLM Land Use Planning Handbook H-1601, discussed below, provides direction for incorporation of wildlife population and habitat goals and objectives into land use plans), along with the forecasting and monitoring of population trends/habitat conditions over time following development decisions, provides a science-based means of evaluating solar development policy within an adaptive management framework.

In addition to listed species (covered in a separate section on ESA policy), Defenders has a strong interest in developing policies and supporting conservation and development decisions that avoid ESA listings and sustain the fish and wildlife populations found on federal lands. For this reason we were very encouraged to read that the FR NOA stated that the study areas avoided "sensitive resource areas" including "areas where the BLM has made a commitment to take certain actions with respect to sensitive species habitat."

However, it is unclear from the FR NOA, as well as from our research into the baseline RMPs that we assumed would clearly articulate the right-of-way avoidance and exclusion areas, precisely how SSS/6840 and FW/6500 policy was applied to the study area decisions. It is similarly unclear what types of "certain actions" were taken with respect to sensitive species habitat. The criterion in the FR NOA implies that information from existing RMPs was applied to screen out sensitive species habitat, but not all sensitive species habitat. This confusion is compounded by a BLM Washington Office internal Solar PEIS document, "Guidelines for Identifying Solar Energy Zones", dated April 1, 2009, that asks BLM managers designing zones to "Screen out areas with the following conflicts: h) Sensitive species habitat."

The public must therefore assume and trust that either the baseline RMP decisions concerning Bureau sensitive species and fish and wildlife populations (the ROW exclusion and avoidance areas) are sufficient to meet the objectives of the SSS/6840 and FW/6500 policy for the designation of the study areas, or, that the BLM has applied a sensitive species habitat screen to the zones pursuant to the Guidelines document. Our investigations into the RMPs did not yield a great deal of information concerning the management of SSS/6840 and the application of FW/6500 policy objectives.⁴ For this reason we continue to question whether the SESA

³ Wilma Lewis, Assistant Secretary for Land and Minerals Management, Keynote Address at the 2009 BLM Renewable Energy Summit (Aug. 31, 2009).

⁴ Defenders sought information from the relevant RMPs to assess the application of this criterion. Unfortunately, most existing BLM RMPs provide limited wildlife information and associated management direction. Further, substantial variation in RMPs exists across states and even among BLM districts within the same state. There is considerable variation in quality and quantity of wildlife information (including maps) as well as the degree to which wildlife management is addressed and incorporated in RMPs. Relying on RMPs to determine a method of handling wildlife management issues is therefore inadequate and incomplete and does not provide for wildlife needs.

designations have been screened using sensitive species criteria and if their designation will “minimize the likelihood” of listing Bureau sensitive species under the ESA and will “ensure self sustaining populations...of wildlife, fish and plant resources.” BLM should clearly articulate within the PEIS whether this is the case.

b. Assessment of BLM screening methods

Based on our assessment of BLM methods employed to select the study areas, it appears that a variety of methods were used by the states, and in general, Defenders applauds the BLM’s application of criteria. We commend BLM for issuing guidance to all of the study area state offices that all sensitive species habitat should be screened out of the proposed study areas. We ask that BLM clearly confirm within the PEIS that all sensitive species habitat was in fact removed from the designated areas, including a discussion on the completeness of that set of information (e.g. information gaps in sensitive species habitat data). The use of a variety of screening and decision criteria will naturally lead to a variety of outcomes, including conservation outcomes.

- For example, California performed a “multi-criteria analysis, relying heavily on the state’s Renewable Energy Transmission Initiative (RETI).” The RETI process ranks zones based on the “environmental and economic costs of bringing energy to market from each of the zones.” In addition to this criterion, CA BLM applied the screens provided by the Washington Office, including the sensitive species habitat screen we presume, as well as data provided by stakeholder groups active in the CA desert.
- Nevada avoided all sensitive species occurrences, special designations, as well as “habitat restricted endemics that could result in Federal listing.”
- Utah also noted the conflict associated with sensitive species habitat, but stated “the boundaries chosen represent those areas with the lowest predictable probability of resource conflicts based on the best available resource and GIS data accessible to our staff at the time of analysis. Areas chosen could still contain T&E, cultural resource, grazing or habitat conflict that are not predictable without on-the-ground Environmental Studies or Ecological Assessments.”
- Arizona refers to places “that had the lowest known conflict” by conducting a BLM Renewable Energy Conflict Analysis.

Recommendation: BLM should articulate and assess how the SESA designations, along with mitigation activities, will impact SSS/6840 and FW/6500 policy objectives. All lands where solar energy development would contradict these policies should be excluded from further consideration or addressed within the mitigation provisions. We ask that BLM make available

(cont.) The general lack of biological resources occurrence and planning-related designations for public lands affected by the proposed 24 study areas significantly limited our ability to provide meaningful, site-specific comments on issues that should be addressed in the Solar PEIS. Based on our review of the information provided within the relevant RMPs, there is little means for the public to verify that solar development will adequately consider biological resources, including wildlife and habitat protections.

detailed information on right-of-way avoidance and exclusion areas designated in land use plans associated with the conservation of wildlife movement corridors and sensitive species.

Please also clarify if the study areas were selected based on application of *all* the criteria contained in the FR NOA or if it is BLM's intent to determine at a later time if the public lands within each of the 24 study areas are consistent with the criteria. We urge BLM to provide the supporting documentation that any proposed study areas are consistent with the stated criteria contained in the FR NOA. We strongly urge BLM and DOE to expand the criteria to extend greater protection to functioning natural plant and animal communities, special status species and their habitats and other important biological resources as noted above. Such expansion would necessitate the refinement of the study areas and, in some cases result in the elimination of some and designation of new areas.

Only one proposed set of study areas was offered for consideration based on a limited number of criteria that were developed in the absence of public involvement. Thus, we strongly urge BLM to offer a full range of alternatives designed to meet the goals for renewable energy generation and transmission, including alternatives, based on more restrictive criteria with regard to lands containing significant biological resources, as well those that would limit the consideration of public lands containing naturally occurring plant and animal communities and maximize the potential for using degraded private lands.

c. BLM Land Use Planning Handbook (H-1601)

As discussed above, the FR NOA is structured to imply that study area designation decisions are clearly tied to decisions made in the baseline RMPs. It is unclear to Defenders whether the BLM Land Use Planning Handbook will be applied to the study area designation decisions, or whether the handbook is not considered at this stage, given that it was used to create the baseline RMPs. We thank the BLM for providing a clear explanation within the PEIS of the relationship between the 1601 Handbook and the study area designation decision-making process.

Either way, the planning requirements and guidance found in the 1601 Handbook have the potential to add significant structure to study area designation decisions and the development of a robust and meaningful mitigation policy. We strongly recommend that all solar study areas and associated mitigation policies be subjected to strategic planning processes using tools found in the 1601 Handbook. For example, consider that a mitigation goal may be to ensure self-sustaining fish and wildlife populations associated with solar energy development, as directed by the FW/6500 policy. The Planning Handbook provides the BLM with the ability to designate priority species, to describe desired population conditions (*i.e.* self-sustaining), and to identify actions to achieve those desired population conditions. We believe that this type of strategic policy direction, as well as the direction found within the SSS/6840 and FW/6500 policy, including tools to monitor biological resources and conduct adaptive management, allow BLM to make robust science-based study area designation and mitigation decisions.

d. Defenders recommendations on areas to avoid

In addition to designating study areas and mitigation policies that minimize the need to list sensitive species, that sustain populations of fish and wildlife populations, and that use targeted baseline conditions and monitoring strategies to evaluate success, we strongly recommend that BLM exclude from consideration public lands with the following biological resources and values. These areas are biologically significant, and their development will lead to unnecessary conflicts:

- Landscape-level corridors providing opportunities for natural movement of plant and animals species, and especially corridors linking subpopulations that comprise a metapopulation, such as bighorn sheep and desert tortoise.
- T&E critical habitat—designated and proposed
- Habitat for BLM designated sensitive species
- BLM-designated Areas of Critical Environmental Concern (ACECs) and Desert Wildlife Management Areas (DWMAs)
- Zones around wetlands that provide adequate corridors for wildlife movements to and from these invaluable habitats.
- Upland habitat located within two miles of any seep, spring, stream or wetland.
- National Landscape Conservation System (NLCS) lands (National Conservation Areas, National Monuments, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, and National Historic and Scenic Trails)
- Special Recreation Management Areas
- Areas allocated in existing Land Use Plans with wilderness characteristics
- Areas allocated in existing Land Use Plans as wildlife habitat management areas.
- Zones around known raptor nesting sites adequate to provide protection for essential foraging areas
- Mohave Ground Squirrel Habitat Management Area (aka Mohave Ground Squirrel Conservation Area)

While the criteria listed are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the undeveloped core of the CDCA.

Using the above criteria, Defenders and the other environmental organizations identified and mapped potentially suitable solar energy development zones that warrant further, inn-depth study. We strongly recommend these areas be included in the PEIS for further study. The map of these potentially suitable areas is attached.

e. Recommended Criteria to Prioritize Siting

Defenders supports identification and further study of areas we believe are potentially suitable for solar energy development, as well as development of mitigation strategies to be employed where impacts cannot be avoided. In order to sustain fish and wildlife populations, to minimize the risk of listing sensitive species, and to conserve ESA listed species, we strongly recommend

using the following criteria as a means of identifying potentially suitable lands for solar energy development.

- Lands that have been mechanically disturbed, *i.e.*, locations that are degraded and disturbed by mechanical disturbance
- Lands that have been “type-converted” from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use)
- Public Lands of comparatively low resource value located adjacent to degraded and impacted private lands and which might allow for expansion of renewable energy development onto private lands.
- Lands with existing transmission capacity and infrastructure
- Lands adjacent to urbanized areas
- Locations adjacent to federally designated corridors with existing major transmission lines.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locates proximate to load centers
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Isolated or scattered lands
- Abandoned mine sites
- Already developed transportation corridors
- Producing oil and gas fields
- Abandoned/damaged agricultural lands

II. Statutory Requirements

a. National Environmental Policy Act (NEPA)

1. Range of Alternatives

The range of alternatives analysis is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. NEPA requires BLM to “rigorously explore and objectively evaluate” a range of alternatives to proposed federal actions.” See 40 C.F.R. §§ 1502.14(a) and 1508.25(c).

Recommendation: The DEIS must include alternatives that incorporate avoidance of environmentally harmful options, as discussed in this comment letter.

2. Cumulative Impacts Analysis

Cumulative impact is defined as the impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.7.

a. Landscape Level Analysis

A landscape level analysis of the proposed solar energy zones is supported by NEPA guidance on cumulative impacts, which requires that the entire area potentially affected be included in a cumulative analysis and holds that a failure to include an analysis of actions within a larger region will render NEPA analysis insufficient. *See, e.g., Kern v. United States Bureau of Land Management*. 284 F.3d 1062, 1078 (9th Cir. 2002). Therefore, in order to accurately evaluate the potential environmental consequences of Solar Energy Zones (“SEZ”), the cumulative impact analysis must look at the cumulative impacts on all of the directly and indirectly affected landscapes.

Recommendation: Solar projects, with the accompanying roads and other infrastructure, present a particular challenge to wildlife in the form of habitat fragmentation. Continued habitat fragmentation forces wildlife to live on ever-shrinking islands of habitat, where it is more difficult for them to find food, water, shelter, mates, and protection from predators. Genetic problems such as inbreeding appear, and populations become more susceptible to catastrophic events such as wildfire. The resulting fragmented habitat inevitably leads to smaller populations of wildlife, and extinction of populations or species becomes more likely. Defenders strongly urges that the PEIS analyze the impacts of the placement of solar projects on public lands at the “landscape” level. We do not believe that a general discussion of the various types of lands and species impacts provide sufficient “ecosystem” focused analysis. Instead, we urge that PEIS analyze impacts across geographic ranges, including wildlife corridors and river corridors.

b. Utility Scale Energy Analysis

The environmental analysis must address the cumulative impacts of both the development of utility-scale solar energy projects and other foreseeable utility scale energy development, including siting and transmission facilities, within the same areas. The impact of the large scale energy development may affect wildlife habitat and linkages that are critical to the survival of wildlife and vegetation in the affected areas.

Recommendation: The BLM’s obligation to analyze the cumulative impacts must encompass not only the proposed and projected solar energy projects, but also the cumulative impacts of the projects, taken together with the impacts of existing, proposed, or reasonably foreseeable projects, on the environment. Thus, the BLM must analyze the impacts not just of the solar development projects, but also of other projects that will impact resources in common with this proposed actions.

b. Federal Land Policy and Management Act (FLPMA)

The Federal Land Policy and Management Act (“FLPMA”) mandates that “management be on the basis of multiple use and sustained yield . . .” 1701 U.S.C. § 102(a)(7). Multiple use is defined as:

. . . a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values . . . [and] management of the various resources without permanent impairment of the productivity of the land and the quality of the environment

1701 U.S.C. § 103(c). The statute further requires that:

public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values . . . [and] that, where appropriate, will preserve and protect certain public lands in their natural condition . . . [and] [] will provide food and habitat for fish and wildlife

1701 U.S.C. § 102(a)(8).

Recommendation: We urge consideration be given to the requirement that multiple use not result in the permanent impairment of the productivity of the land and quality of the environment. Essentially all of the solar energy project proposals we have reviewed entail the scraping of the land surface to produce a level building sit that is void of all vegetation. This development will cause a long lasting, if not permanent, impairment of the certain public lands with respect to their ability to support naturally occurring plant and animal communities.

c. Endangered Species Act (ESA)

The BLM has a duty under the Endangered Species Act to consult with the U.S. Fish and Wildlife Service to ensure that the impacts from solar development will not “jeopardize the continued existence of threatened and endangered species . . . or . . . destroy or adversely modify their designated critical habitat.” 16 U.S.C. § 1536(a)(2).

The ESA “is the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 180 (1978). The Supreme Court’s review of the ESA’s “language, history, and structure” convinced the Court “beyond a doubt” that “Congress intended endangered species to be afforded the highest of priorities.” *Id.* at 174.

Under section 7(a)(2) of the ESA, every federal agency “shall...insure that any action authorized, funded, or carried out by such agency (“action agency”) is not likely to jeopardize the continued existence of the endangered or threatened species or result in the destruction or adverse modification of habitat of such species...determined...to be critical...” 16 U.S.C. § 1536(a)(2) (Section 7 consultation). Agency “action” is defined in the ESA’s implementing regulations to include “all activities or *programs* of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas. Examples include, but are not limited to: (a) actions intended to conserve listed species or their habitat; (b) the promulgation of regulations; (c) the granting of licenses, contracts, leases, easements, rights-

of-way, permits, or grants-in-aid; or (d) actions directly or indirectly causing modifications to the land, water, or air.” 50 C.F.R. § 402.02.

Recommendation: BLM should exclude from the study areas habitat for listed species for which critical habitat has not been designated. As of 2005, critical habitat had been designated for approximately 37 percent of all listed species, leaving approximately two-thirds of such species without the benefit of designated critical habitat.⁵ Accordingly, we recommend that all habitats within the study areas that support threatened and endangered species be excluded from consideration as solar study areas regardless of whether critical habitat has been designated. BLM should identify how many acres of threatened or endangered species habitat in each preliminary study area would be affected by potential solar energy developments, the listed or proposed species involved, and information about the known abundance of each species.

III. Water

Water sustainability must be one of the guiding principles for siting solar energy development. The agencies cannot “implement agency-specific programs that would facilitate environmentally responsible utility-scale solar energy development,” 73 Fed. Reg. 30908, 30909 (May 29, 2008), without ensuring water sustainability for power production. Solar power is not environmentally responsible if it is reliant on unsustainable water use.

To ensure sustainable water use on BLM lands, the agencies must take all aspects of water resources into account when evaluating solar energy development on our nation’s lands. We cannot plan for future energy production, energy security and energy reliability without considering how water requirements will be met over time. “[I]t is crucial that the United States develop new policies that integrate energy and water solutions so that one resource does not undermine the use of the other.”⁶

The agencies must analyze and acknowledge the limits that water availability will place on solar development on BLM lands. The 24 SESAs alone use up to 1.3 million acre-feet/year of water, more than the state of Colorado uses in one year. Before it can permit utility-scale development, BLM must gather the baseline data necessary for a meaningful assessment of water resources and potential impacts from solar development.

a. Water Resources-Water Quantity

BLM must also assess the water quality impacts as a result of the siting, design and operation of a Concentrated Solar Plant (“CSP”) plant. The construction and placement of thousands of acres of CSP may degrade water quality through the addition of sediments from cleared desert lands. The operation and maintenance of CSP plants will further degrade water quality the addition of dissolved substances from surface water runoff troughs and collectors, including the heat-collecting elements.

⁵ Suckling, K. and M. Taylor. *The Endangered Species Act at Thirty: Renewing the Conservation Promise* (2005).

⁶ ___ Cong. Rec. S2830 (daily ed. March 5, 2009) (statement of Sen. Bingaman) (noting that “neither resource is routinely considered in developing management policies for the other”).

Recommendation: The agencies must describe any necessary water storage and treatment facilities for CSP plants using wet cooling and for water disposal associated with these activities, including chemicals and chemical storage associated with CSP plants.⁷

b. Water Usage

Recommendation: BLM solar development criteria must express preference for CSP plans that minimize water use

Recommendation: CSP's can use an enormous amount of water—amounts similar to fossil fuel power plants—for cooling, steam cycle make-up, hotel load, and mirror wash. Parabolic trough and power tower CSP plants that use dry cooling or hybrid cooling, on the other hand, minimize water use and are preferable in desert environments. Dry cooling eliminates 90% of the water use. Hybrid wet/dry cooling systems can reduce water consumption by half with only 1% drop in electricity output and as much as 85% with a 3% drop. The hybrid system designed to maximize water conservation—a dry/wet peaking cooling system—cuts water use by 80% with modest performance penalties. We recommend BLM consider requiring dry cooling or hybrid systems to conserve water

Recommendation: We also recommend that BLM explore the availability of alternatives to freshwater for use in thermal power plants, with appropriate safeguards for avoiding pollution from such use. This may be necessary to avoid conflicts with state law and policy.⁸ Alternative sources of water include municipal effluent, mine pool water, brackish groundwater, agricultural runoff, industrial wastewater, and produced water.

Recommendation: Parabolic trough plants use highly flammable heat transfer fluids in their heat collecting elements. Use of these fluids in heat-collecting elements and/or for heat storage is a fire hazard. We recommend BLM assess the need for and availability of water for fire suppression as well as the likelihood and effects of human-caused fires in arid ecosystems.

c. Water Availability

The agencies must ensure solar development does not further stress streams and aquifers already stressed by overuse. Each of the six states with solar energy study areas administers water rights and waters of the state belong to the public.⁹ These waters, however, may be subject to appropriation and any person who wishes to appropriate such waters or change the place of diversion, place of use, or manner of use, must apply to the State Engineer for a permit to do so.¹⁰ State water plans, water rights permitting and other policies for the protection

⁷ See generally *California Energy Commission, Comparison of Alternate Cooling Technologies for California Power Plants Economic, Environmental and Other Tradeoffs* (2002) at ch.6.

⁸ See 40 C.F.R. § 1502.16(c) (environmental effects section shall include discussions of possible conflicts between the proposed action and federal, state, local or tribal plans, policies or controls for the area.).

⁹ See generally BLM National Science & Technology Center, *Western States Water Laws*, <http://www.blm.gov/nstc/WaterLaws.abstract1.html>.

¹⁰ See 40 C.F.R. § 1508.27 (measuring the significance of environment effect by both the context and intensity of the action, and an action that may violate federal or state law or other requirements for environmental protection,

of water resources may conflict with large-scale solar development that does not conserve water.

Recommendation: BLM must assemble information regarding existing water use and permitting in basins containing study areas so that it may avoid those areas that are within overappropriated or fully appropriated basins.

Recommendation: Solar energy zones must not be located in areas where there is no unappropriated water available for energy development, where the use of water for this purpose will conflict with existing water rights or where the use of water for this purpose is not a reasonable one.

Recommendation: BLM must assess the reliability of water supplies for solar power given the potential for shortage sharing arrangements and priority calls by senior water users. Furthermore, BLM must investigate the impacts of climate change and drought, and the subsequent potential for impacts of shortage sharing and priority calls on water resources.

Recommendation: BLM must include in the environmental impact analysis a robust attempt to consider the impacts of all alternatives in the context of climate change. BLM must assess the current and future water supplies in the SESAs and other study areas.

d. Water Impacts

Water usage on the scale of widespread utility-size CSP plants will have adverse effects on wildlife.

Recommendation: The agencies must examine the potential for adverse effects to rare, endemic, threatened and endangered aquatic and riparian wildlife and their habitats.

Each state has the authority to deny water applications or condition permits if granting the application is not in the public welfare or public interest.¹¹

Recommendation: The agencies should not facilitate solar energy development where the resulting water use would threaten public trust resources such as national wildlife refuges, national parks or monuments, federal reserved water rights and federally protected or state managed wildlife.

Due to the fluid nature of surface and ground water resources, CSP plants may be located some distance from national wildlife refuges, national parks, national monuments, critical habitat and other sensitive lands and waters, yet have adverse downstream effects on these resources. We appreciate BLM's initial effort to protect sensitive resource areas in removing those areas from

see id. § 1508.27(b), may have a significant impact). *See also id.* § 1502.16(c) (environmental effects section shall include discussions of possible conflicts between the proposed action and federal, state, local or tribal plans, policies or controls for the areas); *id.* § 1506.2(d) (requiring discussion of any inconsistency with state or local plans or laws and the of the extent to which the proposed action will be reconciled with the plan or laws).

¹¹ *See, e.g., Nev. Rev. State. § 553370(4)* (if use “threatens to provide detrimental to the public interest” the State Engineer “shall reject the application”).

proposed SESAs, but those sensitive resource areas remain vulnerable unless BLM also eliminates from consideration those areas where CSP water use might adversely affect national wildlife refuges, national monuments, threatened and endangered species, or impair reserved water rights for the maintenance of fish and wildlife habitat for listed species or refuge purposes.¹²

e. Groundwater

Recommendation: BLM must assess the potential for changes in surface runoff patterns, aquifer storage and recharge and in water quality due to the presence of tens to hundreds of thousands of acres of land dedicated to solar development. Similarly, BLM must assess the potential for changes in groundwater recharge as a result of these solar facilities.

Recommendation: BLM must also assess the effects of groundwater withdrawals. Groundwater withdrawal greater than the perennial yield mines the aquifer and contributes to adverse effects such as water quality degradation, storage depletion, diminished well yield, land subsidence and possible reversible of groundwater gradients. BLM must project groundwater decline if CSP water requirements are to be met with groundwater pumping and consider that decline in the context of the basin's water budget and perennial yield.

Recommendation: BLM must examine the impacts of groundwater level decline on any nearby springs and spring features. BLM should perform a similar analysis for nearby surface water features, to determine if groundwater pumping at quantities necessary for CSP plants would affect streams, creeks or other features.

IV. State Analyses

a. California

Four study areas were identified in California totaling 351,049 acres. At the time of the release of the FR Notice, BLM had received 24 solar energy project right of way applications within three of the study areas totaling 231,664 acres. One study area, Imperial East, had no such right of way applications.

In addition, a recent study conducted by graduate students at the Donald Bren School of Environmental Science and Management developed scenarios that examine the cumulative effects of habitat loss and fragmentation (impacts to movement and gene flow) from renewable energy development upon desert tortoise and desert bighorn sheep in the West Mojave. Spatially-explicit modeling of habitat quality and connectivity for these species was conducted and is now available. One key recommendation from this study is to:

¹² See., e.g., James E. Deacon et al., *Fueling Population Growth in Las Vegas: How Large-scale Groundwater Withdrawal Could Burn Regional Biodiversity*, 57 *BioScience* 688 (Sept. 2007); Defenders of Wildlife, *Gambling on the Water Table: the High-Stakes Implications of The Las Vegas Pipeline for Plants, Animals, Place and People* (2007).

[i]ncorporate connectivity analyses more specifically into regional and local planning processes. Because this network of large-scale projects will span across a vast area, analyzing the cumulative impacts that renewable energy development might have on ecological processes— such as connectivity— over long time horizons is an important consideration. Incorporating an analysis such as the one developed by this project can help inform decision-makers about which locations are ideal to develop or to conserve.¹³

Because the draft solar energy study areas in the West Mojave region *did not incorporate the important consideration of habitat connectivity or movement corridors*,¹⁴ we urge the BLM to acquire this new data and to utilize it to inform the location and configuration of solar energy study areas.

California Desert Conservation Area Plan (CDCA)

Section 601(b) of the California Desert Conservation Area states: “It is the purpose of this section to provide for the immediate and future protection and administration of the public lands in the California desert within the framework of a program of multiple use and sustained yield, and the maintenance of environmental quality.”

We question the compatibility of large scale solar energy projects in the California Desert Conservation Area with the mandate to manage on the basis of multiple use, and especially with regard to sustained yield and maintaining environmental quality. We believe that the proposed large scale solar energy projects entailing a 100 percent conversion of the land surface to an industrial site will result in a permanent change in the character of the land, essentially rendering it useless for any future multiple use except as an industrial site.

The Plan, as amended, has guided the use and management of public lands in the CDCA since it was approved in 1980. It has been amended on numerous occasions, with significant modifications made during the period from approximately 2002-2006. Most notable changes were desert-wide conservation commitments for the threatened desert tortoise and its habitat, and multi-species conservation measures in the western Mojave and eastern Colorado Deserts.

It appears the preliminary study areas in California avoid all of the designated Desert Tortoise Recovery ACECs as well as newly established ACECs for other biological resources such as the Pisgah Lava Flow in the western Mojave region. We find, however, that the study areas include portions of BLM-designated sensitive habitats in the Riverside East and Iron Mountain study areas. BLM has established a 3:1 habitat loss compensation requirement, apparently as a tool to deter or limit projects in these areas. These areas should be excluded from consideration so that they are not affected by large-scale, single-use solar energy projects and turned into Intensive Multiple Use Class under the provisions of the CDCA Plan. These sensitive habitats include the following:

¹³ Hannah, L., L Bare, et. al., Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave: *Effects on habitat quality, physical movement of species, and gene flow* (2009), http://fiesta.bren.ucsb.edu/~westmojave/images/Wemo_Final.pdf

¹⁴ BLM staff, personal communication (Aug. 24, 2009).

- Desert Dry Wash Woodland
- Desert Chenopod Scrub
- Sand Dune and Playa Communities that are designated closed to ORV use

The issue of wildlife movement corridors was addressed in the CDCA Plan amendments with the goal of providing connectivity between desert tortoise populations within desert tortoise recovery ACECs (a.k.a. Desert Wildlife Management Areas) as a means of sustaining healthy populations within the primary recovery areas. Bighorn sheep subpopulation connectivity was also a goal as a means of sustaining health Sonoran and Southern Mojave metapopulations. The plan objectives with regard to Bighorn sheep populations included the identification and protection of essential habitat, including movement corridors, as a means of maintaining viable metapopulations. The issue of wildlife movement corridors and biological connectivity between subpopulations is of great concern with respect to the Pisgah, Iron Mountain and Riverside East preliminary study areas. We recommend deletion of Iron Mountain; reduction in size of the Pisgah; and significant reduction in the size of the Riverside East.

There are other conservation requirements for various species in the CDCA as a result of amendments stemming from the Northern and Eastern Colorado Coordinated Management Plan process. They include the following:

- Activities or projects authorized at or within 1 mile of a significant bat roost site would have applicable mitigation measures. Mitigation might include seasonal restrictions, light abatement, etc.
- Within suitable habitat within the distribution of flat-tailed horned lizard, all applicable actions in the Flat-tailed Horned Lizard (FTHL) Conservation Strategy would be applied.
- During project construction, special effort would be made to avoid disturbance of populations of any special status plant. Avoidance would be strongly encouraged, but where plants cannot be avoided, the effects of the project on the species as a whole would be assessed. If the project is not likely to jeopardize the species or lead to the need to list a candidate or sensitive species, the project may be approved. Disturbance of a listed plant species would not be allowed. Consideration would be given to transplanting; seed collection and propagation; seed-bed removal and replacement; and long-term, rigorous post-project monitoring of plant population recovery. Where a project approaches a population of a special status plant, permanent or temporary fencing would be strongly considered.

Pisgah

The Pisgah study area consists of 26,282 acres of public land adjacent to Interstate 40 and between the Cady Mountains and the Pisgah Lava Flow. Four right of way applications for solar energy development involving 17,568 acres have been received by BLM. One application for the proposed Solar I project using Stirling dish engine technology is currently being processed by BLM and the California Energy Commission. It involves approximately 8200 acres of public land where 32,000 Stirling dish engines would be sited with a total power output of approximately 750 MW.

Defenders believes this study area, if fully developed, would significantly reduce or eliminate certain species from being able to move through the creosote bush habitat located between the base of the Cady Mountains and the railroad located north of Interstate 40. This habitat is currently occupied by the threatened desert tortoise and is within the Western Mojave Recovery Unit but not within designated critical habitat. However, area supports a relatively high number of tortoises based on recent biological surveys conducted in the area in support of the environmental review for the proposed Solar I project. Based on a review of the Desert Tortoise Recovery Plan¹⁵ and the Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise,¹⁶ we believe this solar study area overlaps a significant portion of a desert tortoise movement corridor that provides biological connectivity between the Western Mojave, Eastern Mojave and perhaps the Northern Colorado Recovery Units. In addition it appears this biological connectivity involves the following designated Critical Habitat Units; Ord-Rodman, Fenner, Chemehuevi, and perhaps the Superior-Cronese Lakes. These areas are identified as Desert Wildlife Management Areas in the recovery plan.

The Cady Mountains, a Wilderness Study Area, is immediately north of the solar study area. The solar study area may include a portion of the Cady Mountains Wildlife Habitat Management Area for desert bighorn sheep (W-30), and to a larger extent the Pisgah Lava Flow Special Attention Area which was also designated a Research Natural Area by BLM.¹⁷ The Cady Mountains are a known raptor nesting area and we believe it is prudent to maintain a viable raptor foraging area on south slope and bajada of the Cady Mountains.

Recommendation: To substantially reduce the biological issues associated with this solar study area, Defenders recommends the following:

- Reduce the size of the study area by recognizing a wildlife movement corridor zone between the Cady Mountains and the existing railroad, and eliminating the portion of the study overlapping with the Pisgah Lava Flow Research Natural Area. Generally we believe the northern boundary of the study area should extend approximately one-half mile north of the railroad.
- In partnership with the State of California and County of San Bernardino, extend the study area to the west to the vicinity of Daggett to include all of the brownfields, abandoned industrial sites, and generally degraded land. Maximum use of lands and facilities at the U.S. Marine Corps Supply Centers at Yermo by including these areas within a new solar study area.

Iron Mountain

¹⁵ Desert Tortoise Recovery Plan, U.S. Fish and Wildlife Service (1994).

¹⁶ Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise, U.S. Fish and Wildlife Service (2008).

¹⁷ Bureau of Land Management (1980).

The Iron Mountain study area consists of 109,642 acres of largely pristine or undeveloped public land in the North-Central Colorado Desert portion of the CDCA.¹⁸ Four right of way applications for solar energy development involving 167,211 acres have been received by BLM, although none have applied for certification from the California Energy Commission and, thus, the administrative review process has not been initiated.

Vegetation in the area consists of low diversity creosote bush scrub. Notable wildlife in the study area includes desert tortoise, nesting and foraging raptors, and desert bighorn sheep.

Desert Tortoise: The study area is within the Northern Colorado Recovery Unit and is part of a likely habitat linkage that biologically joins the Western Mojave, Northern Colorado and Eastern Colorado Recovery Units. The Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise includes lands meeting the criteria for inclusion in the Draft USGS Desert Tortoise habitat model. These lands suggest that biological linkage or continuity potentially exists between the Joshua Tree and Chemehuevi Critical Habitat Units.¹⁹ Furthermore, the U.S. Fish and Wildlife Service state that “Patchy habitat southeast of the Cadiz Valley appears to provide some linkage between the northern and southern halves of this recovery unit. As a result, we merged these two recovery units.”

Joshua Tree and Chemehuevi located within a landscape-level corridor that provides biological linkage between the Joshua Tree and Chemehuevi Critical Habitat Units a landscape that provides biological connectivity for the Desert Tortoise in the

Desert Bighorn Sheep: Desert bighorn sheep, a BLM-designated Sensitive Species, occurs in the Iron Mountains in addition to a number of other isolated desert ranges separated by vast undeveloped valleys. Bighorn sheep have persisted in the California Desert because their individual subpopulations were biologically linked by movement corridors across the valleys in-between ranges having habitat conducive to supporting permanent bighorn sheep populations. Iron Mountain is one of those ranges linked with others such as the Eagle, Coxcomb, Palen, Old Woman, and Turtle Mountains.

Raptors: The Iron Mountains are used by nesting and foraging raptors such as golden eagles, according to BLM planning data.²⁰

Recommendation: We strongly encourage that the Iron Mountain study be eliminated from further consideration because its isolation, extensive natural plant and animal communities and its location within wildlife movement corridors for the desert tortoise and desert bighorn sheep.

Riverside East

¹⁸ Bureau of Land Management (1980).

¹⁹ Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise, pg. 49.

²⁰ Bureau of Land Management (1980).

This extremely large study area consists of 202,295 acres in eastern Riverside County and stretches from Blythe on the Colorado River west to approximately the town of Desert Center. There are currently 16 right of way applications covering 146,885 acres within the study area.

Recommendation: We feel portions of this study area should continue to be seriously considered for solar energy development, especially those areas adjacent to private land where the natural plant communities have been previously removed or significantly degraded, and along a swath north of Interstate 10 basically connecting Desert Center and Blythe. The Desert Center area contains some abandoned farm lands that are no longer in production as well as industrial utilities associated with the abandoned Kaiser Mine and the Colorado River Aqueduct. In the Blythe area we recommend reducing the size of the study area so that it is adjacent to Interstate 10, the Blythe Airport and numerous abandoned agricultural lands, as well as avoiding the extensive microphyll woodland washes draining from the eastern slope of the McCoy Mountains.

Imperial East

This relatively small study area comprising 12,830 acres is sandwiched between a portion of Interstate 8 and the U.S. Border in southeastern Imperial County. There are currently no right of way applications for this area on file with the BLM. Although the area is within the range of the Flat-tailed Horned Lizard, it is outside of the designated Flat-tailed Horned Lizard Management Area. There are no designated critical habitats, ACECs or wildlife habitat management areas affected.

Recommendation: We consider this study area acceptable for further consideration.

b. Arizona

We applaud BLM for selecting SESAs located near existing infrastructure. The selected SESAs are relatively small and are primarily located outside of areas of high conservation value, although some identified areas are located directly adjacent to areas of high conservation value.²¹ The proximity could cause undesirable edge-effects for sensitive wildlife species such as the Sonoran desert tortoise—the status of which is currently under review by the U.S. Fish and Wildlife Service for possible listing under the ESA. In addition, although there is no apparent overlap with designated critical habitats, according to the USGS ReGAP models, the SESAs do contain potential distribution/habitat for multiple BLM sensitive species.

Size and Screening

When one compares the Arizona study areas against the sizes and locations of those in California and pending solar development right of way (ROW) applications on BLM lands in Arizona, numerous questions arise. First, what is driving the significant study area size difference between Arizona and California? Is this simply a function of the differing criteria used, availability of information or quality of the screening process employed? Second, in Arizona there is no overlap between the solar study areas and pending ROW applications in Arizona –

²¹ See Figure 1.

why is this? Last, the amount of acreage in pending ROW applications in Arizona dwarfs the solar study areas themselves.²² This brings into question the utility of the PEIS in terms of value-added planning for solar development on BLM land in Arizona.

Applications outside SESAs

The BLM has recently given notice of intent to prepare an EIS to address potential effects of a proposed project by Boulevard Associates to construct and operate an electrical generating facility using concentrated solar thermal power on approximately 4,000 acres of mostly intact desert habitat located on the northern boundary of the Sonoran Desert National Monument. *See* Figure 3. It is apparent that BLM is processing applications and initiating NEPA for individual solar projects that would impact large tracts of BLM land and are outside of the solar study areas identified in the west-wide PEIS. What then is the point of the solar study areas if applications outside of these areas will continue to be processed? Why then are the same screens used to identify the solar study areas not being applied to pending solar ROW applications to inform whether they are an appropriate use of public land? Perhaps there are not regulations that require BLM to enforce a rigorous screening process – but this points to the urgent need for such regulations when the integrity of so much public land is at stake.

SESAs on degraded lands

In Arizona, the federal government has initiated the “Restoration Design Energy Project”—a pilot project that aims to identify and assess the potential of using abandoned mines and other industrial or impacted sites to house renewable energy projects – on BLM land and possibly that of other municipalities as well. It is funded with \$1.7 million of stimulus money, and if successful, could be the beginning of what could eventually be a national plan to reuse millions of acres of “brownfield” sites for wind farms, solar arrays and geothermal power plants. These sites are attractive from a conservation perspective in that most are already disturbed and located near existing transportation and electric transmission infrastructure. However, issues regarding toxic clean-up, rugged terrain, water use, multiple land ownership complications, etc. have already been raised.

The initiative plans to promulgate a NEPA process that will assess the feasibility renewable energy development on sites that are nominated by the BLM field offices, other municipalities and entities. Why has the BLM not identified already-disturbed sites within the context of the Solar PEIS? Why is the Restoration Design Energy Project on a completely separate track from the Solar PEIS? There may be disturbed sites without major environmental hazard issues that should be considered as SESAs.

Brenda²³

- Intersects the northeast corner of a potential wildlife linkage identified in the Arizona Wildlife Linkages Assessment (Ranegras Plain Linkage)
- Contains USGS SWReGAP modeled distribution for BLM Sensitive Species: Western burrowing owl (*Athene cunicularia hypugea*), Tucson shovel-nosed snake (*Chionactis*

²² *See* Figure 2.

²³ *See* Figure 1 for a map of conservation areas of concern in relation to Arizona SESAs.

occipitalis klauberi), Rosy boa (*Charina trivirgata*) [western half of SESA], Small-footed myotis (*Myotis thysanodes*).

Bullard Wash

- Located just southwest of a potential wildlife linkage identified in the Arizona Wildlife Linkages Assessment.(Tres Alamos – Prescott National Forest Linkage)
- Located on southern edge of TNC Ecoregional Portfolio Area: “Date Creek”
- Located between “Date Creek” and “Harvuvar Mountains” TNC portfolio areas – would potentially disrupt habitat connectivity between these two priority conservation areas.
- Located along the edge of suitable desert tortoise habitat.

Gillespe

- Intersects northern portion of TNC Ecoregional Portfolio Area: “Buckeye Copper Mine”
- Located on the eastern edge of a proposed management area for a future second population of endangered Sonoran Pronghorn (Area “A”)
- Located along the edge of suitable desert tortoise habitat.
- Located just south of a potential wildlife linkage identified in the Arizona Wildlife Linkages Assessment.(Saddle Mountains – Gila Bend Linkage)

c. New Mexico

The three SESAs in New Mexico contain significant natural and cultural resource conflicts, including the potential to directly and indirectly impact wilderness quality lands. One positive aspect of the three New Mexico SESAs is that they are all located near existing infrastructure, and thus would require less new road building than if they were located more remotely.

We were pleased to learn that upon further review, the BLM Las Cruces Field Office has recommended dropping both the Mason Draw and Red Sand SESAs from consideration, citing conflicts that have been subsequently identified related to natural resources, cultural resources and wildlife management areas.²⁴ We concur with this recommendation. The Afton SESA appears to contain the least amount of potential conflicts with natural and cultural resources, but may contain important habitat for reptiles that should be avoided if possible.

Mason Draw

This SESA intersects southwestern corner of New Mexico Wilderness Alliance BLM Citizen’s Inventory Unit “Sleeping Lady Hills” by approx. 350 acres and also clips the “Robledos-Las Uvas” unit by approx. 480 acres.²⁵

According to the New Mexico Wilderness Alliance, the Robledos-Las Uvas complex contains a high diversity of vegetation types, especially cacti (including the State-endangered night-blooming cereus). Pronghorn, mule deer, mountain lion, bobcat, coyote, bats, rock squirrels and

²⁴ Jennifer Montoya, BLM organized discussion with interested parties (Sept. 4, 2009).

²⁵ See Figure 4.

other rodents, quail, and numerous other birds call this area home. The grasslands found here are important to a declining grassland fauna and provide habitat for rare birds like the Aplomado falcon and Baird's sparrow. The abundance of cliffs in the mountains provides nesting and perching sites for many raptors, including bald and golden eagles, various hawks and owls, and the Federal-endangered peregrine falcon. Reptile diversity is also high; banded rock rattlers, Madrean alligator lizards, and Trans-Pecos rat snakes are all found here, as are other reptiles that reach the northern or western limits of their range.

Archaeological and historic resources are also rich in the Greater Robledo Mountains – Sierra de las Uvas Complex. At least 20 historic and prehistoric sites are known to occur within or adjacent to the Robledo Mountains WSA, including some of the earliest known prehistoric habitation sites in southern New Mexico. Also included are several undisturbed pothouse villages, two Lithic Indian sites in Horse Canyon, and at least two excellent petroglyph sites in the Sierra de las Uvas. More prehistoric sites likely exist, but no comprehensive survey has taken place. The historic Butterfield Trail also runs through the area.²⁶ Given its close proximity to this roadless area complex, it is likely that the Mason Draw solar energy study area shares many of these characteristics and values.

This SESA is located within a BLM Habitat Management Planning area for pronghorn and mule deer. Industrial solar development is not consistent with maintaining and/or improving habitat for these two species, both of which are very sensitive to roads, traffic, human development and disturbance.²⁷

The Nature Conservancy, in cooperation with the BLM and other entities, conducted a Rangeland Ecological Assessment for the southern half of New Mexico. In this assessment, there are two areas in the west and south of the Mason Draw SESA, totaling approximately 1,000 acres that may contain some grassland reference condition elements.

Recommendation: The Mason Draw SESA should be dropped or at a minimum redrawn to exclude these inventory areas. Even if redrawn to exclude these roadless, wilderness-quality lands, the development of industrial-scale solar installations would undoubtedly impair the viewsheds from inside these potential wilderness areas, and would also impair the sense of naturalness and solitude they provide to the public. Lastly, solar development in this area would impair habitat quality and connectivity for species that utilize habitat in and adjacent to the Mason Draw SESA.

Afton

Of the three SESAs in New Mexico, this unit appears to have the least conflict with sensitive natural resources, is close to existing infrastructure (Interstate 10 and an “existing designated corridor”) as well as a major metropolitan area (Las Cruces). According to USGS, Southwest ReGAP terrestrial species predicted range modeling species richness composite, this SESA has high reptilian diversity in the eastern half (45 on a scale of 0-57).²⁸

²⁶ NMWA BLM Citizen's Wilderness Inventory.

²⁷ See BLM Las Cruces District Office Map.

²⁸ See Figure 8

The southwest corner of this SESA is approximately 2.5 miles from the northeast corner of BLM's Aden Lava Flow ACEC,²⁹ which was protected for, "Scenic and geologic features; interesting wildlife and wildlife habitat."³⁰ How would industrial-scale development in close proximity impact the scenic and habitat values of this ACEC? Similarly, how would such development impact wilderness characteristics and values of NMWA's Citizens "Aden Lava Flow" wilderness inventory unit, which lies 1.9 miles southeast of this SESA's southwest corner? We anticipate industrial-scale development would undoubtedly negatively impact the viewsheds from these wilderness-quality lands and could impair the ability to achieve solitude do to an increase in human development and activities in the area.

Recommendation: The SESA should be redrawn to avoid this area of high potential reptilian diversity.

Red Sand

This SESA is located due east from White Sands National Park, and is due west of the Sacramento Escarpment, which contains numerous NMWA BLM Citizen's Inventory Units. Industrial-scale development would undoubtedly negatively impact the viewsheds from these roadless, wilderness-quality lands and internationally known National Park Service unit.³¹ In addition, according to the Las Cruces BLM Field Office, this SESA contains extensive cultural resources that would potentially be disrupted by industrial-scale solar development.

The Nature Conservancy's Rangeland Ecological Assessment identifies a grassland area in the northwestern portion of this SESA that contains approximately 6,400 acres of reference condition-quality grasslands.³² Reference condition Chihuahuan desert grasslands are very rare, and should be eliminated from the SESA.

Recommendation: To the extent that lands within this SESA are targeted by BLM and conservation organizations for grassland restoration, these areas should be eliminated from the SESA.³³

d. Nevada

Amargosa Valley:

The Amargosa Valley is located between two significant federal conservation areas: Death Valley National Park and Ash Meadows National Wildlife Refuge. Many sensitive and significant biological resources within these two areas are associated with surface waters derived from a complex groundwater system.

²⁹ See Figure 9

³⁰ Bureau of Land Management (2001).

³¹ See Figure 7

³² See Figure 5.

³³ See Figure 6.

The 23,000 acre Ash Meadows Wildlife Refuge, established in 1984, supports 24 endemic species of plants and animals, the highest concentration of known rare and endemic species in the United States. Of these 24 species, 12 are federally listed as threatened or endangered, and almost all re dependent on aquatic or wetland environments within the refuge.

Recommendation: Defenders recommends that the Amargosa Valley study area be eliminated from further consideration as a solar energy zone.

Dry Lake Valley North/Delamar Valley

Recommendation: Due to the lack of groundwater supply necessary to support the construction and operation of any solar energy facility, BLM should remove these solar energy areas from consideration.

e. Lands being Considered for Solar Energy Development

Uncertainty remains as to how the “light blue” areas on the Solar PEIS maps will be treated in the Solar PEIS. In response to a query regarding these areas, we received this response:

Regarding your question on the areas identified as “BLM Lands Being Analyzed”, maps of these lands are still under development and are not available. However, it may be helpful to you to know how the BLM is defining these lands. These other BLM-administered lands that may be considered for solar energy development include all BLM lands in the 6-state study area with solar insolation levels greater than 6.5 kWh/m²/day and slopes of less than 5%, but exclude the following BLM-administered lands: Federally Designated Wilderness Areas, Wilderness Study Areas, Instant Study Areas, National Monuments, National Conservation Areas, National Trails, Wild and Scenic Rivers, Areas of Critical Environmental Concern, Critical Habitat for Threatened and Endangered Species designated by the U.S. Fish and Wildlife Service, Right-of-Way Exclusion and Avoidance Areas, No Surface Occupancy Areas, and Special Recreation Management Areas. Also, any areas of less than 1 km² after the above exclusions were applied have been excluded. The “Other BLM Lands Being Analyzed” will not be assessed in detail in the PEIS, whereas the solar energy study area assessments will include detailed information (for example, on hydrology, potential air quality impacts, surrounding land uses, endemic species).

While the “light blue” areas identified may have high solar insolation values and relatively flat terrain, these additional “BLM lands being analyzed for Solar Development in PEIS” also contain extensive conflicts with areas of high conservation and cultural values. One prime example of an area of high conflict included within these “light blue” areas is the western portion of Otero Mesa.³⁴ Otero Mesa contains the largest remaining intact and undisturbed expanses of Chihuahuan desert grassland, which supports a high degree of biological diversity. As such, The

³⁴ See Figure 10.

Nature Conservancy's Rangeland Ecological Assessment identifies the majority of Otero Mesa containing "reference condition" grasslands.³⁵

According to the New Mexico Wilderness Alliance, Otero Mesa ". . . is home to over 1,000 native wildlife species, including black-tailed prairie dogs, desert mule deer, mountain lions, golden and bald eagles, over 250 species of songbirds, and boasts the state's healthiest and only genetically pure herd of pronghorn antelope. Furthermore, there is evidence that the Salt Basin aquifer, which originates in Otero Mesa and travels south into Texas, is the largest untapped fresh water resource remaining in New Mexico." In addition, the New Mexico Wilderness Alliance's Citizen's Wilderness Inventory has identified more than 500,000 acres suitable for wilderness designation.³⁶

Thus, there are serious concerns regarding how industrial-scale solar development would potentially impact the integrity of this grassland system, and the abundant wildlife it supports. In addition, water use to support solar installations could potentially mine precious potable water from the Salt Basin aquifer.

In addition to Otero Mesa, there are numerous other BLM Wilderness Inventory Units with abundant natural and cultural resource values that are in conflict with the "light blue" areas, including: Robledos-Las Uvas complex, Potrillo Mountains complex, Caballo Mountains complex, Jornada del Muerto complex, Goodisight and Nutt Mountains units.

Recommendation: Defenders expects a meaningful opportunity to comment will be provided, *i.e.*, one that allows comments to be considered and areas adjusted.

Conclusion

Defenders of Wildlife recognizes the urgent need to rapidly increase the amount of energy generated by renewable energy sources in order to curb the serious environmental and socio-economic threats posed by greenhouse gas-driven climate change. Public lands are sure to play an important role in facilitating our nation's transition from fossil fuel-based energy production to renewable-based alternatives. However, such large-scale development will also come at a cost. Extensive amounts of land and water are required to facilitate utility-scale solar plants. By its nature, utility-scale solar development will preclude most other public uses of the developed lands, and has the potential to destroy, degrade and fragment vital wildlife habitats, eliminate vegetative carbon sequestration, and negatively impact water quality and availability. Therefore, we urge the application of the best available science and the inclusion of already-disturbed lands in the process of identifying areas suitable for solar development.

Defenders is supportive of creating an efficient process for authorizing solar energy development in a manner that will protect sensitive resources and minimize negative environmental impacts. Given the current lack of regulations governing the issuance of right-of-way applications for solar development on public lands, we applaud programmatic-level planning for the designation of solar

³⁵ See Figure 11.

³⁶ *Id.*

energy study areas, and the development and implementation of comprehensive mitigation policies. Strategic planning at the proposed scale has a higher likelihood of leading to sustainable decisions and optimal conservation outcomes as compared to piecemeal decision-making processes at the project or site scale. However, questions remain regarding the comparative environmental benefits and risks of zonal versus non-zonal planning, as well as concerns regarding cumulative impacts of solar development and associated energy transmission.

BLM must fully comply with statutory requirements under the National Environmental Policy Act, the Endangered Species Act, and the Forest Land Policy and Management Act. Furthermore, it is imperative that the screening criteria used to identify appropriate areas for development should be applied consistently from state to state, and that all available scientific information pertaining to special status species habitat (including BLM sensitive species), habitat connectivity, wilderness characteristics and values, and valuable water resources are considered in detail in the identification, configuration and analysis of solar energy study areas.

Thank you for considering our comments. If you have any questions, please contact Peter Nelson, Defenders' Director of Federal Lands, at 202-682-9400 x. 202 or via email at pnelson@defenders.org.

Respectfully,

Peter Nelson
Federal Lands Program, Director

DEFENDERS OF WILDLIFE
1130 Seventeenth Street NW
Washington, D.C. 20036
(202) 682-9400
pnelson@defenders.org

ATTACHMENTS

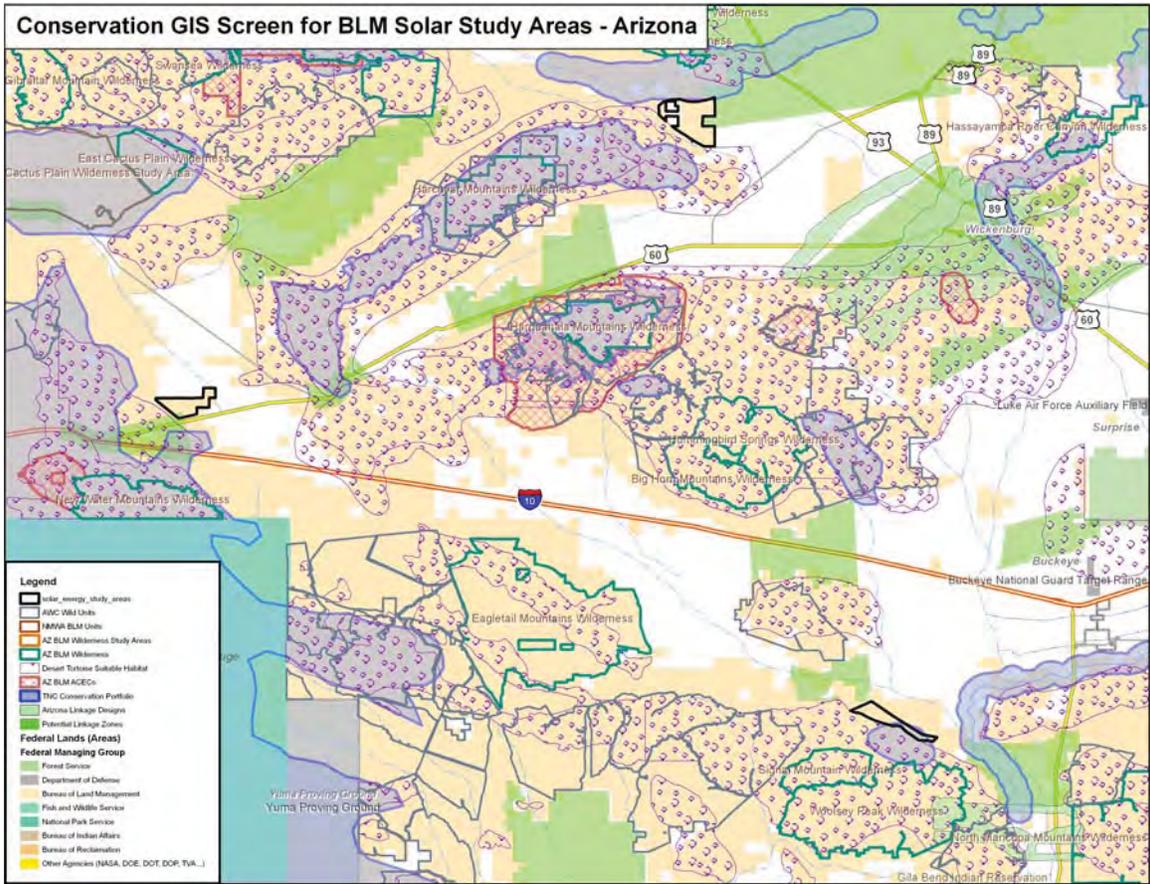


Figure 1. This map depicts the three Solar Energy Study Areas in Arizona in relation to important areas of conservation concern. Note that while the SESAs are located mainly outside of these areas, they are all located on the edge of important areas (e.g. Desert tortoise suitable habitat).



Figure 2. This map depicts solar development ROW applications on BLM lands in Arizona. Yellow polygons are BLM Wilderness Areas. Orange cross-hatched areas represent pending solar ROW applications. Red outlined/cross-hatched areas represent the 3 solar energy study areas. Blue cross-hatched areas represent National Monuments. Note there is no overlap between ROW applications and SESAs.

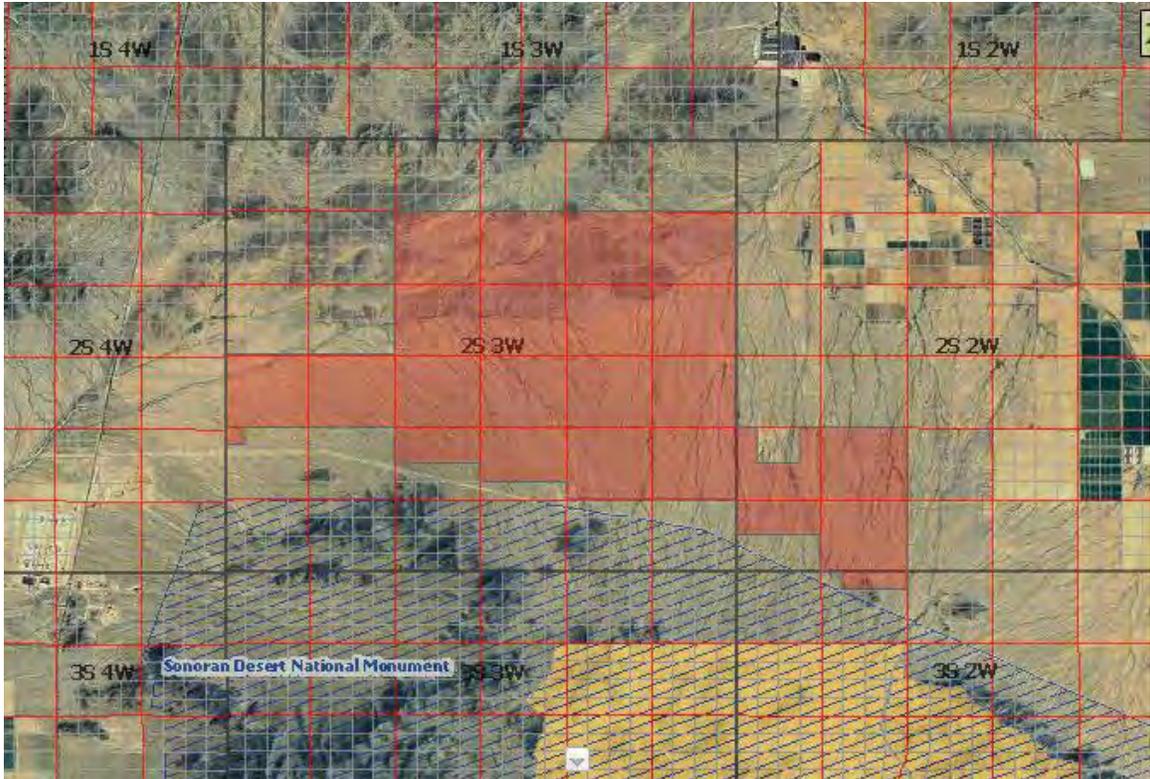


Figure 3. This map depicts the pending ROW application of Boulevard Associates on 4,000 acres of currently undisturbed desert habitat (salmon color). This is located on the northern boundary of the Sonoran Desert National Monument (blue cross-hatch), and outside of any of the 3 solar study areas.

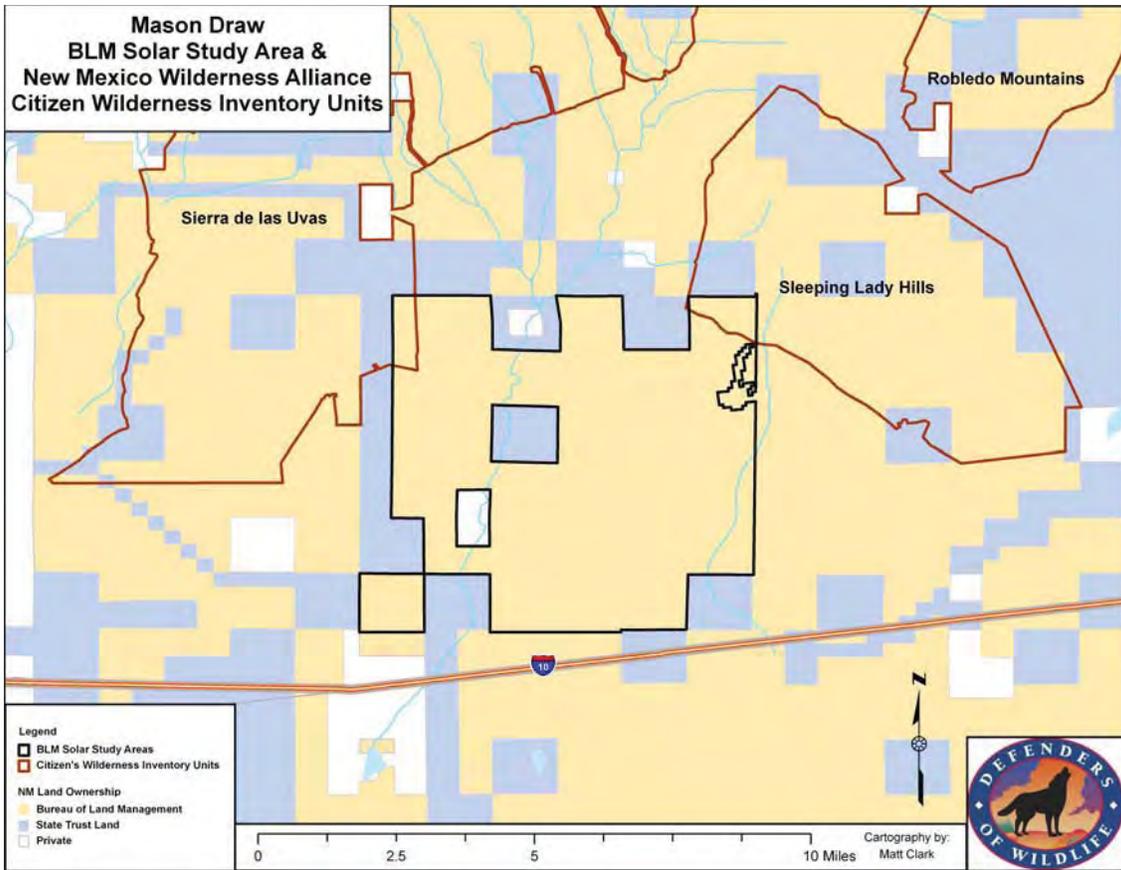


Figure 4. This map depicts overlap and conflict of the Mason Draw SESA with the New Mexico Wilderness Alliance's BLM Citizen's Wilderness Inventory Units.

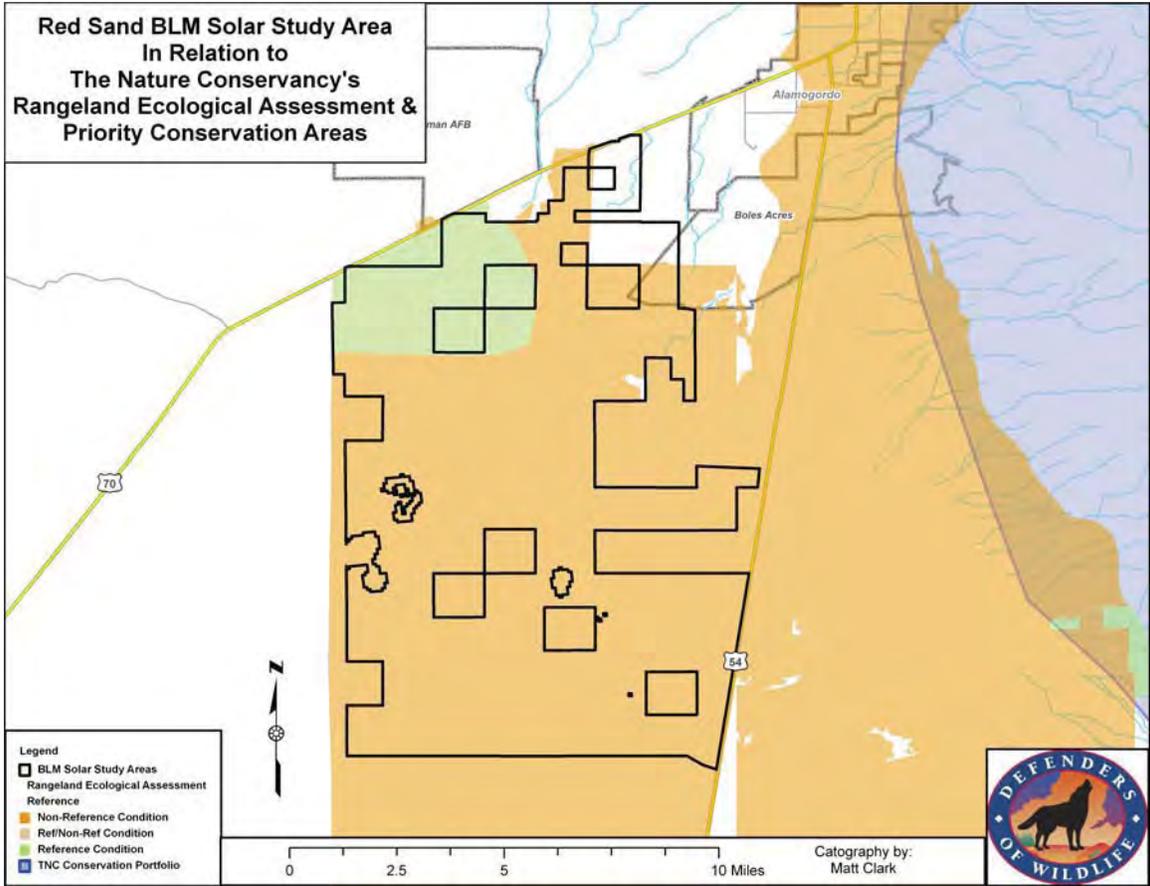


Figure 5. This map depicts the Red Sand Solar energy study area in relation to mapped units of The Nature Conservancy's Rangeland Ecological Assessment reference conditions.

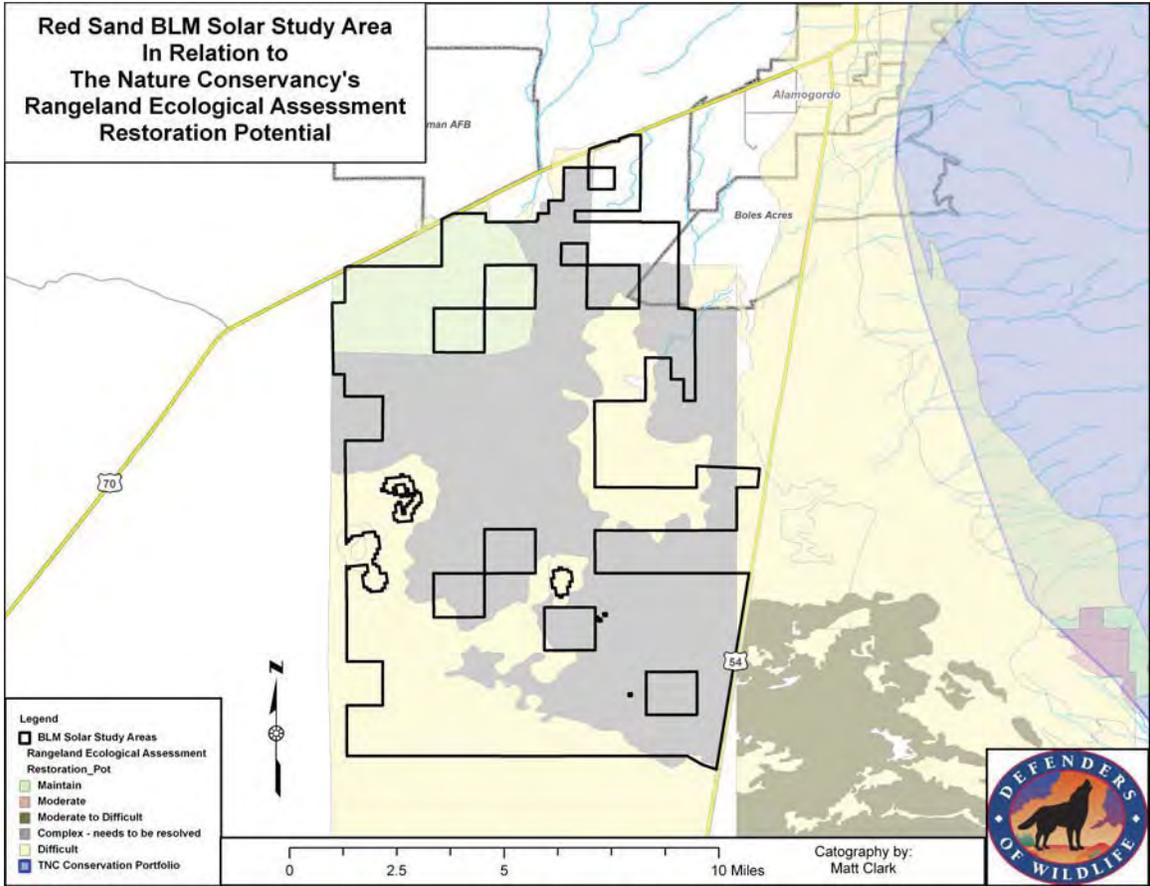


Figure 6. This map depicts the Red Sand Solar energy study area in relation to The Nature Conservancy's Rangeland Ecological Assessment restoration potential.

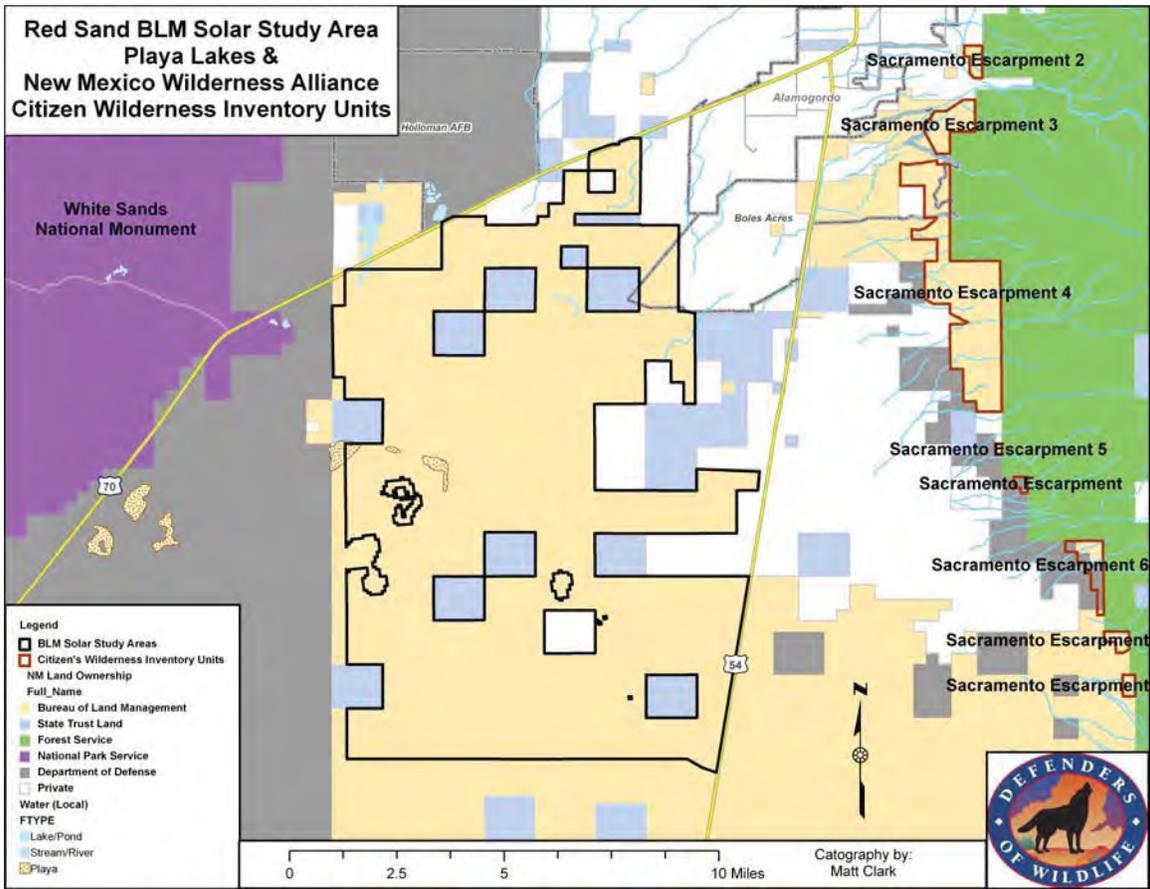


Figure 7. This map depicts the Red Sand Solar Energy Study Area in relation to the White Sands National Monument, NMWA's Citizen Wilderness Inventory Units, and playa lakes.

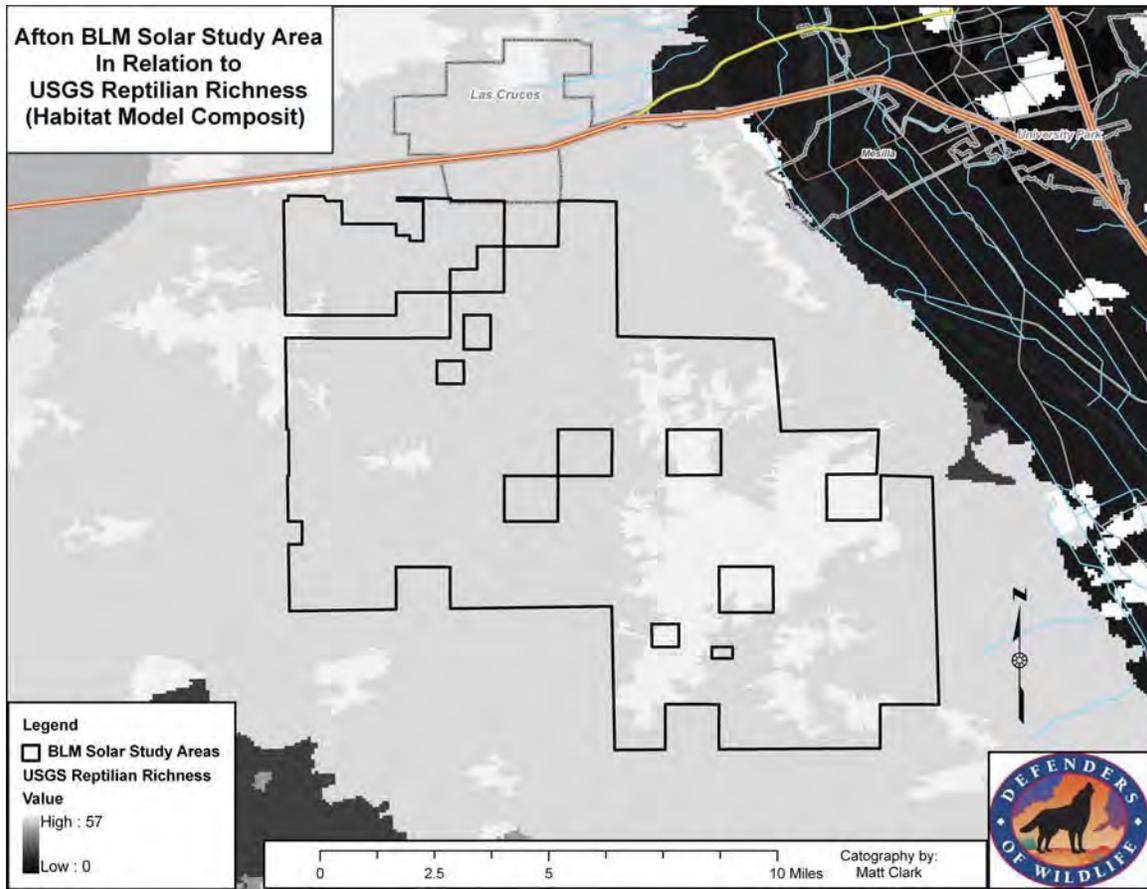


Figure 8. This map depicts the Afton Solar Energy Study Area in relation to the USGS Southwest ReGAP wildlife habitat modeling reptile richness composit. Note the area in the eastern portion of the study area that contains relatively high reptilian richness.

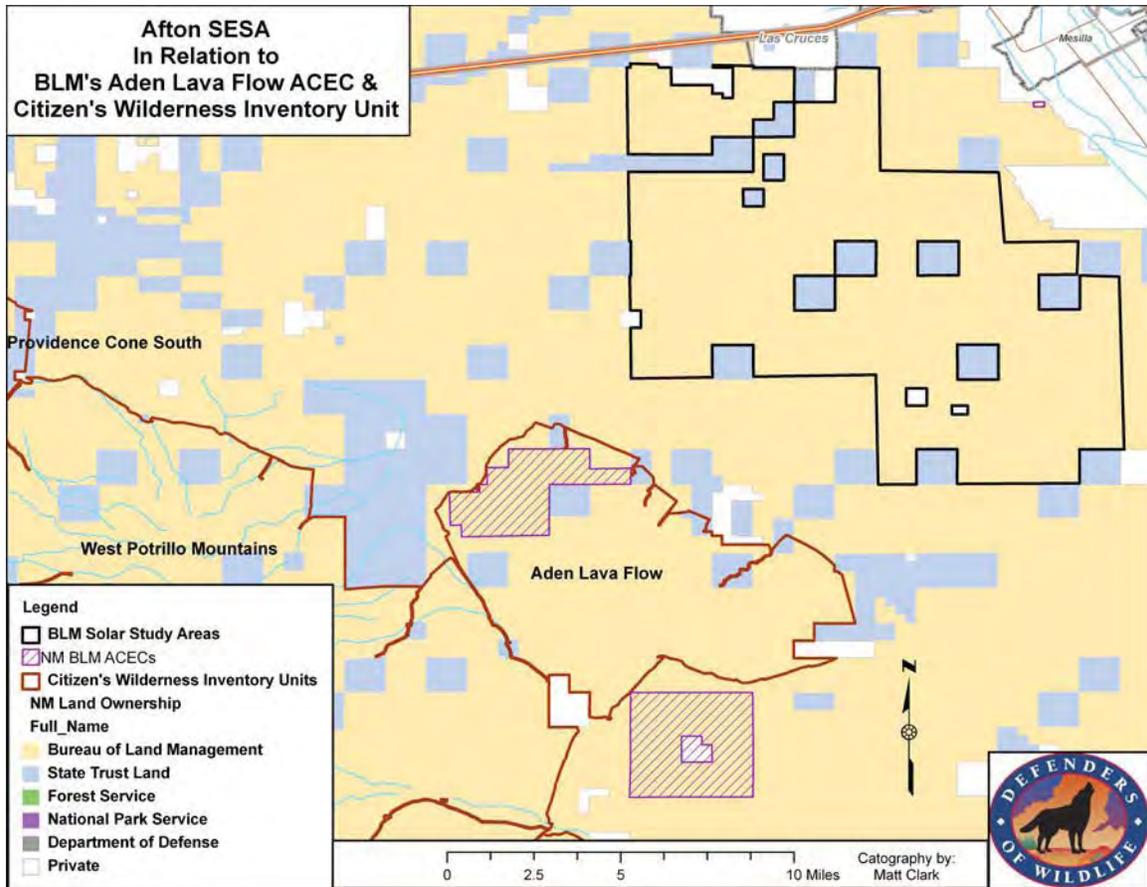


Figure 9. This map shows the close proximity of the Afton SESA to the Aden Lava Flow Area of Critical Environmental Concern and NMWA's Aden Lava Flow Wilderness Inventory Unit.



Figure 10. This is a clipped portion of the BLM’s “Solar Energy Study Areas in New Mexico” map. The light blue areas shown here on the western portion of Otero Mesa are labeled as “BLM Lands Being Analyzed for Solar Development in PEIS”.

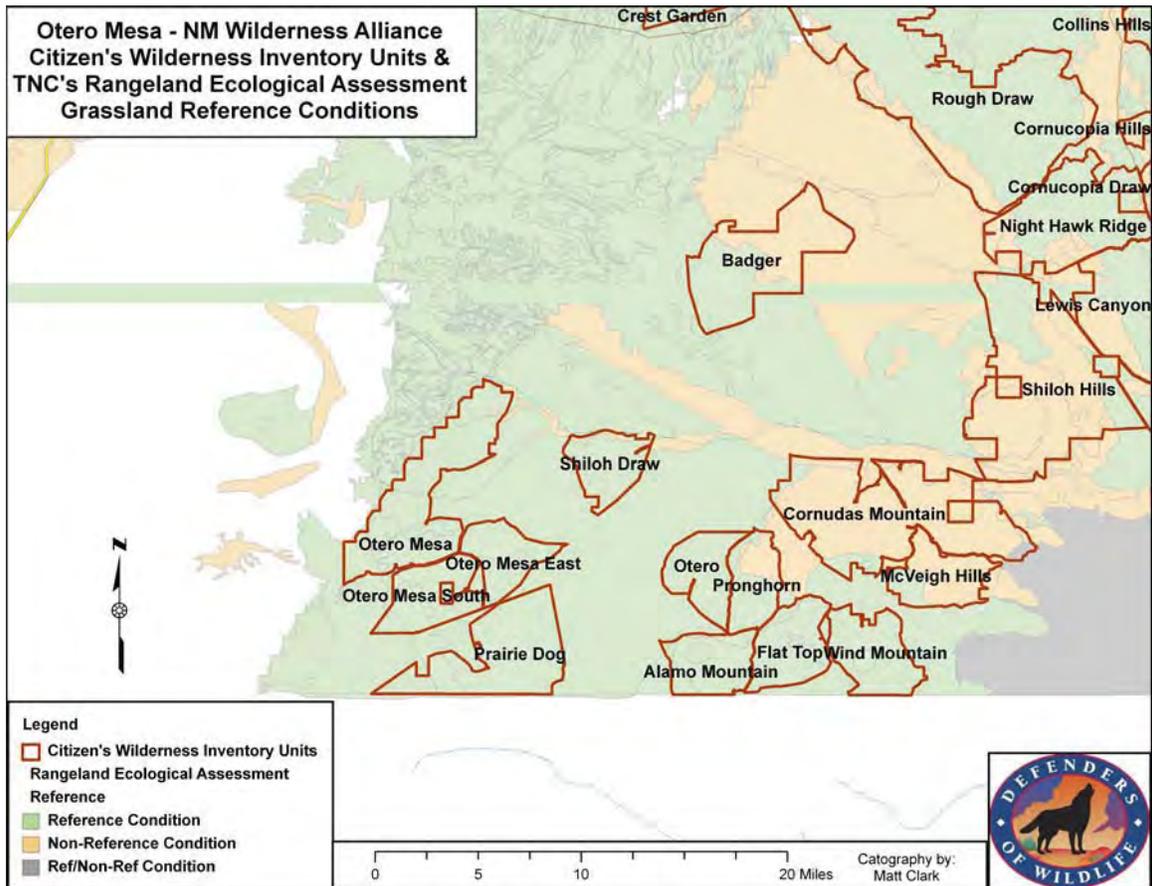
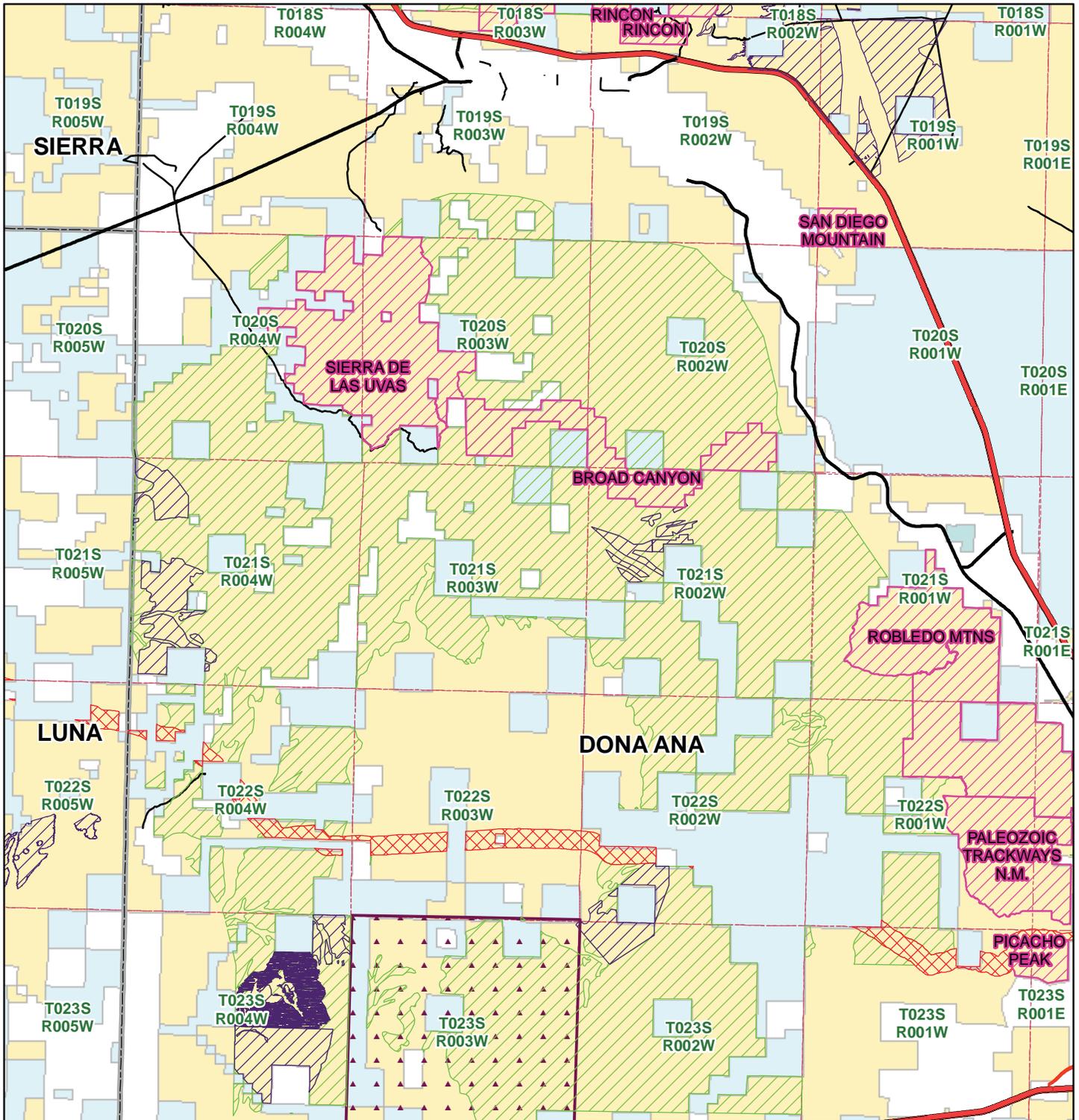


Figure 11. This map depicts Otero Mesa’s “reference condition” grasslands and wilderness potential.

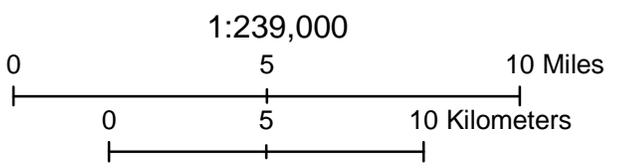


Legend

Exclusion	Bureau of Land Management
BUTTERFIELD TRAIL	Private
GRASSLAND RESTORATION	State
HMP ROBLEDO/LAS UVAS	New Mexico State Park
Potential_Solar_Enterprise_Zones	

Administration

- Federal Highway - Interstate
- Federal Highway - US Highway
- State Highway
- County



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the BLM. Spatial information may not meet National Map Accuracy Standards. This information is subject to change without notification.

Thank you for your comment, David Fick.

The comment tracking number that has been assigned to your comment is SolarM60244.

Comment Date: September 14, 2009 17:41:18PM
Solar Energy Development PEIS
Comment ID: SolarM60244

First Name: David
Middle Initial: R
Last Name: Fick
Organization: Morongo Basin Conservation Association
Address: P.O. Box 24
Address 2:
Address 3:
City: Joshua Tree
State: CA
Zip: 92252
Country: USA
Email: info@mbconservation.org
Privacy Preference: Don't withhold name or address from public record
Attachment: BLM-PEIS Comments.doc

Comment Submitted:

See below attachment

Morongo Basin Conservation Association
P.O. Box 24
Joshua Tree, CA 92252
www.mbconservation.org

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/90
Argonne, IL, 60439

September 14th, 2009

Re: Scoping Comments on the Solar Energy Study Areas for the Solar PEIS

The Morongo Basin Conservation Association (MBCA) represents the Morongo Basin's environmental concerns for four decades. The Morongo Basin is approximately seven hundred square miles between the Joshua Tree National Park on the South and the Marine Corps Air Ground Combat Center Twentynine Palms on the North and includes the City of Twentynine Palms, the Town of Yucca Valley and the communities of Joshua Tree, Morongo Valley, Landers and Wonder Valley.

The MBCA formed to battle illegal power transmission lines through the Morongo Basin in 1969. It took over a decade to set SCE in the right direction in their previous agreements on power transmission corridors. The Los Angeles Department of Water and Power (LADWP) in the last couple of years has been attempting the Green Path North power transmission project through the western portion of the Morongo Basin on mostly BLM and pristine conservation lands. The LADWP is meeting a 99% resistance to this project from affected communities and San Bernardino County (see www.cadesertco.org). Any large scale solar projects within the Morongo Basin would require transmission lines going west that would meet equally 99% resistance from the Morongo Basin public.

Besides the unwanted power transmission lines, the proposed solar projects would be requiring some of the precious water of the Morongo Basin. The Morongo Basin is importing water (through the Sate Water Project) to replenish it's western aquifers since 1994. There isn't enough water through that arrangement to supply the current water demands of the Morongo Basin population.

The MBCA supports the comments by the Joshua Tree National Park and the MCAGCC 29 Palms in general and the comments by the Mojave Desert Land Trust and the Citizens for the Chuckwalla Valley in particular.

This "fast-tracking" and big solar projects are leading to the ruination of the California desert region for everybody that in the long run will only make some big utilities, some politicians and lots of lawyers happy. Roof Top Solar is the direction this nation's renewable energy policy should embrace as priority. It would be more feasible, quicker and adaptable to the communities needing to meet their energy demands.

Respectfully Submitted,
David Fick, President
Morongo Basin Conservation Association

Thank you for your comment, Henry Bulloch.

The comment tracking number that has been assigned to your comment is SolarM60245.

Comment Date: September 14, 2009 17:45:54PM
Solar Energy Development PEIS
Comment ID: SolarM60245

First Name: Henry
Middle Initial: M
Last Name: Bulloch
Organization: Hogs Heaven Cattle Company
Address: 1897 N. 4500 W.
Address 2:
Address 3:
City: Cedar City
State: UT
Zip: 84721
Country: USA
Email: mattbulloch@netutah.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar Energy Development in Lincoln County NevadaWhil.wpd

Comment Submitted:

Comments on Solar Energy Development in Lincoln County Nevada

While recognizing the need for additional energy production for the citizens of the western United States, solar energy development in areas proposed in Lincoln county, Nevada are mostly unsuitable for the following reasons:

1. The impact of a solar plant in these valleys would be extremely detrimental to every living thing that resides there from the plants that grow on the fragile soils to the wildlife, including but not limited to wild horses, antelope, deer, elk, badgers, coyotes, quail, and many other mammals, reptiles, and birds.
2. For generations ranchers and their families have worked and cared for the land, providing benefits not only for the cattle that graze the forage but also for the wildlife. Springs have been improved, reservoirs have been built to store precious rainwater. The values established by the many generations of people before us have contributed to and are essential to the lifestyle that we as rural residents want to continue to live. If solar energy is developed in these valleys, this will have a tremendous negative impact on our way of life. Our cattle operation will be severely curtailed because this is the winter range for our cows. We will have nowhere to winter our cattle. Elimination of our winter range will have a drastic effect on our livelihood financially and impact our summer ranges. If the cattle are taken off the land, the wildlife will suffer also due to water sources drying up and not being maintained. Also if solar developments comes to these valleys, the top soil and vegetation will be graded off, leaving the area bare of good vegetation and the likelihood of noxious weeds taking over the area is high.
3. These valleys are currently used by multiple public land users. People camp, ride motorcycles and ORVs, have traplines in the winter, hunt deer and coyotes. They appreciate the great outdoor experiences that are available to them. Solar energy development in the areas as presently outlined would put a stop to the afore mentioned activities as well as other uses.
4. Solar energy could be produced on allotments such as Ely Springs, where the land owners have expressed a desire to participate in solar energy development. I firmly believe that development should only be placed on non-productive areas such as dry lake bottoms where vegetation would not be destroyed. Also private lands or permits where landowners are agreeable to having these cells on their property should definitely take priority.

We feel that solar energy may be a partial solution to the nation's energy problems but development should be located in areas not are not already producing valuable products such as cattle and sheep.

As shown by your map there are probably ten million acres that are not capable of sustaining livestock production. These areas should definitely be considered first. The areas shown would take out some the most productive white sage stands and other vegetation anywhere in the United States.

Lincoln County commissioners, BLM officials and permittees and other land users should be made aware of every step that is taken in this process. Mitigation plans should be made and agreed to by all interested parties before any construction begins.

Henry M. Bulloch
Jo Bulloch
1897 N. 4500 W.
Cedar City, UT 84721
(435)586-9622

Thank you for your comment, Bradley Albert.

The comment tracking number that has been assigned to your comment is SolarM60246.

Comment Date: September 14, 2009 17:48:09PM
Solar Energy Development PEIS
Comment ID: SolarM60246

First Name: Bradley
Middle Initial:
Last Name: Albert
Organization: Arizona Public Service
Address: P.O. Box 53933
Address 2:
Address 3:
City: Phoenix
State: AZ
Zip: 85072
Country: USA
Email: bradley.albert@aps.com
Privacy Preference: Don't withhold name or address from public record
Attachment: APS BLM Solar Energy Study letter to Solar Energy PEIS_091409.pdf

Comment Submitted:

Please see the attached letter submitted on behalf of Arizona Public Service Company.



Bradley J. Albert
Director
Resource Planning

Tel. 602-250-2347
e-mail:
Bradley.Albert@aps.com

Mail Station 8990
PO Box 53999
Phoenix, Arizona 85072-3999

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

RE: Bureau of Land Management Solar Energy Study Areas Selection in Arizona

Dear Sir or Madam:

Arizona Public Service Company (APS) appreciates the opportunity to provide comment on the recently announced Solar Energy Study Areas for Arizona as part of the Bureau of Land Management's (BLM) and U.S. Department of Energy's (DOE) initiative to expedite the processing of solar energy projects on federal land. We believe that the Solar Energy Study Areas program is essential to furthering renewable energy in Arizona. We also believe there is significant evidence of great potential for solar resources in Arizona. It is for this reason that APS encourages the DOE and BLM to expand its evaluation of potential solar resource areas in Arizona from those proposed in the June 29, 2009 initiative to accommodate Arizona's significant potential for solar resource development.

Disproportion of Solar Interconnection Requests to Arizona Solar Energy Study Areas

The emergence of renewable resources as key components of future electrical generation resulted in a significant increase of requests for interconnection into the Arizona electrical transmission system. As of August 10, 2009, utilities in Arizona have more than 11,800 megawatts of proposed solar generation seeking interconnection into the state's electrical transmission system.¹ Comparing this figure with that of Nevada (approximately 3,000 megawatts) and New Mexico (approx. 3,800 megawatts) for the same time period, Arizona has about 3 times as many solar projects seeking interconnection into the electrical transmission system than our neighboring states included in the BLM study.

¹ Generator Interconnection Queues as of August 10, 2009
<http://www.westconnect.com/init_trans_provider.php>.

Contrasting these interconnection queue figures, the BLM identified three Solar Energy Study Areas in Arizona totaling 16,492 acres, while solar energy zones totaling 149,375 acres and 120,584 acres were identified in neighboring Nevada and New Mexico respectively.² This represents approximately 7 to 9 times the amount of area proposed for study in Arizona, yet the commercial solar development market has more than 3 times as many interconnection requests into the Arizona transmission system.

Arizona Participation in Regional Solar Resource Planning Initiatives

The 2008 Biennial Transmission Assessment (BTA) issued by the Arizona Corporation Commission (ACC) directed state-regulated utilities "to identify new transmission projects that will support the development of renewable generation resources in Arizona."³ APS played a key role in a multi-jurisdictional planning committee formed in response to the BTA, called the *Arizona Renewable Resource and Transmission Subcommittee* (ARRTIS). This group was tasked with conducting a high-level analysis of potentially developable areas for solar and wind generation projects throughout Arizona. The information gathered by ARRTIS was used as background resource data and provided to a parent committee called the *Renewable Transmission Task Force* (RTTF), which then developed a network of conceptual transmission linkages throughout the state to aid the utilities in meeting the ACC's directive in the BTA. Both the ARRTIS and the RTTF were part of the broader *Southwest Area Transmission Study Group*, a sub-regional planning organization comprised of utilities throughout the Southwest, of which APS is a participant.

The ARRTIS process benefited from the active participation of personnel from a wide variety of federal and state agencies, including those listed below, which also provided Geographic Information System (GIS) data to the studies:

- Bureau of Land Management
- Department of Energy - National Renewable Energy Laboratory
- United States Forest Service
- United States Fish and Wildlife Service
- Arizona Game and Fish Department

Data received by the ARRTIS was categorized by a corresponding level of potential environmental sensitivity ranging from "exclusion" to "low sensitivity" based on the designation assigned to each layer by the agency providing the data. For the purposes of the process, no objection was raised as to the appropriateness of the sensitivity designation. The ARRTIS sought only to compile available resource data and consider the state resource conditions that were identified.

One of the primary assumptions of the ARRTIS process was that although four areas of resource sensitivity were defined; only Exclusion Areas would be considered unsuitable for utility-scale

² BLM Solar Energy Study Areas, 2009

<http://www.blm.gov/wo/st/en/prog/energy/solar_energy/Solar_Energy_Study_Areas.html>.

³ Arizona Corporation Commission Decision #70635.

generation in the state. All non-Exclusion Areas would be considered viable options for generation and transmission development subject to site-specific conditions and jurisdictional review and approval.⁴ The results demonstrate that Arizona has tremendous potential for solar development, with approximately half the state falling outside of the conceptual Exclusion Areas and potentially being suitable for solar development.

Use of Arizona Game and Fish Department Information In Determining Solar Energy Zones

As noted above, the Arizona Game and Fish Department (AGFD) provided data for the ARRTIS process and suggested a “high sensitivity” designation for specific areas. Similar AGFD data layers appear to have been provided to the broader Western Renewable Energy Zone (WREZ) initiative administered by the Western Governors’ Association and were considered by the BLM and DOE in their Solar Energy Study Area identification process.⁵ The AGFD is currently in the process of refining the resource data evaluation used to define high sensitivity resource areas and have advised utilities and state agencies that additional renewable resource development planning should not be made based on information provided to the WREZ or ARRTIS initiatives. A new refined data set will soon be released by the AGFD that is expected to serve as a more useful resource for planning purposes, including the evaluation of renewable resource development and state resource considerations.

Arizona’s Viable Solar Future

Arizona has a strategic role to play in the development of renewable resources in the Southwest. Our own growth, combined with that of our neighboring states, remains the highest in the nation and will require that infrastructure continue to be developed to support the region’s growing energy needs. The National Renewable Energy Laboratory’s own analysis of Concentrating Solar Power (CSP) potential in Arizona concluded that “*significant resources exist in Arizona for economic development of CSP within the State*” and that these CSP resources “*are located near existing transmission and near existing and growing loads*” further strengthening Arizona’s position as a renewable energy consumer and potential net exporter to the region.⁶ The Western Governor’s Association’s Solar Task Force identified Arizona as having the “*largest solar resource potential*” of all the Western states evaluated in its analysis.⁷

The Arizona transmission system is robust and continues to be enhanced to support the development of the significant solar resource potential of Arizona. In 2008 and again in 2009, APS announced the development of two of the largest utility-scale concentrating solar projects in the world, designed to utilize Arizona’s vast solar resource to power clean energy generation facilities capable of producing 570-megawatts, or enough electricity to serve approximately

⁴ *Draft Final Report of the Arizona Renewable Resource and Transmission Identification Subcommittee* (September 2009).

⁵ Arizona BLM Renewable Energy Conflict Analysis.

⁶ *Analysis of Solar Resource Potential and Siting Opportunities for the State of Arizona* – NREL, 2006

⁷ Western Governors’ Association Solar Task Force Recommendations

<[http://www.cc.state.az.us/divisions/utilities/electric/4%20-%20ACC-WGA%20recs%201%20Oct.ppt#257,1,WGA Solar Task Force Recommendations](http://www.cc.state.az.us/divisions/utilities/electric/4%20-%20ACC-WGA%20recs%201%20Oct.ppt#257,1,WGA%20Solar%20Task%20Force%20Recommendations)>.

143,000 customers. With this in mind, APS encourages the BLM to consider the potential that exists for the development of solar energy resources in Arizona and to incorporate additional Solar Energy Study Areas into the ongoing solar initiative.

Respectfully,

A handwritten signature in black ink that reads "BJ Albert". The signature is written in a cursive, flowing style.

Bradley Albert

Cc: Chairman Mayes
Commissioner Pierce
Commissioner Newman
Commissioner Kennedy
Commissioner Stump
Steve Olea
Janice Alward
Rebecca Wilder
Ray Williamson
Mike Anable, Office of Arizona Gov. Jan Brewer

Thank you for your comment, Alex Daue.

The comment tracking number that has been assigned to your comment is SolarM60247.

Comment Date: September 14, 2009 17:53:28PM
Solar Energy Development PEIS
Comment ID: SolarM60247

First Name: Alex
Middle Initial:
Last Name: Daue
Organization: The Wilderness Society
Address: 1660 Wynkoop St., Suite 850
Address 2:
Address 3:
City: Denver
State: CO
Zip: 80202
Country: USA
Email: alex_daue@twsw.org
Privacy Preference: Don't withhold name or address from public record
Attachment: TWS NRDC and partners comments on BLM SESAs 09.14.09 (with exhibits).pdf

Comment Submitted:

Please accept and fully consider the attached comments on behalf of The Wilderness Society and the other organizations signed on to the document.

Thank you,
Alex Daue

The Wilderness Society ~ Natural Resources Defense Council
Defenders of Wildlife ~ Wild Utah Project ~ Center for Native Ecosystems
Western Resource Advocates ~ New Mexico Wilderness Alliance
Arizona Wilderness Coalition ~ Californians for Western Wilderness
National Wildlife Federation ~ California Native Plant Society
Wyoming Outdoor Council ~ Colorado Environmental Coalition
Great Old Broads for Wilderness ~ Soda Mountain Wilderness Council
California Wilderness Coalition ~ Desert Protective Council ~ Sierra Club
Southern Utah Wilderness Alliance ~ Mojave Desert Land Trust

September 14th, 2009

Delivered via electronic mail (with exhibits, through the project website) and U.S. mail (with exhibits and attachments)

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Re: Scoping Comments on the Solar Energy Study Areas for the Solar PEIS

Please accept and fully consider these comments on behalf of The Wilderness Society, Natural Resources Defense Council, Defenders of Wildlife, Wild Utah Project, Center for Native Ecosystems, Western Resource Advocates, New Mexico Wilderness Alliance, Arizona Wilderness Coalition, Californians for Western Wilderness, National Wildlife Federation, California Native Plant Society, Wyoming Outdoor Council, Colorado Environmental Coalition, Great Old Broads for Wilderness, Soda Mountain Wilderness Council, California Wilderness Coalition, Desert Protective Council, Sierra Club, Southern Utah Wilderness Alliance, and the Mojave Desert Land Trust.

The mission of The Wilderness Society (TWS) is to protect wilderness and inspire Americans to care for our wild places. We have worked for more than 70 years to maintain the integrity of America's wilderness and public lands and ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained. With more than half a million members and supporters nation-wide, TWS represents a diverse range of citizens.

Natural Resources Defense Council (NRDC) is a non-profit environmental organization with over 1.2 million members and online activists nationwide. NRDC uses law, science and the support of its members and activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things. NRDC has worked to protect wildlands and natural values on public lands and to promote pursuit of all cost-effective energy efficiency measures and sustainable energy development for many years.

We appreciate the opportunity to submit these comments to the Bureau of Land Management on the maps of proposed Solar Energy Study Areas (SESAs), supplementing the Programmatic Environmental Impact Statement (PEIS) for agency-wide solar energy programs and policy. We are submitting these comments today via email and also forwarding a copy with attachments to you separately.

It is clear that the nation's growing addiction to fossil fuels, coupled with the unprecedented threats brought about by global warming, imperil the integrity of our wildlands as never before. To sustain both our wildlands and our human communities, TWS, NRDC and the undersigned believe the nation must transition away from fossil fuels as quickly as possible. To do this, we must eliminate energy waste, moderate demand through energy efficiency, conservation, and demand-side management practices, and rapidly develop and deploy clean, renewable energy technologies, including at the utility-scale, while keeping habitats and ecological connectivity intact.

Our public lands harbor substantial wind, solar, and geothermal resources. Developing some of these resources will be important to creating a sustainable energy economy and combating climate change. Renewable resource development is not appropriate everywhere on the public lands, however, and development that does occur on the public lands must take place in a responsible manner. TWS, NRDC and the undersigned support such careful development of renewable energy and hope these comments will assist the BLM in achieving the goal set out in Secretarial Order 3258 of "identifying and prioritizing specific locations best suited for large-scale production of solar energy."

We have organized our comments into three sections: The first section addresses cross-cutting themes and issues that address key considerations for both SESAs and the broader Solar PEIS process, including structuring a solar energy program, coordination with other on-going related processes and the need for a long term vision for the energy and conservation needs of the West. The second section discusses the SESAs that have been proposed and alternatives. The third and final section discusses issues that will arise if the other "blue lands" identified on SESA maps were opened to solar development. Exhibits with detailed comments on the BLM's proposals in each of the six states encompassed by the Solar PEIS, including maps and GIS data where available, are also included, as well as an exhibit on cultural resources in the SESAs. Please note that not all groups signed on to these broader comments are signing on to the additional state-specific and cultural resources comments attached as exhibits, so we have specifically identified those groups that are specifically signing on at the beginning of each state-specific comment exhibit and the cultural resources exhibit (exhibits 6-12).

I. Cross-cutting issues relating to SESAs and Solar PEIS

- a. Identifying the most suitable areas and focusing development in those areas before expanding development is a responsible approach to utility-scale solar development on the public lands.

We support BLM's commitment to develop clear and comprehensive guidelines for responsible solar energy development, identify lands appropriate for solar projects as open for development, and close all other lands to development as part of the Solar Energy PEIS. The release of proposed SESAs for public review and comment is an important next step showing the BLM's commitment to this approach and providing more detail on how it can be accomplished. We are encouraged by the BLM's statements that important screening criteria (including critical wildlife habitat, special management areas, and visual resources) have already been applied to SESAs. Further, establishing SESAs better enables a landscape-level analysis of solar development and associated transmission on public lands in the West.

As the SESAs are building on the information provided in BLM's original Notice of Intent for the Solar PEIS, these comments are also building on the issues we identified in our original

scoping comments, dated July 15, 2008, which are attached as Exhibit 1 and incorporated herein by reference.

We appreciate the opportunity to comment on the proposed SESAs before the release of the Draft PEIS. Conservation organizations, local jurisdictions, industry groups, and many other members of the public have valuable information that can inform identification of the most appropriate areas as SESAs on public lands, and incorporating this information into decision-making will help ensure the success of the PEIS in furthering renewable energy development on public lands while protecting the many sensitive resources and values on our public lands.

Recommendations: BLM should move forward with developing a comprehensive and robust PEIS for solar development that includes clear and comprehensive guidelines for responsible solar energy development, identifies lands appropriate for solar projects as open for development, and closes all other lands to development. Through comments received during the NEPA process, BLM should refine the SESAs to ensure that, when Solar Energy Zones (SEZ) are designated, they truly include only the most appropriate lands for solar development on public lands.

- b. Areas in which solar power generation is not appropriate must be clearly identified.

Development of utility-scale solar power generation facilities will transform the lands upon which they are located and preclude most other uses. As noted by the BLM, other uses of these sites “are unlikely due to the intensive use of the site for PV [photovoltaic] or CSP [concentrating solar power] facility equipment.” Instruction Memorandum (IM) No. 2007-097. This transformation can be expected to last for decades, and some impacts will likely be permanent and cannot be mitigated. Under these circumstances, it is clear that some areas are not appropriate for this kind of development and equally that, as part of its new solar program, the BLM must identify which those areas are.

We appreciate the BLM’s commitment to avoiding the sensitive areas identified in the scoping notice, as well as requiring that the SESAs be near existing roads and existing or designated transmission routes.

We support the application of the criteria set out in the Notice of Availability (74 Fed.Reg. 31307-31308) for removing lands from consideration for SESAs. In addition, we reiterate the categories and considerations identified in our original scoping comments on the Solar PEIS (Exhibit 1). In particular, we note that the SESAs do not acknowledge the need to identify and exclude from consideration lands with wilderness characteristics that have not been previously inventoried. For instance, some of the resource management plans (RMPs) governing the lands within proposed SESAs have not completed re-inventories for wilderness characteristics. A similar approach is already being implemented in the context of transportation management, where the BLM is requiring evaluation of lands for their wilderness characteristics prior to making or changing designations for roads or motorized trails. *See*, IM No. 2009-132. The agency can conduct a similar analysis prior to designating lands to be prioritized for large-scale solar energy development.

Further, while we believe it is of primary importance that no SESA be placed directly in any of the types of areas identified by the BLM and in our previous comments, it is also important that solar energy facilities not infringe on the recreational enjoyment of certain types of areas

or otherwise interfere with their ecological functions or other special values. Units of the National Landscape Conservation System and other protected areas serve as important core areas that are part of larger ecosystems; migration corridors and other landscape-level values must be taken into account in analysis of the SESAs in the Draft PEIS.

Supplemental Recommendations: We support BLM's exclusion of the categories of lands listed in the scoping notice. BLM should analyze any potential impacts from SESAs sited immediately adjacent to these areas, propose measures to minimize and mitigate those impacts, and make any necessary adjustments to SESAs if impacts are determined to be unacceptable. Lands with wilderness characteristics must not be adversely impacted by the SESAs. The SESAs should not be sited in lands BLM is managing to protect wilderness characteristics. Further, areas that have not recently been inventoried for wilderness characteristics should be inventoried before being committed to SESAs. The BLM should specifically consider the significant new information encompassed by the wilderness inventories which were attached to our original scoping comments, as well as to a letter sent by TWS to BLM on May 22, 2009 recommending avoidance of these areas. The May 22, 2009 letter and attached GIS data are included with these scoping comments as Exhibit 2 (letter, GIS data and explanatory spreadsheet attached).

- c. Maximize use of areas that are already degraded and near existing infrastructure.

In addition to avoiding ecologically-sensitive lands, we commend BLM for selecting SESAs based on proximity to existing roads and existing or designated transmission corridors. We also recommend that BLM obtain and incorporate information on lands that are already impaired and/or are slated for other development uses. Abandoned mines, developed oil and gas fields, fallow agricultural lands, undeveloped real estate parcels, and other brownfields, which are not being restored to ecological function, provide opportunities for solar energy development without loss of other uses and values. Such sites are often close to existing infrastructure, so these two criteria work well together.

The Arizona BLM is conducting a specific process to identify lands that are both suitable for renewable energy development and require remediation or do not have other high resource values. The Restoration Energy Design Project is seeking to identify lands such as:

- hazardous material sites;
- brownfields;
- abandoned mines;
- former landfills, mineral sites or gravel pits;
- sites damaged or disturbed to the extent that restoration potential is limited; and
- sites that otherwise have very limited productivity due to a disruption of natural processes.

The BLM could undertake a similar process in other states, both internally and by seeking information from industry and the public, to identify such lands for solar energy development. We have attached comments submitted on the Restoration Energy Design Project as Exhibit 3 to these comments and incorporate these for your consideration in incorporating suitable, degraded lands. As noted in our comments, the categories in use by the Arizona BLM could

also permit coordination with adjacent landowners, to establish coordinated management of lands so that there would be sufficient acreage to support large-scale solar energy development.

Recommendation: In addition to accepting information from the public regarding areas to be excluded, BLM should solicit and incorporate information on severely degraded lands and disturbed habitat that could be additional SESAs.

- d. Areas outside designated solar energy zones should be closed to new applications and applicants should be encouraged to move into zones.

The Notice of Availability states that the SESAs are being evaluated “for the purpose of determining whether such areas should be designated as Solar Energy Zones” that are intended to be “specific locations determined best suited for large-scale production of solar energy.” Once the SEZs are designated as “best suited” in the PEIS, the BLM should give full force to those designations by limiting applications to these areas.

As the BLM well knows, there are hundreds of applications pending for rights-of-way (ROWS) for solar projects.¹ At the outset, we would note the recommendations in our scoping comments (Exhibit 1) and also under consideration in pending legislation that the BLM evaluate changing to a leasing program for development of renewable energy on public lands and/or incorporating more robust conditions and competitive bidding for ROWs. We reiterate the importance of these considerations in addition to the following discussion on limiting development to SEZs designated through the PEIS process.

The sheer number of the pending ROW applications, in addition to the problematic locations and speculative nature of many of them, as well as the lack of a program to manage them, have generated alarm among public land users and elected officials while complicating the BLM’s ability to proactively design a comprehensive, environmentally responsible solar program. Consequently, allowing continued filing and potential development of new applications outside SEZs *after* SEZs have been designated is inconsistent with the fundamental reason for designating such areas – i.e., to direct solar development to appropriate areas of the public lands. A BLM and/or Interior Department decision to establish a program that seeks to both authorize utility-scale solar development within SEZs identified in this PEIS process, while also continuing to permit development outside the SEZs, is certain to generate significant public opposition and controversy, and slow down the Obama Administration’s efforts to speed production of renewable energy.

Instead, the solar energy program prescribed by the Solar PEIS should require BLM field offices to move quickly to affirmatively deny pending applications that are inconsistent with its terms, including in particular applications in areas that have been put off limits to solar development, such as Areas of Critical Environmental Concern (ACECs) and critical habitat for threatened and endangered species,² as well as applications whose proponents have not met

¹ According to the BLM, the total number of “active” pending applications is 158. Qs & As: BLM Solar Programmatic Environmental Impact Statement (PEIS), June 29, 2009, p. 8 (hereinafter “BLM Qs & As”). In addition to these “active” applications, there are also 39 pending applications that overlap with pre-existing applications, for which they are not considered “active” by BLM.

² If any exceptions to this rule are deemed necessary, they should be as tightly constrained as possible. E.g., the only companies excepted should be those which had not only completed all required studies but also had signed power purchase agreements in hand. And, rather than merely allow these companies to develop these wholly inappropriate areas, they should be given the opportunity to apply for land within a designated zone on a non-competitive basis.

other applicable requirements such as timely submission of adequate and complete plans of development.³ In addition, the new program should close all lands outside SEZs to the filing of new applications; and we strongly urge BLM to deny all *pending* applications outside delineated SEZs – with the exception of projects (including “fast-track” projects⁴) which meet the criteria set out in this comment letter and our July 2008 comment letter (Exhibit 1, attached), and comply with all environmental laws and permitting regulations and have either begun scoping or for which the BLM has approved a Plan of Development as of this date.

Thus, a key result of the new solar program should be the immediate closure of all public lands outside of designated SEZs to solar development, once the PEIS is completed and the Record of Decision (ROD) is signed. This goal could be achieved through amending the land use plans in question to not only designate SEZs, but also to direct that only applications within SEZs will be processed for permitting until such time as additional or enlarged SEZs are designated. A major advantage of such an amendment would be that it would simultaneously deal with the problems of pending as well as future applications.

The BLM should also set out specific standards for designating new or additional SEZs, including a requirement for a determination of need for additional megawatts (MW) of production before additional designations are considered. Moreover, the BLM should make clear as part of its new program that proposed plan amendments that would designate or expand SEZs will not be accepted from individual project proponents. 43 C.F.R. § 1601.6-3(b) (“A resource management plan may be changed through amendment [which] is initiated by the need to consider ... an applicant’s proposed action...”). If expansion of existing SEZs and/or designation of new ones is permitted through the traditional RMP amendment process, the benefits of a pro-active comprehensive approach to management will be eroded, if not completely lost.

If BLM determines not to refuse to process all pending applications outside SEZs (whether through plan amendments or otherwise), it must limit processing of such applications as strictly as possible. For example, it should provide for processing of applications outside SEZs only for those companies which meet specific criteria as of a specified date, such as companies that have completed all required biological surveys and studies, have signed power purchase agreements in hand and have evidence of independent financing. Rather than merely allow companies that meet these criteria to develop in the places they have selected outside SEZs, the new program should give them the opportunity to apply for land within a designated SEZ on a non-competitive basis.

In addition, if the BLM decides not to deny all pending applications outside SEZs, the agency should develop a suite of incentives to use to encourage any remaining applicants as well as others to move into designated SEZs. Put another way, if the BLM does not reject all applications outside SEZs, it is critical that the new program make meaningful distinctions between its handling of applications which are in SEZs and those which are not. Ensuring that

³ Some of the groups submitting these comments have previously indicated their support for this and other measures such as increased fees designed to handle existing applications.

⁴ The American Recovery and Reinvestment Act of 2009 identified renewable energy development as a priority on federal lands, and is making stimulus funding available in the form of loan guarantees for a subset of BLM's solar, wind, and geothermal project applications. The BLM is tracking project applications that may be able to qualify for these funds. The agency has identified potential "fast-track" applications that are furthest along in their application process and have the best chance of beginning construction by the end of December 2010 - the deadline for stimulus funding.

processing of applications within SEZs will be easier and hopefully faster as the result of the PEIS is definitely one such incentive,⁵ but others, such as prioritizing the processing of applications that have moved into designated SEZs should be explored in the PEIS and incorporated into the new program. Simultaneously, the BLM should emphasize that every project outside a SEZ will require a full EIS. While we believe that such incentives will help encourage solar developers to move into SEZs, we emphasize that standing alone they will not provide an adequate solution to the problem posed by existing and potential applications outside those areas. At a minimum, applications on excluded lands must be denied and lands outside SEZs must be closed to future applications.

Recommendations: The BLM should utilize the PEIS to develop an approach to pending applications that will ensure that solar development is permitted on public lands in the future only within designated SEZs. BLM should develop, preferably through an exclusion policy, resource management plan amendments or through the use of a robust set of incentives, a means to close lands outside of designated SEZs to solar applications (with the exception of projects (including “fast-track” projects) which meet the criteria set out in this comment letter and our July 2008 comment letter (Exhibit 1, attached), and comply with all environmental laws and permitting regulations and have either begun scoping or for which the BLM has approved a Plan of Development as of this date). The BLM should also set out specific standards for designating new or additional SEZs, including a requirement for a determination of need for additional MW of production before additional designations are considered.

- e. Discourage the use of wet-cooled or other water-intensive technologies.

Water is a major concern in the arid regions of the West where the proposed SESAs are located and we urge the BLM to take a proactive approach to this issue in the PEIS.

Electric generation from solar (and other) thermal power plants is most efficient when a source of cooling – typically water – is available to remove waste heat from the thermal cycle.⁶ Unfortunately, the SESAs that are the focus of the PEIS are located in arid areas where intense competition already exists between the use of limited supplies of water for urban areas, fossil fuel production and agriculture.⁷ Permitting water-cooled production of energy from solar resources would add to that competition.⁸ The BLM should explore ways to avoid these results in the PEIS, including the options identified below:

- (1) *Adopt a policy which would discourage the use of wet-cooling for power plants.* Both California and Nevada have adopted such policies.⁹ California’s policy states that the

⁵ See, e.g., BLM Qs & As, p. 6.

⁶ See, e.g., Renewable Energy Transmission Initiative Phase 1B Final Report (January 2009), Chapter III – Environmental Assessment of Competitive Renewable Energy Zones, p. 3-3 (hereinafter “RETI Phase 1B Report”).

⁷ See, e.g., Colorado River Project, River Report – Summer 2009, p. 8. See also *id.*, pp. 4-5, 6.

⁸ The amount of water used for wet cooling a power tower plant is about 500 gallons of water per MWh of electricity, similar to a typical coal or nuclear plant. U.S. Department of Energy, Report to Congress, “Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation, p. 4 (hereinafter “DOE Report on Water Use”) (accessible at http://www1.eere.energy.gov/solar/pdfs/csp_water_study.pdf). A water-cooled parabolic trough plant consumes about 800 gal/MWh, or about four times what a combined-cycle natural gas plant consumes. *Id.* Because wet-cooled plants are more efficient than dry-cooled, see text at note 6 *supra*, more land would be required to produce a given amount of energy.

⁹ See, e.g., California Energy Commission 2003 Integrated Energy Policy Report.

Energy Commission “will approve the use of fresh water for cooling purposes by power plants only where alternative water supply sources and alternative cooling technologies are shown to be ‘environmentally undesirable’ or ‘economically unsound’.”¹⁰ There is broad acceptance of this policy in California, including among the solar industry,¹¹ where alternatives considered to date have included use of brackish water as well as dry-cooling.¹² Although Arizona does not have an explicit policy, it has moved to strictly regulate water use in solar projects.¹³

(2) *Adopt a performance standard that specifies the amount of water that is acceptable per MW generated.* Rather than tie solar development to one specific technology (i.e., dry-cooling), such an option would allow for any technology that would meet the standard and could in fact result in technology improvements.¹⁴

(3) *Adopt a technology-forcing standard that would continue to elevate the bar regarding water use and, simultaneously, encourage the use of new, innovative technologies.* For an example, the Department of Energy’s project selection criteria for renewable energy projects “seeks to give priority consideration to “new or significantly improve[d] technologies” that are not extensively used in the marketplace¹⁵.

Recommendations: The PEIS should examine several options related to guidelines on water use, including those described above, so that the agency and the concerned public can see the tradeoffs involved in saving fresh water, on the one hand, and the additional land that would be necessary to produce a given amount of renewable energy, on the other.

- f. Consultation with U.S. Fish and Wildlife Service is necessary at the programmatic level.

A programmatic Section 7 consultation on the Solar PEIS should be undertaken with the U.S. Fish and Wildlife Service (USFWS), as was done for the Wind PEIS. To the extent possible, this Section 7 consultation should also seek to provide project-level take coverage under the federal Endangered Species Act.

We believe that a consultation is legally required, and that the failure to consult could make the entire process legally vulnerable with potential attendant delays. The failure to commence a Section 7 consultation now will result in this key requirement being processed separately at a later date, rather than now. This will correspondingly delay the timeline for implementation of actual near-term projects.

¹⁰ California Energy Commission, Preliminary Staff Assessment, Beacon Solar Energy Project, Application For Certification (08-AFC-2), Kern County (Posted April 1, 2009) (hereinafter “Beacon Staff Draft”), p. 4.9-5.

¹¹ See, e.g., RETI Phase 1B Report, p. 3-3, describing agreement of all RETI stakeholders, including solar generators, to the assumption, for RETI purposes, that dry-cooling would be used except when reclaimed water from communities of a certain size is available.

¹² In the case of the Beacon project, CEC analysis revealed that dry-cooling could “reduce ... consumption of potable water by up to 97 percent.” Beacon Staff Draft, p. 1-6. In addition, the analysis revealed that not only were both of these options economically feasible, but also that dry cooling might “actually result in lower project operating costs.” *Id.*, p. 4.9-48.

¹³ *See*

<http://www.azwater.gov/AzDWR/WaterManagement/documents/SolarPowerPlantsSummaryFINALPublic.pdf>

¹⁴ For additional options, *see* DOE Report on Water Use, *supra*.

¹⁵ “Federal Loan Guarantees for Projects That Employ Innovative Energy Efficiency, Renewable Energy, and Advanced Transmission and Distribution Technologies,” Loan Guarantee Solicitation Announcement, July 29, 2009, pp. 35-36.

We understand that USFWS and BLM instead intend to undertake Section 7 consultations in connection with specific project proposals for which ROW applications have been filed. While some of these project-specific consultations will be pursued in parallel with the Solar PEIS effort, reducing the timeline to completion for those *particular* projects, complete reliance on those consultations alone has several disadvantages in comparison to consolidated consultation. First, project-level consultation biases siting decisions toward those sites for which applications have been filed, erasing some of the planning benefits of the Solar PEIS effort. Instead, as in the zone approach, BLM should take the lead and guide developers toward the optimum sites. Second, a single, consolidated Section 7 consultation is likely to be more efficient than multiple project-level processes. Third, such consolidation is likely to result in greater consistency across projects. Finally, a completed Section 7 consultation with incidental take coverage for particular sites will enhance the value of those sites for potential developers and maximize the return to the United States from a potential competitive process. As the BLM, USFWS, and California’s Energy Commission and Department of Fish and Game have recognized, in general a programmatic consultation with a project-level component for high priority near-term sites will best serve the goal of developing BMPs “and other appropriate ... guidelines to assist solar ... developers with siting projects in environmentally suitable locations”¹⁶

Recommendations: BLM should undertake a programmatic Section 7 consultation with the Fish and Wildlife Service in parallel with the Solar PEIS in order to comply with NEPA requirements, maximize efficiency of environmental review, and maximize consistency in the application of Section 7 analysis to projects in SESAs.

- g. Integrate BLM planning with other laws and required processes.

As indicated, to address the climate challenge (as well as to obtain other economic benefits), our nation needs to develop renewable energy and to develop it quickly. In general, we believe that one of the best ways to achieve this goal is to integrate the environmental and other review processes of relevant state and federal agencies so that they can be carried out simultaneously, rather than serially. Consolidating reviews required under different environmental laws can accelerate zone designations as well as project approvals without sacrificing environmental protections.

One of the main complaints about delays involving all extractive or exploitative activities on the public lands comes from the different environmental review processes that these activities must undergo. Consultation may be required under the Endangered Species Act, conformity review may be required under the Clean Air Act, cultural resource review may be required under the National Historic Preservation Act and, even in our deserts, wetlands review may be required under the Clean Water Act. At the present time, all of these reviews frequently happen separately from the NEPA process. One of the best ways to expedite ultimate approval of SEZs and projects is to process environmental reviews at the program and project levels in a single document, or if that is not possible to process them in parallel. In addition to shortening the timeline to implementation, unified or parallel processing can promote economies of scale,

¹⁶ Memorandum of Understanding Between the California Department of Fish and Game, the California energy Commission, the Bureau of Land Management, and the U.S. Fish and Wildlife Service Regarding the Establishment of the California Renewable Energy Action Team, November 17, 2008, p. 2. Accessible at <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy.Par.76169.File.dat/RenewableEnergyMOU-CDFG-CEC-BLM-USFWS-Nov08.pdf>

integrate cumulative and project-level analyses, and maximize flexibility in considering alternatives, among other benefits.

In 2002, the Western Governors' Association (WGA) developed a protocol with the federal government, including the Department of the Interior and the Council on Environmental Quality that provides for such a consolidated process (attached as Exhibit 4). Among other items, the protocol calls for establishment of a timeline for consolidated reviews as well as for agreements on data needs and methodologies. In California, the BLM has entered into an agreement with state agencies to prepare joint environmental reviews of renewable generation and transmission projects.

Recommendations: We urge the BLM to utilize the WGA protocol and the California experience to the maximum extent possible in preparing this PEIS and, in the future, in processing specific solar applications.

h. Coordinate PEIS with other processes.

It is critical that the BLM coordinate the Solar PEIS with ongoing processes that share the same overarching goal – i.e., facilitating the development of solar (and other renewable) resources in an environmentally responsible manner. We have identified three processes underway in which the BLM has been a participant, as well as several others in which BLM may be participating.. At least one of these has clearly been taken into account in delineating the SESAs.

(1) RETI

California's Renewable Energy Transmission Initiative (RETI) is a voluntary, multi-stakeholder consensus process begun about three years ago. Its goal is to plan for the lowest cost, environmentally and economically, renewable development and transmission needed to meet the state's ambitious Renewable Portfolio Standard (RPS) goals. To date, RETI has identified 30 competitive renewable energy zones (CREZ) and developed a conceptual transmission plan that could serve those zones. At least half of the RETI CREZ are located on public lands, mostly in the California Desert Conservation Area.

RETI's CREZ were based in large part on existing ROW applications, including all applications filed on BLM-administered lands as of 2008 – even though all participants in the process understood that not all pending applications would in fact be granted. Clearly the BLM has considered RETI CREZ in developing its proposed SESAs in California: in addition to saying so,¹⁷ comparison of the two kinds of areas reveals substantial overlap. Because BLM used different criteria and took into account potential resource conflicts and other information not available to or used by RETI participants, the SESAs are smaller than CREZ and some CREZ are not represented at all. As a result, it appears at this time that less renewable energy will be available from public lands in California than RETI has assumed. While this result is entirely within BLM's prerogative as the steward of those lands, it is essential that agency officials make sure that RETI participants clearly understand the PEIS process, including its timeline and the options under consideration. Further, the intergovernmental coordination underway must be strengthened to ensure the state is an active participant in the federal process. It is equally essential that RETI participants be kept fully up to date as to milestones

¹⁷ BLM Qs and As, p. 3.

and the results of the process so that they can plan on the basis of complete and accurate information.

(2) Desert Renewable Energy Conservation Plan

The BLM is also participating in another California process – the DRECP. A major effort is currently underway at the California Department of Fish and Game (CDFG) to prepare this plan as directed by Governor Schwarzenegger’s November 2008 Executive Order. Although the DRECP will require an environmental impact report (EIR), under the California Environmental Quality Act, it is not proceeding on a parallel timetable with the Solar PEIS; it is a longer term effort. Still, if created as a state Natural Community Conservation Plan (NCCP) and coupled with a federal Habitat Conservation Plan (HCP), this plan could provide an appropriate framework for the kind of long-term blueprint that is needed for the California Desert Conservation Area. It could also inform processes on other public lands in other involved states as discussed below. Consequently, it is critically important that the two efforts be closely coordinated.

Coordination is particularly important in terms of the areas identified for development and the appropriate mitigation strategies for solar projects. If there are disagreements between BLM, CDFG, and/or other state (or federal) agencies regarding these key issues, they should be resolved at least tentatively in advance (subject of course to the legal obligations and discretion of each agency) and as promptly as possible. If these questions are not addressed early on, the alternative is an iterative process that could delay projects by years and require substantial revisions to early efforts to respond to later, potentially differing, regulatory processes.

At a minimum, the BLM needs to ensure that the PEIS process supports the work that CDFG is and will be doing in developing the DRECP. More concretely, the PEIS should provide information that can and should be used by CDFG in their CEQA document(s). For example, if possible, the PEIS should address state listed species such as the Mojave Ground Squirrel, and do so in a way consistent with the views of CDFG and the requirements for an NCCP. In order to facilitate CDFG’s DRECP process, it would also be helpful for the PEIS to address CEQA related issues and CEQA standards of significance, to increase CDFG’s ability to utilize the PEIS in its own CEQA process on the DRECP. Agreeing on such issues and subjects is covered in the WGA Protocol referenced above.

(3) WECC west-wide planning

BLM should be coordinating its solar efforts with transmission planning in the Western Interconnection. As BLM has recognized, transmission access is the key to unlocking and developing the West’s best renewable energy resources, including solar. To ensure sufficient transmission access for areas identified in the EIS process to best develop large-scale solar generation, BLM should therefore be coordinating closely with the key transmission planning venues in the western United States.

At the regional level for the Western Interconnection, this includes the Western Electricity Coordinating Council’s (WECC) Transmission Expansion Planning and Policy Committee (TEPPC). More detailed planning occurs at the subregional level and therefore BLM should also coordinate with the Southwest Area Transmission (SWAT) group (focused on Arizona, New Mexico and southern Nevada), the Colorado Coordinated Planning Group (Colorado and Wyoming) and the California Independent System Operator (CAISO) and related entities for

southern California. BLM should also coordinate with state-based transmission expansion processes including the Colorado Senate Bill 100 effort (transmission is being planned to CO solar areas) and the Nevada’s Renewable Energy Transmission Access Advisory Committee as it has done with California’s RETI process. Lastly, BLM should consult and coordinate with the region’s major utilities on both the resource planning and transmission expansion components to ensure markets adequate transmission for solar energy.

(4) WGA Western Renewable Energy Zones Initiative and State Renewable Energy Planning Initiatives

The Western Renewable Energy Zones Initiative (WREZ) is a cooperative initiative between the WGA and the US Department of Energy. It is a project to address transmission barriers to increased renewable energy production in the West. WREZ intends to “generate (1) reliable information for use by decision-makers that supports the cost-effective and environmentally sensitive renewable energy development in specified zones, and (2) conceptual transmission plans for delivering that energy to load centers.”¹⁸ Importantly, the WREZ effort combines solar resource data from government and industry with lands, wildlife and natural resource information from state agencies and the conservation community.

Further, all of the states within the scope of this PEIS (including California with its RETI process), have initiatives to identify locations and provide incentives for renewable energy development and transmission:

- New Mexico’s Renewable Energy Transmission Authority was created to “stimulate clean energy production and create high-paying jobs, capital investment and greater economic development in rural areas.”¹⁹
- Colorado’s Clean Energy Development Authority is directed to “facilitate the financing of renewable energy projects in Colorado.”²⁰
- Nevada’s Renewable Energy Transmission Access Authority is tasked to “propose recommendations for improved access to the grid system by which renewable energy industries can set up and have market access in Nevada and neighboring states.”²¹
- The Arizona Renewable Resource and Transmission Identification Subcommittee (ARRTIS) of the Renewable Transmission Task Force (RTTF) has “been developed to more specifically identify those areas in Arizona with the best potential for renewable generation project development. This resource information will be evaluated against specific constraint criteria including land ownership, sensitive lands, terrain and other factors that could influence the location of utility-scale generation facilities. The ARRTIS will then identify opportunities for future transmission corridors that would link these areas to the existing transmission system or to load pockets in the state.”²²
- Utah’s Renewable Energy Zone Task Force was created “to promote the development of renewable energy resources to meet the goal of 20% of Utah’s electricity by 2025.” Specific objectives of the task force include the identification of renewable energy zones, identification of “policies or market mechanisms that would facilitate

¹⁸ <http://www.westgov.org/wga/initiatives/wrez/>

¹⁹ www.nmreta.org

²⁰ <http://www.colorado.gov/energy/index.php?/utilities/category/clean-energy-development-authority/>

²¹ <http://gov.state.nv.us/RETAAC-II/Members.htm>

²² http://www.westconnect.com/planning_swat_rtff_arttis.php

transmission planning and permitting for renewable energy projects”, and identification of the transmission necessary to bring renewable energy resources to market.²³

The increased focus on renewable energy in this planning area also increases the importance of the WREZ process and the state-based process occurring in the six states involved in the Solar PEIS. Accordingly, the Solar PEIS should coordinate with these parallel efforts, and in particular, incorporate information and data when there is consensus reached between the environmental, renewable energy industry and utility and other stakeholders on zones/areas that are appropriate for large-scale solar energy development on public lands.

Recommendations: BLM should consistently and actively participate in all processes related to the development of renewable technologies on public lands including, but not limited to, the initiatives identified above in order to facilitate a two-way exchange of relevant learning and data. BLM should specifically coordinate with the WGA to incorporate information gathered in the WREZ process and share information produced in the development of the PEIS.

- i. Geographic and temporal phasing of development should be evaluated.

The BLM’s efforts to develop an environmentally responsible approach to managing solar generation on public lands implicates phasing in at least two respects: 1) geographically and 2) temporally. As discussed immediately below, both issues should be explored in the PEIS.

Geographic phasing: The SESAs identified by BLM involve three ecoregions: the Mojave, Sonoran and Central. The majority of acreage proposed in SESAs, Kilowatts, projects in SESAs and pending projects are located in the Mojave. While it may be tempting to designate SEZs only in that ecosystem, we urge the BLM instead to ensure that appropriate SEZs are designated and appropriate projects are approved in all three of these ecoregions. In this way, ecologically unique impacts of development can be identified and studied and the new knowledge incorporated into future decisions about development in each SEZ. In fact this information and knowledge is sorely needed given the lack of experience with utility scale projects. While there is a critical need to increase the generation and use of solar (and other renewable) energy to supplement even more urgently needed efforts at conservation and energy efficiency, it would be irresponsible not to learn as much as we can from these early stages of development.

Temporal phasing: It is essential that, as part of the new program, BLM field offices be directed to consider temporal phasing – i.e., phasing in projects. Consideration of such an approach is appropriate given that there is a lack of understanding of the on-the ground impacts of several solar technologies, both individually and cumulatively, as well as little experience with utility scale solar generally.

Under these circumstances, field offices should be directed to consider phasing in projects during the permitting process.²⁴ Such an approach may not be appropriate or feasible in all cases, but in those where it is – e.g., in cases where there are multiple power blocks or limited existing transmission capacity such that a new or upgraded line would be required for an entire proposed project – it should absolutely be explored. For instance, approving part of, rather

²³ www.energy.utah.gov/Renewable_Energy

²⁴ This recommendation is not intended to suggest that consideration of this option requires that field offices be given new authority. Rather it is intended to ensure that they use their existing authority to consider this option for reasons discussed above.

than all, of a many thousand acre proposal will help ensure that the impacts of the entire project can be better understood, avoided and mitigated.

Phasing is also appropriate given the likelihood that at least some permitted projects will not succeed for financial, technical or other reasons. Making approval of subsequent phases dependent on success of previous phases will help ensure that good sites are not tied up unnecessarily.²⁵

Recommendations: The PEIS should explore and the final solar program should incorporate provisions designed to ensure that there are SEZs in all affected ecoregions in order to build knowledge and experience with solar technologies in those regions through geographic phasing. The PEIS and the new program should also incorporate temporal phasing of projects where appropriate and as practicable to address the lack of understanding of the on-the ground impacts of several solar technologies, both individually and cumulatively, as well the lack of experience with utility scale solar generally. Such an approach will accomplish the dual purposes of allowing BLM to identify unforeseen impacts and develop strategies for mitigating them as well as ensuring that areas that are appropriate for development are not tied up unnecessarily.

- j. BLM should compare and prioritize SESAs for development.

As part of the process of studying these SESAs and ultimately delineating solar development SEZs, the BLM should engage in a careful comparison and ranking of SESAs on the basis of their environmental suitability for development. This is not the same as comparing the alternatives that will be considered in the PEIS. Rather, it involves the development of criteria for use in assessing the relative environmental harms as well as benefits that will likely attend the designation of each area under consideration for solar development and then the application of those criteria to those lands. Such a comparison is critical to enabling the public to understand the tradeoffs inherent in developing one area over another. The ranking component of this exercise is essential to allow the BLM to determine which SESAs to designate as SEZs. Public understanding of both these sets of information is key to maximizing public support for the final SEZ decisions. More specifically, the public needs this kind of information to be able to conclude that the lands chosen for development are, in fact, more appropriate than lands that were not so chosen.

The criteria that should be used for such a task include, for example, relative access to transmission infrastructure, likelihood of public acceptance of designation,²⁶ number of projects proposed for development, and megawatt potential, as well as more traditional environmental indicators such as the presence or absence of federal and state-listed species, acreage of disturbed land – i.e., land that has been subjected to mechanical treatment –, and proximity to protected lands.

²⁵ To further the objective of preventing good sites from being “locked up,” we also support strong due diligence requirements, including a five year review with benchmarks for progress, and prompt termination of project/ROW approval in the event of inadequate progress or failure as stated in our original scoping comments.

²⁶ In California, the task of applying this suggested criterion is made easier by the document entitled “Renewable Siting Criteria for California Desert Conservation Area” that was previously submitted to the Bureau by a large group of environmentalists and desert activists in that state.

Recommendations: The BLM should compare the relative impacts of the SESAs to each other in order to assess which areas are likely to have the least environmental impacts and resource conflicts, and then rank the SESAs to prioritize development.

k. BLM should complete a comprehensive cumulative impacts analysis.

As discussed in detail in our scoping comments on the PEIS (Exhibit 1), NEPA requires agencies to consider the cumulative impacts of proposed actions. In the context of the Solar PEIS, we want to reiterate the importance of considering other projects underway on public lands and, specifically, the development of wind and geothermal projects on public lands, which are reasonably foreseeable future actions that will have significant impacts on natural and cultural resources. There are currently 321 wind power project applications filed on public lands nationwide and 253 geothermal projects. Each of these projects will have individual impacts and taken together, in conjunction with the more than 200 solar project applications currently on file, will have significant *cumulative* impacts on our public lands. With the establishment of state RPS and, ultimately, a national RPS these renewable sources are going to become a bigger percentage of our energy portfolio over time. It is imperative that the BLM look *now* at the scope of cumulative impacts from these projects if renewables development on public lands is truly going to be environmentally responsible.

Supplemental Recommendations: The BLM should include the impacts of all forms of renewable energy development, not just solar, in its cumulative impacts analysis in the PEIS.

l. Develop a comprehensive, system-wide mitigation program.

Development of utility-scale solar power generation facilities will transform the lands upon which they are located and preclude most other uses. As noted by the BLM, other uses of these sites “are unlikely due to the intensive use of the site for PV [photovoltaic] or CSP [concentrating solar power] facility equipment.” IM No. 2007-097.

BLM is obligated to manage the public lands to protect their varied natural and cultural resources. As discussed in detail in our original scoping comments on the Solar PEIS (Exhibit 1), the Federal Land Policy and Management Act requires the BLM to “minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved.” 43 U.S.C. § 1732(d)(2)(a). Further, NEPA requires consideration of measures to mitigate potential environmental consequences. 40 C.F.R. § 1502.16. In order for BLM to rely on mitigation to reduce potentially significant impacts, NEPA requires that BLM make a firm commitment to the mitigation and discuss the mitigation measures “in sufficient detail to ensure that environmental consequences have been fairly evaluated...”²⁷ NEPA defines “mitigation” of impacts (at 40 C.F.R. § 1508.20) to include:

- Avoiding the impact altogether by not taking a certain action or parts of an action;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or

²⁷ *Communities, Inc. v. Busey*, 956 F.2d 619, 626 (6th Cir. 1992).

- Compensating for the impact by replacing or providing substitute resources or environments.

Simply identifying mitigation measures, without analyzing the effectiveness of the measures violates NEPA. BLM must “analyze the mitigation measures in detail [and] explain how effective the measures would be . . . A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA.”²⁸ NEPA also directs that the “possibility of mitigation” should not be relied upon as a means to avoid further environmental analysis. *Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations*.²⁹

- (1) Mitigation measures must be mandatory.

BLM should specify in the land use plan amendments based on the PEIS as well as in the ROD that mitigation measures (such as “best management practices” in technology) are required to be included in each and every permit as long as certain circumstances are present. Unless the mitigation measures are guaranteed to be applied, BLM cannot rely upon them to avoid or lessen potential impacts from siting projects.

Recommendations: The PEIS and the ROD should include language requiring that the mitigation measures and other applicable measures be included in land use plan amendments and in all grants of rights-of-way or other permits for construction solar energy projects.

- (2) Mitigation measures must be based on credible science.

Both NEPA and the Data Quality Act require the agencies to use and present information of sufficient scientific quality. Thus, NEPA’s hard look at environmental consequences must be based on “accurate scientific information” of “high quality.” 40 C.F.R. § 1500.1(b).

Essentially, NEPA “ensures that the agency, in reaching its decision, will have available and will carefully consider detailed information concerning significant environmental impacts.”³⁰ The Data Quality Act and BLM’s interpreting guidance expands on this obligation, requiring that influential scientific information use “best available science and supporting studies conducted in accordance with sound and objective scientific practices.”³¹

Recommendations: The PEIS must assess and present the scientific basis for the proposed mitigation measures in order to show they will be effective.

- (3) Monitoring and adaptive management approaches must include specific standards and commitments.

²⁸ *Northwest Indian Cemetery Protective Association v. Peterson*, 764 F.2d 581, 588 (9th Cir. 1985), *rev’d on other grounds*, 485 U.S. 439 (1988).

²⁹ Available on-line at: <http://www.nepa.gov/nepa/regs/40/40p3.htm> ; the U.S. Court of Appeals for the Tenth Circuit has found that the “Forty Questions” are “persuasive authority offering interpretive guidance” on NEPA from CEQ. *Davis v. Mineta*, 302 F.3d 1104,1125 (10th Cir. 2002).

³⁰ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

³¹ Treasury and General Government Appropriations Act for Fiscal Year 2001, Pub.L. No. 106-554, § 515. See also Bureau of Land Management, Information Quality Guidelines, available at http://www.blm.gov/nhp/efoia/data_quality/guidelines.pdf .

In order to fulfill the BLM's obligations to protect the natural and cultural resources of our public lands and to comply with NEPA's requirements regarding mitigation measures, the PEIS must include, and the ROD must require, that BLM's permits for projects contain concrete commitments to specific monitoring actions, including definitive standards, timing and details for actions that will be taken based on the results of monitoring and a discussion of BLM's basis for relying on their success, including likely funding. This approach will also support the phasing of projects discussed above.

All such mitigation programs should also identify the existing condition of resources, standards for when management change will be triggered and the use of a "fallback prescription" where adaptive management is not suitable or funding for necessary monitoring is not sufficient. All data should be identified in terms of their source, location, and time. Furthermore, data, and their application, should be available for independent review and evaluation; data should be formalized and standardized to allow for sophisticated and accurate aggregate understanding of the landscape and the impacts of management practices within the landscape to enhance agency credibility and accountability. The BLM should disclose not only the results of a given analysis, but the underlying methodology and data management practices used. The focus of data collection should be on the impacts – whether adverse or beneficial – caused by particular activities and not the activity itself.

The management framework for monitoring and adapting management of approved projects should be based on best available science and should include the following elements:

- ***Ensure adequate baseline prior to starting adaptive management and identify indicators.***

Projects can only be approved along with a requirement for a detailed analysis of current inventory status to accompany the environmental analysis, which clearly specifies resources that may be affected by various activities and their baseline conditions, then identify indicators for resources or groups of resources that will demonstrate the effects of management decisions.

- ***Set out a detailed monitoring plan and ensure agency commitment to fund monitoring.***

A detailed monitoring plan is crucial for assessing potential impacts on resource conditions, ensuring that indicators are measured at regular and consistent intervals. Commitment of adequate resources should be firm and sufficient to support the full implementation of adaptive management. Funding for adaptive management should not be dependent on shifting the financial and personnel burden to various user interests or other cooperating community groups.

- ***Include defined limits of acceptable change in resource conditions and specify actions to be taken if change reaches or exceeds those limits.***

For all indicators, the PEIS and ROD must require that, for all projects, BLM prepare an identification of range of acceptable change from the baseline condition, using best available science, and specify those actions that will be taken in the event that unacceptable levels of change are identified.

- ***Have a "fallback" plan should monitoring or other aspects of the adaptive management process not be fully carried out.***

Adaptive management must include requirements for when and how the proposed outcome will be reevaluated if it is not being met. BLM's ability to reevaluate or amend desired outcomes should not be the sole fallback if either the adaptive management process is not working or outcomes are not being met. The PEIS and ROD should require BLM to build into

project analysis and approvals provisions to address situations based on new information, circumstances, regulatory requirements, or discontinued agency funding for monitoring that would trigger a plan amendment or revision under a new EIS.

Recommendations: The PEIS should set out specific commitments, including timelines, for preparation and implementation of inventorying and monitoring programs, and standards for when monitoring as part of management is not appropriate, that are to be incorporated in permits for projects; the ROD should make incorporation an explicit requirement for all permits.

(4) Mitigation of impacts to individual resources and values.

In addition to NEPA's general requirement to mitigate environmental impacts, other laws and policies require specific consideration of mitigation for impacts to certain resources and values. For example, federal agencies are required to conserve species listed under the Endangered Species Act. *See, e.g.*, 16 U.S.C. § 1536(a)(1). Recovery plans for endangered species can help provide guidance on appropriate mitigation measures. Similarly, impacts to cultural resources require mitigation under the National Historic Preservation Act. *See, e.g.*, 36 C.F.R. §§ 800.1(a), 800.2(a)(4). Additional regulations may require specific mitigation measures to other individual resources and values.

Recommendations: BLM must comply with all regulations requiring mitigation of impacts from solar energy development on individual resources and values.

(5) Mitigation for the loss of availability for multiple-use on public lands.

Unlike many activities on public lands which allow for multiple uses, solar development is a single use of the land which preempts any other activities or uses. For this reason, it is critical that BLM mitigate for the effective loss of any lands approved for solar development from the public domain. Onsite mitigation for solar development is extremely important, and all efforts should be made to mitigate impacts onsite. However, since the opportunity for effective mitigation of onsite impacts to many resources and values is limited for solar development, off-site mitigation will also need to be considered for all projects. This mitigation should also compensate for the loss of other resources, values and uses of those lands, such as recreation, scenic vistas, wildlife migration corridors and habitat for other plants and animals.

IM 2008-204, which sets out BLM's current policy on off-site mitigation, defines off-site mitigation as "compensating for resource impacts by replacing or providing substitute resources or habitat at a different location than the project area." The guidance also acknowledges the priority of onsite mitigation, such that "[o]ffsite mitigation is supplemental to onsite mitigation and is used to enhance the BLM's ability to fulfill its mission of providing multiple uses on the public lands, while ensuring its resource management objectives are met." Further, like other mitigation measures, the agency must be able to show the mitigation will be effective. The guidance reiterates: "[w]hen proposed offsite mitigation is geographically distant from the project area, and particularly when it occurs on non-Federal land, the connection to resources for which the BLM is responsible should be clear."

Accordingly, although off-site mitigation is likely to play a key role in addressing the loss of use resulting from solar energy development, these measures must still be developed so that they have a clear connection to the resources that the BLM is managing.

Key considerations for off-site mitigation should include:

- **Identification of uses, resources and values associated with the project site.**

Establishing the connection between off-site mitigation and the resources of the public lands will require detailed understanding and knowledge of the values and uses present on the project site before development occurs, such as wildlife habitat, various recreational uses (ranging from hunting to birdwatching to all terrain vehicle use) and scenic values. BLM should require that necessary inventory of the project site be completed prior to developing off-site mitigation measures.

- **A “no net loss” or a “net gain” requirement for resources and values.**

BLM should ensure that any loss of resources or values on a solar development site is compensated with the addition and protection of equivalent or better resources and values off-site. For instance, backcountry hunting experiences would be re-established by identifying lands with suitable big game habitat and ensuring those lands are managed to maintain wildlife populations and protect a non-motorized experience. These lands might also be able to replace scenic values and hiking or horseback riding opportunities, depending on management. BLM should also make a determination about the value of the habitat to be impacted and adopt direction for mitigation requirements for the specific habitat types impacted. For example, for high quality habitat which is relatively scarce or becoming scarce on a national basis or in the ecoregion section, BLM policy should ensure no net loss of in-kind habitat value.

Additions of lands and resources should equal or exceed the value of any resources or values which are lost. Additions could be gained through some combination of three primary mechanisms; however, requirements should ensure that the majority of mitigation efforts be focused on the first two mechanisms, with the highest priority given to the first mechanism:

- 1) Purchase of additional private lands to be put in the federal estate under conservation management to guarantee the maintenance of the equivalent or better values and resources lost on the project site, or
- 2) Additional conservation designations on existing federal lands which would protect the equivalent or better resources and values lost on the project site, or
- 3) Restoration and research efforts to improve the quality and quantity of equivalent resources and values off-site.

Mitigation for impacts to water resources could be addressed by purchase and retirement of water rights to offset groundwater pumping by the project.

- **Requirements for project developers to fund mitigation efforts based on the amount and value of the land impacted from development.**

Project developers should be required to make deposits to a mitigation fund based on the amount of land used for the project and the fair market value of that land. The funds should be required to be spent on the three mechanisms outlined above.

- **Requirements for project developers to mitigate the ongoing pressure for energy development on the public lands.**

Since project developers will profit from the development of solar energy on the public lands, they can also be obligated to lessen the future demands to be made upon these lands. Project developers can present proposals to achieve these goals by providing financial support for specific distributed generation efforts, energy efficiency measures, demand reduction programs, or equipment upgrades in the region. We recommend that developers be required to identify megawatts of demand mitigation that equate to a percentage of the megawatts they expect to generate.

- **A centralized body should be established to oversee the funds and maximize the effectiveness of their use.**

BLM should establish a centralized body comprised of BLM staff, and other federal and state agencies with expertise and interest to oversee the distribution of funds and maximize the effectiveness of their use. This body should be required to take into consideration recommendations from the public in the distribution of funds.

- **Off-site mitigation should be required to take place in the same ecoregion as the project site.**

The World Wildlife Fund defines an ecoregion as a "large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions".³² Ecoregional health is critical for maintaining the health of individual ecosystems within the ecoregion. In addition to ensuring that off-site mitigation meets a "no net loss" requirement for resources and values lost on the project site, BLM should require that mitigation take place in the same ecoregion as the project site, to ensure the continued health of the overall ecoregion. In situations where availability of private lands for purchase and addition to the federal estate under conservation protection is limited (in Nevada, for example, where the vast majority of lands are already in the federal domain), additional conservation designations on existing BLM land, as well restoration, research, and other mitigation measures, will be necessary.

Recommendations: Because of the extremely limited ability to mitigate impacts from solar development on-site, BLM should require off-site mitigation for impacts which cannot be mitigated on-site. Off-site mitigation should follow the guidelines described above including: 1) a "no net loss" or a "net gain" requirement for resources and values; 2) requirements for project developers to fund mitigation efforts based on the amount and value of the land impacted from development; 3) a centralized body should be established to oversee the funds and maximize the effectiveness of their use; and 4) off-site mitigation should be required to take place in the same ecoregion as the project site.

m. The PEIS needs to address "hybrid" solar plants.

The groups submitting these comments are concerned about the possibility that some companies may try to portray what are truly fossil fuel (i.e., natural gas) plants as renewable energy projects. These purported renewable energy projects could severely undermine public support for the solar program once it is established. This problem could be prevented by adopting a definition of a "renewable solar project" for use in the new program. According to several technology experts whom we consulted, under current financial regulations, including the Investment Tax Credit, projects that use more than 25% natural gas are not considered "renewable."

³² http://www.panda.org/about_our_earth/ecoregions/about/what_is_an_ecoregion/

Recommendation: The PEIS should consider and the final solar program should adopt a definition of a renewable solar project that will ensure that lands that are appropriate for “real” solar projects are not usurped by projects that are actually natural gas plants.

- n. Development of a long-term vision for the necessary contribution of public lands to the nation’s renewable energy needs will assist in determining the need for solar energy development on the public lands.

There is an urgent need for a comprehensive energy vision and renewable energy goal for the West (as well as the nation) that will help focus the agency on the contributions from solar energy (and other renewable resources) to meeting multiple forward-thinking scenarios. Such a goal will also help in the creation of a common set of expectations about the scope of development envisioned for the public lands that, in turn, will help BLM manage stakeholder expectations and concerns.. We urge the BLM to be an advocate for and a participant in the development of such a vision and goal within the Administration and, in particular, with DOE, the Council on Environmental Quality and the DOD as well as with the western states, utilities, transmission planners and the public.

The main driver for these scenarios must be an energy resource mix for the West that moves the region forward in addressing climate change. Other drivers include: 1) long term energy security at both consumer and national levels; 2) diversity for generation portfolios to manage risks (particularly fossil fuel price risks); 3) net reductions in environmental costs, criteria pollutants, and health costs; and 4) coal plant alternatives and retirements. The scenarios developed should be responsive to all drivers, and should focus on science-based targets for CO2 reductions in the electricity sector, in addition to emissions reductions possible through electrification of a portion of our transportation fleet. Such scenarios could include meeting various state Renewable Portfolio Standards, a uniform national standard, or achieving 80% CO2 reductions from 2005 levels by 2050– and 40% reductions by 2030 as a preliminary target and planning tool.

Recommendations: We recognize that this larger vision will require a comprehensive effort outside the PEIS. The BLM, with the assistance of the agencies identified above, should engage in a scenario development exercise to determine a target for megawatt production of renewable energy on public lands under its stewardship. We have detailed the manner in which the BLM could develop scenarios to define the contribution needed from the public lands in Exhibit 5, attached.

II. SESAs identified by the BLM and alternatives.

- a. Selection of study areas needs clarification.

In its “Qs and As” document, the BLM purported to identify the criteria that were used to identify and select SESAs.³³ In fact, different states used different criteria as was made clear in connection with a teleconference held on August 24, 2009 by BLM officials with environmental advocates. We recognize that there may be important regional differences, such that one single set of criteria might not be sufficient for all states identifying SESAs.

³³ *Qs & As: BLM Solar Programmatic Environmental Impact Statement (PEIS)*, available on-line at: http://www.doi.gov/news/09_News_Releases/SolarEnergyQA.pdf

Nonetheless, we do believe that all states should use a consistent set of core criteria and that BLM is obligated to explain why each of those criteria was included. Further, we believe that BLM needs to make public all the criteria used by each state along with explanations for inclusion of non-core criteria. All of these criteria must be publicly applied to the SESAs that have been proposed, using maps and links to GIS data. The same criteria should also be applied to the additional SESAs considered as alternatives in each state. All of this information must be included in the Draft PEIS.

Recommendations: The Draft PEIS must include complete information about how the SESAs were selected and must apply the same selection criteria to all alternative SESAs that are considered.

b. SESAs should be included in all “action alternatives” in the Draft PEIS.

Inclusion of SESAs in all “action alternatives” in the Draft PEIS is critical to ensure that the benefits of identifying SESAs and designating them as SEZs in the Final PEIS and ROD are realized. Further, to achieve the goal of a robust set of SEZs with adequate acreage for development of the solar energy deemed necessary, it is critical that BLM consider additional SESAs identified by industry, conservation groups and others as part of the PEIS process. This is particularly important in Arizona, where the acreage of the SESAs identified in the scoping notice is extremely limited. We understand that five of the eight SESAs originally identified by Arizona BLM were not included in the scoping notice because they had existing applications in them, despite the fact that overlap with existing applications was not a criterion for exclusion of an area as a potential SESA. We also understand that in some states, including Nevada, lands with existing oil and gas leases were excluded from SESAs. Because oil and gas leases are not permanent, these lands should not be excluded. These lands and other areas nominated for consideration as SESAs could be appropriate for inclusion, pending application of the screens outlined above, and should be considered.

Recommendations: BLM should include consideration of SESAs in all alternatives other than the No Action Alternative in the Draft PEIS, and the Final PEIS and ROD should designate appropriate SESAs as SEZs, open for solar development. BLM should analyze and consider additional SESAs identified by the public and BLM state offices to ensure that adequate acreage necessary to meet the solar development needs identified through the analysis outlined in section I n is included.

c. Comments on SESAs and alternatives for each State.

We are including as a separate document detailed comments on the BLM’s proposals in each of the six states encompassed by the Solar PEIS, including maps and GIS data where available. Again, please note that not all groups signed on to these broader comments are signing on to the additional state-specific and cultural resources comments attached as exhibits, so we have specifically identified those groups that are specifically signing on at the beginning of each state-specific comment exhibit and the cultural resources exhibit (exhibits 6-12).

The state-specific and cultural resources exhibits are as follows:

- Arizona – Exhibit 6
- California – Exhibit 7
- Colorado – Exhibit 8

- Nevada – Exhibit 9
- New Mexico – Exhibit 10
- Utah – Exhibit 11
- Cultural Resources – Exhibit 12

Since GIS analysis of many of the SESAs and other areas identified on the maps in relation to citizen-proposed wilderness, wildlife habitat and other resources of concern is continuing, we anticipate that additional information may be developed and will submit supplemental comments.

Recommendations: BLM should fully consider the information and recommendations included in the attached exhibits.

- III. Analysis of lands outside SESAs identified on the maps for potential solar development should not proceed unless they meet the criteria for and are incorporated in SESAs.

As described above in Section II c., one of the most important outcomes from the development of the PEIS will be designation of appropriate lands as SEZs, closure of other lands to new applications, and either denial of existing applications outside the SEZs or serious efforts to incentivize developers to move existing applications to within the SEZs. These steps are crucial not only in guiding development to the most appropriate places, but also in avoiding the unacceptable impacts which solar development would have on lands outside the SEZs.

The recent letter submitted by the BLM Las Cruces District Office recommending the elimination of the Mason Draw and Red Sand SESAs because of recently-discovered conflicts with wildlife habitat underscores the need for the BLM to focus its analysis on SESAs and the importance of closing lands outside of SEZs to development. Although the SESAs were identified through the BLM New Mexico officials' screening for areas potentially appropriate for development based on guidance from BLM Washington Office, subsequent analysis by the BLM identified unacceptable conflicts, highlighting the type of conflicts that can arise in those areas that met the threshold SESA criteria. Additional lands that do not meet these threshold standards for prioritization as SEZs are even more likely to have such conflicts. Although statewide maps and GIS data for lands identified on the SESA maps in light blue and in the legend as "BLM Lands Being Analyzed for Solar Development in the PEIS" (referred to as non-SESA lands) have not been made available, rough analysis of the lands shown in the SESA maps already indicate many areas of high conflict, further supporting the closure of lands outside SESAs to solar development.

For example, in New Mexico, non-SESA lands identified on the maps overlap with Otero Mesa, one of the most ecologically intact and treasured landscapes in the Southwest. The values of Otero Mesa and the importance of protecting it have been advocated by the State of New Mexico, religious leaders, local governments, sportsmen and conservationists; further, the U.S. Court of Appeals for the 10th Circuit recently acknowledged its values as a Chihuahuan Desert grassland, as home to rare species, as essentially roadless, and as housing the substantial freshwater Salt Basin Aquifer, pointing to the "importance of this valuable resource."³⁴ In addition, the area contains lands with wilderness characteristics, as identified by the New Mexico Wilderness Alliance, which the BLM is in the process of re-inventorying as part of the

³⁴ *State of New Mexico v. BLM*, Case Nos. 06-2352, 06-2353, 06-2354 (10th Cir. - April 28, 2009).

TriCounty RMP revision (highlighting the need to ensure that such inventories and/or re-inventories are conducted prior to designating SESAs).

Solar development would clearly cause lasting and irreparable damage to the rich values and resources of Otero Mesa, and is absolutely inappropriate for the area.

An example non-SESA lands with major conflicts with solar development in Utah is the Parowan Gap area. This area contains petroglyphs and an incredible prehistoric astronomical site. Given the cultural importance of this site, no development of any kind should occur here. From the extent of the light blue areas on the visible portion of the Utah SESA Map, it is likely that other such conflicts exist in the light blue areas in southwestern Utah and throughout the state.

Examples of other non-SESA lands equally inappropriate for solar development but which have been identified on the SESA maps for potential analysis can be expected in the other 4 states included in the PEIS. These examples clearly demonstrate the need to identify appropriate SESAs, designate them as SEZs through the PEIS process, and restrict solar development to those SEZs which are included in the Final PEIS and ROD.

Recommendations: To avoid unacceptable and irreparable damage to areas like Otero Mesa and other lands which are currently identified in the SESA maps as non-SESA lands under consideration for solar development, BLM should identify appropriate SESAs, designate them as SEZs through the PEIS process, and restrict solar development to those SEZs which are included in the Final PEIS and ROD unless and until a need for additional development areas is shown.

As more information becomes available on the SESAs or additional lands, we will continue to provide data and recommendations to the BLM. We look forward to continuing working with BLM in the development of the Solar PEIS.

cc: Linda Resseguie, BLM Washington Office, linda_resseguie@blm.gov

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Johanna H. Wald, Senior Attorney
Natural Resources Defense Council
111 Sutter Street
San Francisco, CA 94104

Peter Nelson, Federal Lands Program, Director
Defenders of Wildlife
1130 17th Street N.W.
Washington D.C. 20036-4604

Jim Catlin, Project Coordinator

Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

Josh Pollock, Conservation Director
Center for Native Ecosystems
1536 Wynkoop St, Ste 303
Denver, CO 80202

Tom Darin, Staff Attorney, Energy Transmission
Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Nathan Newcomer, Associate Director
New Mexico Wilderness Alliance
P.O. Box 25464
Albuquerque, NM 87125

Kevin Gaither-Banchoff, Executive Director
Arizona Wilderness Coalition
P.O. Box 40340
Tucson, AZ 85717

Michael J. Painter, Coordinator
Californians for Western Wilderness
P.O. Box 210474
San Francisco, CA 94121-0474

Justin Allegro, Legislative Representative for Wildlife Conservation
National Wildlife Federation
Global Warming Safeguards
901 E Street NW, Suite 400
Washington, DC 20004

Greg Suba, Conservation Program Director
California Native Plant Society
2707 K Street
Sacramento, CA 95816

Bruce Pendery, Staff Attorney & Program Director
Wyoming Outdoor Council
444 East 800 North
Logan, UT 84321

Carrie Curtiss, Program Director
Colorado Environmental Coalition
1536 Wynkoop St., Ste. 5C
Denver, CO 80202

Veronica Egan, Executive Director
Great Old Broads for Wilderness
649 E. College Drive
PO Box 2924
Durango, CO 81302

Dave Willis, Coordinator
Soda Mountain Wilderness Council
P.O. Box 512
Ashland, OR 97520

Monica Argandoña, Desert Program Director
California Wilderness Coalition
167 North Third Avenue, Suite M
Upland, CA 91786

Nick Ervin, Board of Directors President
Desert Protective Council
P.O. Box 3635
San Diego, CA 92163

Carl Zichella, Western Renewable Projects Director
Sierra Club
801 K Street, Suite 2700
Sacramento, CA 95814

Tiffany Bartz, Field Attorney
Southern Utah Wilderness Alliance
425 East 100 South
Salt Lake City, UT 84111

Pat Flanagan, Resource Advocate
Mojave Desert Land Trust
6393 Sunset Road
Joshua Tree, CA 92252

Exhibits

1. Solar PEIS scoping comments
2. CWP recommendations letter, spreadsheet, and GIS data
3. Arizona Restoration Energy Design comments
4. Protocol developed by WGA with the federal government, including the Department of the Interior and the Council on Environmental Quality that provides for a consolidated permitting process
5. Scenario Development for Identifying Megawatt Target
6. Arizona SESAs-specific comments
7. California SESAs-specific comments
8. Colorado SESAs-specific comments
9. Nevada SESAs-specific comments
10. New Mexico SESAs-specific comments

11. Nevada SESAs-specific comments
12. Cultural resources SESAs-specific comments



THE WILDERNESS SOCIETY

July 15, 2008

Delivered via electronic mail and overnight mail (with attachments)

Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Ave. - EVS/900
Argonne, IL 60439

Re: Scoping Comments on the Solar Energy Programmatic Environmental Impact Statement

To Whom It May Concern:

Please accept and fully consider these scoping comments on behalf of The Wilderness Society and the other organizations identified below. The Wilderness Society's more than 300,000 members and supporters nationwide care deeply about the management of our public lands. Founded in 1935, our mission is to protect wilderness and inspire Americans to care for our wild places. We appreciate the opportunity to submit these comments to the Bureau of Land Management and Department of Energy on the Programmatic Environmental Impact Statement (PEIS) for agency-wide solar energy programs and policy. We are submitting these comments today via the website and also forwarding a copy with attachments to you separately.

At a time when the threat of global warming, air and water pollution, and dramatically escalating fuel prices stand to force Americans to entirely rethink how we obtain and consume energy, the Bureau of Land Management (BLM) and Department of Energy (DOE) now have the opportunity to play a critical role in cutting-edge, non-polluting and renewable energy development. The Solar Energy Programmatic Environmental Impact Statement (PEIS) provides an important part of that opportunity.

We support the agencies' commitment to develop the Solar Energy PEIS and urge you to take this opportunity to commit to responsible development of solar energy resources. The PEIS process should be carried out thoughtfully, rigorously, and with a sense of urgency needed to balance the current drive to develop oil and natural gas on our public lands. Oil and natural gas companies have been given the opportunity to lease and run roughshod over some of our most precious public lands throughout the West with minimal consideration for the ecological, recreational and cultural resources that exist there. This PEIS is a chance to plan for development that does not ignore the other important uses and values of these lands.

We support development of renewable energy resources, such as solar, because doing so promotes non-polluting, sustainable energy production that will benefit Americans and our public lands in the long term and encourages a move from a fossil fuels-based economy to a renewables-based economy. America's public lands include significant solar energy resources and have a role to play in supporting utility-scale solar power plants. However, we want to emphasize that more energy development is not a standalone solution to our nation's energy needs. Reducing our energy demands through energy efficiency, conservation, and demand-side management practices is a vital first step.

Moreover, as advocates for America's wild places, we believe that, in order to minimize the impact to our public lands, they should not be the first option for industrial levels of energy development, especially when private or state land is available. Further, there are places on our public lands that are wholly inappropriate for utility-scale solar energy development. Our most pristine lands, especially those with wilderness characteristics and those that possess vast cultural and diverse biological resources, should be off-limits to solar energy development.

The BLM and DOE must take a rigorous "look before you leap" approach to how they will facilitate utility-scale solar development, seriously considering the environmental, cultural, economic and ecological impacts of large-scale solar energy development before rights-of-way are approved or other funding provided. Solar energy production should be "green" in every way – harnessing a clean and renewable energy source on public land while very minimally impacting the land and the natural resources we hold dear.

The BLM already faces a backlog of more than 130 applications representing more than 70 gigawatts of solar potential. Over the last seven years, the BLM has processed no solar permits, but managed to process more than 35,000 oil applications for permit to drill for oil and natural gas projects. We understand the BLM's decision to continue processing permits and encourage the agency to do so in a way that prioritizes projects that are likely to come to fruition, by having secured project financing and power purchase agreements, as well as in locations that are not environmentally sensitive or highly controversial. The Wilderness Society's President, William H. Meadows, wrote a July 8, 2008 letter to the House Appropriations Committee encouraging funding for this overall approach (copy attached for your reference). Because the BLM will be amending land use plans and developing a PEIS that may be relied upon for permitting projects, the bulk of our comments address the manner in which the BLM should analyze impacts and develop its solar energy development program. We also discuss considerations that the DOE should incorporate into its project funding at the end of the comments.

This PEIS is the BLM and DOE's opportunity to do energy development right on our public lands – a chance to show that the ecological integrity of the public estate is at least as important as renewable energy production. We hope that these comments will be of assistance.

<u>Issues Addressed</u>	<u>Page</u>
I. Considerations for Siting of Energy Corridors	3
A. Areas to Avoid	3
B. Maximize Use of Impaired Lands and/or Existing Infrastructure	4
C. Additional Siting Considerations	5
II. Right-of-Way Terms and Conditions	5
III. BLM Proposed Planning Criteria	8
IV. Issues for Further Analysis	19
A. Protection of Lands with Wilderness Characteristics	19
B. Protection of Wildlife Habitat	19
C. Special Management Areas	21
D. Socioeconomic Impacts	22
E. Scope of NEPA analysis	32
F. Transmission	38
V. Department of Energy Solar Energy Program	39
A. Current DOE Solar Energy Program	
B. Issues to be Addressed in the PEIS	
C. Range of Alternatives	
List of Attachments	42
References	43

I. Considerations for Siting of Energy Corridors

Development of utility-scale solar power generation facilities will transform the lands upon which they are located and preclude most other uses. As noted by the BLM, other uses of these sites “are unlikely due to the intensive use of the site for PV [photovoltaic] or CSP [concentrating solar power] facility equipment.” Instruction Memorandum (IM) No. 2007-097. An inappropriately sited and constructed solar energy facility has the potential to cause significant damage to the environment and to human health. **Accordingly, it is crucial that the BLM commit to avoiding sensitive areas, obtain necessary information on lands with wilderness characteristics and consider maximizing use of existing infrastructure (where appropriate) in siting solar facilities.**

A. Areas to Avoid:

We appreciate the BLM’s acknowledgment that certain places are not appropriate for large solar energy facilities and agree that categories of lands to be avoided should be included in the PEIS. Based on their important natural values and potential for damage from the construction, use and maintenance of solar facilities, we recommend that the PEIS include a commitment to not permit siting of utility-scale solar energy facilities in the following areas on BLM lands:

1. Wilderness Areas;
2. Wilderness Study Areas (WSAs);
3. National Monuments;
4. National Conservation Areas;
5. Other lands within BLM's National Landscape Conservation System (NLCS), such as Outstanding Natural Areas;
6. National Historic and National Scenic Trails;
7. National Wild, Scenic, and Recreational Rivers, study rivers and segments, and eligible rivers and segments;
8. Areas of Critical Environmental Concern (ACECs);
9. Threatened, endangered and sensitive species habitat, as well as critical cores and linkages for wildlife habitat;
10. Citizen-proposed wilderness areas; and
11. Other lands with wilderness characteristics.

This category should also include lands that are included in pending legislation for designation in one of the above categories or would otherwise include provisions that prohibit solar energy development. Further, while we believe it is of primary importance that no solar energy facility or transmission corridor be placed directly in or through any of the types of areas listed above, it is equally important that solar energy facilities not infringe on the recreational enjoyment of certain types of areas or otherwise interfere with their natural function or other special values.

Recommendation: Solar energy facilities should not be sited in the categories of lands listed above and should not be sited immediately adjacent to these areas, if doing so would degrade the viewshed for scenic areas or negatively impact the ecological values for which these areas were designated.

B. Maximize Use of Areas That Are Already Degraded, Existing Infrastructure and Load to be Served as Appropriate

In addition to avoiding ecologically-sensitive lands, we recommend that the PEIS require that lands that are already impaired be considered first for proposed utility-scale solar development. Abandoned mines, developed oil and gas fields, and other brownfields, which are not being restored to ecological function, provide opportunities for solar energy development without loss of other uses and values. Such sites are often close to existing infrastructure, which is another important consideration, both in conjunction with degraded sites and as a separate factor. Proximity to existing infrastructure will minimize new road construction or major roadway improvements (such as paving and widening), avoiding another set of impacts on the public lands. Further, proximity to the load that will be served by the project will limit the amount of new transmission needed and reduce related income.

DOE has already emphasized the benefits of using brownfields for solar energy development in its "Brightfields" initiative, an attempt to revitalize heavily-impacted industrial areas by turning them into large-scale renewable energy generating areas. DOE has found that such use of brownfields contributes to urban renewal, allowing communities to take advantage of locally-

produced clean power, attracting “green” businesses to the area and allowing communities to offset their use of polluting energy sources.

Recommendation: The PEIS should specifically prioritize use of degraded lands that are not identified for restoration and sites with proximity to existing infrastructure and load to be served to avoid unnecessary impacts on public lands.

C. Additional Siting Considerations

The PEIS should also identify additional criteria to be considered in determining whether lands are appropriate for utility-scale energy development. The BLM should consider the availability of impaired lands on private or state land as alternatives to development on public land. In addition, the agency should consider:

- the availability of water at the site or, if water is not available on-site, other sources;
- likelihood that the project is ready to proceed - status of financing, power purchase agreements and regulatory permits;
- proximity to housing for workers – to determine additional infrastructure and use of roads that may be needed.

Recommendation: The PEIS should require evaluation of the above factors in determining whether a site is appropriate for utility-scale solar development.

II. Right-of-Way Terms and Conditions

The BLM will permit solar energy development subject to right-of-way (ROW) authorizations under Title V of the Federal Land Policy and Management Act (FLPMA) and implementing regulations, 43 C.F.R. Part 2800, which also requires a plan of development (POD). These documents should contain key terms for responsible development, including:

A. Reasonable Term and Diligent Development

While the BLM’s ROW regulations do not impose specific limits on the terms for ROWs, as acknowledged in IM 2007-097, the term for the ROW should not exceed the design life of the project, typically 30 years. Further, ROWs should also require that companies exercise reasonable diligence in developing and producing solar energy, such that the ROW can be terminated if progress is not being made and other uses of the land are not precluded without justification.

B. Changes in Applicable Laws and Regulations are Incorporated

If applicable laws and regulations change during the term of the ROW, then they should be automatically incorporated. For example, species such as the sage grouse are currently being considered for listing under the Endangered Species Act. Should such a listing occur, the terms of the ROW must be clear that compliance with activities triggered by the listing are required and are not subject to challenge.

C. Monitoring, Phased Development and Adaptive Management

Plans of development should require that a minimum footprint first be developed, so that monitoring can determine not only if the project is likely to be technically successful but also if projected damage to the environment is consistent or requires additional mitigation measures or other changes to the project before proceeding. Only once technical and environmental considerations are addressed, should the project be permitted to proceed to the next level of development.

Detailed monitoring plans should be required for the construction and operation of the project to identify key indicators of environmental effects on-site and on adjacent lands. These plans should also provide for changes to the project to be made to ensure that environmental effects do not exceed expected and acceptable levels.

D. Restoration and Bonding

Bonding should be sufficient to cover the costs of restoration, as well as the cost of compliance with other terms of the ROW grant, including actions that the agency may take if the ROW grant is terminated for noncompliance. *See*, IM No.2007-097.

Restoration of the site includes not only removal of equipment but also reclamation of surface disturbance, including the facility footprint and access roads, and revegetation with native species in a distribution comparable to that of surrounding lands. However, based on the transformation of a site connected with utility-scale solar development, barring significant changes in technology, restoration may not be feasible. Further, sites selected for development on public land should ultimately be those with the combination of the highest solar potential and most acceptable location (in terms of other ecological values). Accordingly, the BLM should consider requiring project proponents to commit to long-term use of the land for solar generation, so that the bond amount could be used to ensure that the site is suitable for transfer to a successor or converted to another technology.

E. Management Practices to Limit Impacts on the Environment

Right-of-way grants should include a standard term requiring that operations are conducted in a manner that minimizes and seeks to avoid adverse impacts to land, air and water, and to cultural, biological, visual, and other resources, as well as to other land uses and users. The BLM should also retain the right to require reasonable measures be taken to fulfill this requirement, such as modification to facility siting or design, timing and location of construction activities, and specification of interim and final reclamation measures. The agency's standard oil and gas lease terms contain a comparable term, which could be used as a starting point. However, because the ROW should also include a right to require phased development and other changes based on monitoring results, the BLM's ability to require "reasonable measures" should be more broadly defined.

Other management practices that will limit the overall impact of utility-scale solar development should also be included in the terms of the ROW, such as:

1. locating roads and maintaining the site to avoid erosion and sedimentation, limit number of roads needed, minimize habit disruption;
2. preconstruction surveys for threatened and endangered species, as well as state listed species;
3. protection plans for adjacent habitat and species;
4. off-site mitigation where habitat disruption is unavoidable;
5. locate facilities in proximity to existing transmission infrastructure, roadways and sources of other necessary resources;
6. minimize the overall size of the facility;
7. minimize use of water;
8. include avian protection plans (*see* www.aplic.org) for all related transmission lines;
9. periodically assess feasibility of incorporating technological advances that improve efficiency and/or reduce impacts on wildlife and other natural resources.

F. Termination for Noncompliance

Should the ROW holder fail to comply with any of the terms set out in the grant or the plan of development, the BLM should have the ability to terminate the ROW if the failure continues for 30 days after written notice. The ROW grant should also explicitly provide that, in the event of termination, the BLM has the right to use the bonded funds to dispose of the facility and restore the site. Once again, while the agency's standard oil and gas lease contains a comparable term, it is important that the ROW grant for development of utility scale solar energy contain explicit remedies for not only termination but also for restoring the land to its previous condition.

Recommendation: The BLM should develop an expanded set of standard terms that will be set out in the PEIS and incorporated into all ROWs and plans of development where applicable.

G. Revisions to BLM's ROW Process

The BLM's right-of-way process was designed primarily for short-term uses and linear ROWs, such as pipelines, or ROWs with a relatively limited footprint, such as communication sites. Even in the case of ROWs for wind energy projects, there is still land that is not in active use and is available for other uses. ROWs for utility-scale solar energy development will be long-term and will encompass total disruption of the land to the virtual exclusion of all other uses, as acknowledged in IM No. 2007-097. Accordingly, the agency should consider revisions to the ROW process, both procedures and regulations, to address this important difference.

For instance, the federal government is currently compensated for ROWs by a relatively low cost monthly payment per acre of land. Due to the way that federal land will be exclusively devoted to the solar project, the agency could consider revising the payment scheme to reflect this reality and could include some form of royalty payment to acknowledge the profits that will be made by solar energy developers and/or to compensate the public for the loss of use of the land developed. More comprehensive revisions could also assess whether the ROW structure should be maintained for solar projects, or whether a lease or purchase approach might be more suitable.

Further, as discussed above, because sites for utility-scale solar development on public lands should be those that are most productive and most suitable, the agency should consider requiring that sites continue to be used for solar energy production. This approach could include limiting a project proponent's ability to obtain a ROW for a new project if the same proponent is seeking to abandon another site.

In addition, the BLM's current ROW policy is to process applications on a first-come, first-serve basis. However, this approach may not yield the best return for the agency and also may not lead to the most thoughtful development of parcels – for instance, where a wind energy project and a solar energy project could both be served by the same area or one project may have less environmental impacts. As the BLM acknowledges in IM No. 2007-097, the ROW regulations (43 CFR § 2804.23(c)) provide authority for offering public lands under competitive bidding procedures for solar energy right-of-way authorizations. Competitive bidding and comparison of projects based on their likely success, taking into account the ability to limit environmental effects, the applicant's technical and financial capability, and the amount of power to be generated, could be used to improve the process of awarding ROW grants to ensure that the best use is made of our public lands when they are provided for energy development.

Recommendation: The BLM should consider revisions to its ROW process to address the current explosion in applications for ROWs for both solar and wind development, as well as the particularly high impacts of utility-scale solar development, including through adjustments to the pricing and/or structure of ROWs and through providing a mechanism to choose amongst competing projects.

III. BLM Proposed Planning Criteria

The Notice of Intent identifies a list of planning criteria for amendment of applicable land use plans to incorporate the BLM's solar energy program. We agree that many of these criteria, reproduced below, will be necessary in properly analyzing solar energy development and have identified additional issues and clarification for the BLM to consider under each criterion; we have organized our comments by restating in summary fashion each of the proposed planning criteria listed in the Notice of Intent.

A. Comply with Applicable Laws and Policies

In complying with applicable laws and policies, the BLM should take the initiative to consult with the U.S. Fish and Wildlife Service to fulfill the requirements of the Endangered Species Act, instead of deferring consultation until specific projects are proposed. Further, per Executive Order 12898, BLM is required to assess the potential for disproportionately high and adverse human health or environmental impacts on minority and/or low-income populations. As discussed throughout these comments, development of utility-scale solar energy has the potential to degrade natural areas and to inflict market and non-market costs on local communities, as well as affect water supply and quality. The agency should consider the manner in which these costs might disproportionately affect minority or low-income populations in proximity to development and take appropriate steps to address potential environmental injustice.

B. Use PEIS as Analytical Basis for Amending Land Use Plans

In order for BLM to support amendment of land use plans and to tier to the PEIS in connection with subsequent decision-making processes, the analysis conducted under the National Environmental Policy Act (NEPA) must be sufficiently robust to support the determination that specific lands are suitable for development. The PEIS and subsequent amendment should also require site-specific environmental review prior to approval of projects with opportunities for public comment.

C. Develop Reasonable Foreseeable Development Scenario and Identify Lands Available for Development, Lands Available for Development with Restrictive Stipulations, and Lands Not Available

1. RFD scenario

We commend the BLM for developing a reasonable foreseeable development scenario (RFD) for solar energy development, which provides a projection of expected levels of development as a basis for evaluating and managing environmental effects. The RFD should project development for each resource management plan (RMP) that is amended by the PEIS and associated surface disturbance, including from associated infrastructure, such as roads and transmission. In addition, the RMP amendments established by the PEIS must include methods for monitoring impacts to other resources managed by BLM and a specific plan for conducting further NEPA review should the RFD appear likely to be exceeded. The specific applications for solar projects that the BLM is currently reviewing can serve as models for the PEIS and can provide valuable information for assessing the RFD. BLM should incorporate the specifics of these projects into the PEIS to provide examples for detailed impact analysis.

2. Identification of available lands

Due to the nature of large-scale solar energy production, mitigation measures and restrictive stipulations are severely limited. The most important aspect of mitigation for solar energy will be establishing lands that are closed to development. Therefore, the PEIS must specifically identify lands open to solar and lands closed to solar in addition to best management practices.

D. Limit Amendments to Utility-Scale Solar Energy Development and Associated Transmission Issues

After analyzing impacts from solar energy projects on other resources, it may become necessary for BLM to change management prescriptions for other resources in order to best protect them in the context of making lands available for utility-scale solar energy development. These additional prescriptions can and should be included in the RMP amendments.

E. Continue to Manage Other Resources Based On Current Terms of RMPs

The PEIS should address whether current RMP terms are satisfactory for protecting other resources after potential impacts from solar development have been analyzed and make changes as appropriate as part of the RMP amendments. We have included more information on potentially affected resources in Section IV.

F. Recognize Valid Existing Rights

While we realize the obligation of the BLM to recognize existing rights, BLM often has the ability to make changes in current conditions of use without foreclosing those rights and can also engage in negotiations and/or cooperative collaboration to effectuate important changes.

G. Coordinate with Other Governments/Agencies and Seek Consistency

FLPMA requires that the BLM's guidance and management policies shall "be consistent with officially approved and adopted resource related policies and programs of other Federal agencies, State and local governments and Indian tribes." 43 U.S.C. § 1712(c)(9); 43 C.F.R. § 1610.3-2. There are currently three major planning processes underway in the Western United States that we wanted to highlight for the BLM to address in the Solar PEIS because of the potential overlap in goals: the state of California's Renewable Energy Transmission Initiative (RETI), the Western Governors Association's (WGA) Western Renewable Energy Zones (WREZ), and the West-wide Energy Corridors PEIS.

RETI is a California "statewide initiative to help identify the transmission projects needed to accommodate renewable energy goals, support future energy policy, and facilitate transmission corridor designation and transmission and generation siting and permitting." (*see* <http://www.energy.ca.gov/reti/index.html>). RETI is relevant to the Solar PEIS because it will establish transmission projects that should be completed throughout the state of California for the purpose of connecting renewable energy projects to the statewide grid. RETI also considers opportunities in neighboring states, including Arizona and Nevada. Therefore, solar projects in California and neighboring states should be situated in accordance with the RETI results. The PEIS should state that solar projects in California and neighboring states will be assessed in accordance with their proximity to the RETI corridors.

WREZ is a cooperative initiative between the Western Governor's Association (WGA) and the US Department of Energy. It is a project to address transmission barriers to increased renewable energy production in the West. WREZ intends to "generate (1) reliable information for use by decision-makers that supports the cost-effective and environmentally sensitive renewable energy development in specified zones, and (2) conceptual transmission plans for delivering that energy to load centers" (*see* <http://www.westgov.org/wga/initiatives/wrez/>) Importantly, the WREZ effort will combine solar resource data from government and industry with lands, wildlife and natural resource information from state agencies and the conservation community. Most of the states within the scope of this PEIS have initiatives to identify locations and provide incentives for renewable energy development and transmission:

- New Mexico’s Renewable Energy Transmission Authority was created to “stimulate clean energy production and create high-paying jobs, capital investment and greater economic development in rural areas.” (www.nmreta.org)
- Colorado’s Clean Energy Development Authority is directed to “facilitate the financing of renewable energy projects in Colorado.”
- Nevada’s Renewable Energy Transmission Access Authority is tasked to “propose recommendations for improved access to the grid system by which renewable energy industries can set up and have market access in Nevada and neighboring states.”

The increased focus on renewable energy in this planning area also increases the importance of the WREZ process, which will incorporate information and address these issues on a west-wide scale. Accordingly, the Solar PEIS should coordinate with this parallel effort, and in particular, incorporate information and data when there is consensus reached between the environmental, renewable energy industry and utility and other stakeholders on zones/areas that are appropriate for large-scale solar energy development on public lands.

The West-wide Energy Corridors PEIS is a joint planning process among the DOE, BLM, USFS, and DOD. It intends to designate appropriate transmission corridors on public lands in the West. The West-wide Energy Corridor PEIS is of particular relevance to the Solar PEIS. These two processes should be viewed as an opportunity for synergy and as an opportunity to bring more renewable energy into the American electricity grid while minimizing environmental degradation. If both energy corridors and solar energy development projects are properly sited and renewable technologies such as solar, wind, and geothermal energy are given preference in new transmission rights-of-way within the corridors, these efforts together can help America reduce its reliance on the fossil fuels responsible for global climate change. Currently, the West-wide Energy Corridor PEIS is the subject of significant controversy, due to the failure to assess the need for corridors to support renewable energy, as well as the failure to avoid ecologically important areas.

In considering how areas suitable for solar development will relate to designated west-wide energy corridors, it would be better to coordinate the current WWEC PEIS with the Solar PEIS and have a set of energy corridors that focuses on delivering renewables to major market centers. In other words, analyzing in the current Solar PEIS whether “additional” or “separate” west-wide energy corridors should be designated to facilitate solar development may lead to duplicative corridors and unnecessary lands, wildlife and natural resource impacts.

In addition, the WGA has recently produced the Wildlife Corridors Initiative Report (available at <http://www.westgov.org/wga/publicat/wildlife08.pdf>), which identifies important wildlife corridors and habitats in the western states and makes recommendations for best protecting these crucial areas. BLM should consult this report for information on the areas identified and/or confer with the WGA Western Wildlife Habitat Council while preparing the PEIS.

The aforementioned planning projects and others currently underway in the West provide the BLM with an important opportunity in the form of a plethora of reliable information and planning partners. These resources should be utilized in order to maximize efficiency of solar energy while minimizing impacts to landscapes and wildlife.

H. Coordinate with Tribal Governments and Provide Strategies for Protection of Traditional Uses

BLM should make diligent efforts to consult with Native American tribal governments to determine whether there are sites or specific areas of particular concern, including sites of traditional religious and cultural significance, and incorporate this information into the PEIS. Tribes can also benefit economically from clean energy development and this is a good alternative to traditional extractive industries and the environmental and health impacts they have on native people. *See, e.g.,* <http://www.grandcanyontrust.org/programs/native/programs2.php> for a discussion of beneficial wind energy projects on tribal lands.

I. Take Into Account Protection of Cultural Resources and Engage in Required Consultation

FLPMA obligates the BLM to protect cultural, geologic, and paleontologic resource values. 43 U.S.C. §§ 1701(a)(8) 1702(c). In the context of historical and cultural resources, the National Historic Preservation Act of 1966 (“NHPA”) (16 U.S.C. § 470 et seq.) affords heightened protection to these resources, establishing a cooperative federal-state program for the protection of historic and cultural resources. In particular, the review process set out in Section 106 (16 U.S.C. § 470f) obligates the BLM to consider the effects of management actions on historic and cultural resources listed or eligible for inclusion under NHPA. Additionally, Section 106 requires the BLM to consider the effects of its management actions on all historic resources and to give the Advisory Council on Historic Preservation an opportunity to comment before the BLM takes action. Section 110 of the NHPA requires the BLM to assume responsibility for the preservation of historic properties it owns or controls (16 U.S.C. § 470h-2(a)(1)), and to manage and maintain those resources in a way that gives “special consideration” to preserving their historic, archaeological, and cultural values. Section 110 also requires the BLM to ensure that all historic properties within the National Monument are identified, evaluated, and nominated to the National Register of Historic Places. *Id.* § 470h-2(a)(2)(A).

Further, the President’s “Preserve America” initiative (*See* Exec. Order 13287, March 3, 2003) requires the BLM to advance the protection, enhancement, and contemporary use of its historic properties. The BLM must ensure that “the management of historic properties in its ownership is conducted in a manner that promotes the long-term preservation and use of those properties as Federal assets.”

The BLM should take the opportunity to proactively consult and obtain information on cultural and historical resources in the areas proposed to be available for solar development so that there irreplaceable resources are identified and protected.

J. Recognize Special Importance of Public Lands to People Who Live in Nearby Communities and to Nation as a Whole

Extensive research exists demonstrating the key role that wildlands play in the vitality of nearby communities. The Wilderness Society released a report in 2007 entitled “Natural Dividends: Wildland Protection and the Changing Economy of the Rocky Mountain West” (available at www.wilderness.org and attached) that documents the importance of wilderness landscapes to western economies and provides additional references. Wildlands are also valued as places to visit and learn about for all Americans. The PEIS should acknowledge these values and take them into account as part of considering whether the benefits from use of an area of public land for solar energy development are sufficient to justify the long-term loss of that same land to citizens. A more detailed socioeconomic analysis is provided in Section IV.

K. Encourage Public Participation

We encourage BLM to maximize public involvement in preparation of the Solar PEIS. In addition to the public comment periods required by NEPA and BLM’s regulations, there are other opportunities throughout the planning process for public involvement, which are used by many BLM offices. Public involvement allows the public to provide useful information and bring concerns to BLM’s attention throughout the planning process, which improves the planning process and also can avoid controversy.

The BLM has identified the need to ensure sufficient data is available. In this context, we would also note that other BLM offices have made inventory data available to the public to assist in identifying new data needs and also made base data available for public use, and encourage BLM to take similar action in preparing the solar PEIS. By way of example, along with its release of the Draft RMP, the BLM’s Arizona Strip Field Office provided zipped GIS files for all data layers needed to create the maps contained in the Draft RMP (and can be viewed on-line at <http://www.blm.gov/az/GIS/files.htm#strip>). The server space required for this operation is minimal and without this information, effective public participation in this process is severely hampered. GIS data for the West-wide Energy Corridors PEIS was also released to the public, allowing for more informed participation. This type of public participation is also consistent with the BLM’s Land Use Planning Handbook (H-1601-1), which states that, “Documentation supporting the AMS [analysis of the management situation] should be maintained in the field office for public review” (Section III.A.4) and that, “Alternatives should be developed in an open, collaborative manner, to the extent possible” (Section III.A.5).

Many offices are providing a preliminary range of alternatives prior to formally releasing a Draft RMP, which gives the public a chance to provide input. After the comment period on the Draft, making analyses available before issuing the Final PEIS is another excellent way to increase public understanding of and participation in the PEIS process. The Kemmerer (Wyoming) Field Office, for example, has made their analysis of comments submitted on the Draft RMP and their ACEC evaluations public by posting them on their website, even though they have not yet issued the Proposed RMP/FEIS¹. Making such analyses available to the public before the publication

¹ <http://www.blm.gov/rmp/kemmerer/docs.htm>

of the Draft PEIS will better prepare participants to understand the complex analyses and large amounts of data in the Draft PEIS and increase the relevance and usefulness of comments and other public participation. Making sure the public fully understands the proposed plans will also decrease conflict later in the process. We hope to see these types of opportunities provided to the many members of the public who are interested in the development of the solar PEIS.

The BLM should make every attempt to encourage the public to participate in the PEIS process including holding workshops, providing interim information regarding inventories of wilderness-quality lands and visual resources, posting GIS files, and posting analysis of comments submitted on the Draft PEIS to the PEIS website.

L. BLM Can Develop Protective Management Prescriptions for Lands with Wilderness Characteristics and Will Consider Public Input Regarding Lands to be Managed to Maintain Wilderness Characteristics

The Solar PEIS presents an opportunity for the BLM to consider information that it has received regarding lands with wilderness characteristics in the six states included in the PEIS, including inventorying these lands. The lands at issue in this PEIS contain numerous areas proposed for wilderness designation in citizen's wilderness inventories and/or found to have wilderness characteristics. Applicable law and current BLM policy provide for ongoing inventory of wilderness characteristics and management to protect wilderness characteristics through management prescriptions or other administrative designations on BLM lands, including as a priority over other uses.

Further, the April 2003 settlement agreement (Utah Settlement) between Secretary of the Interior Norton and the State of Utah (in which BLM abdicated its authority to designate any additional Wilderness Study Areas (WSAs)), does not affect BLM's obligation to value wilderness character or its ability to protect it, including in management prescriptions which would also merit exclusion of solar energy projects. We maintain that this agreement is invalid and will ultimately be overturned in pending litigation. Recently, a federal court in Utah revoked its approval of the Utah Settlement, stating that its approval of the initial settlement was never intended to be interpreted as a binding consent decree. Recognizing that the court's decision undermined the legal ground for the Utah Settlement, the State of Utah and the Department of Interior have now formally withdrawn the settlement as it was originally submitted. *See*, Motion to Stay Briefing and for a Status Conference, September 9, 2005, copy attached. This casts serious doubt upon BLM's current policy not to consider designating new WSAs. Because the State of Utah and the Department of Interior have withdrawn their settlement and do not intend to seek a new consent decree, there is currently no binding consent decree and the BLM has not even issued any updated guidance seeking to continue applying this misguided, and illegal, policy.²

The Instruction Memoranda (IMs) 2003-274 and 2003-275, which formalize BLM's policies concerning wilderness study and consideration of wilderness characteristics in the wake of the settlement contemplate that BLM can continue to inventory for and protect land "with wilderness

² Consequently, IM Nos. 2003-274 and 2003-275, which are explicitly based on an April 2003 settlement that no longer exists, are arguably invalid and do not apply to restrict BLM from designating new WSAs.

characteristics,” such as naturalness or providing opportunities for solitude or primitive recreation, through the planning process. The IMs further provide for management that emphasizes “the protection of some or all of the wilderness characteristics as a priority,” even if this means prioritizing wilderness over other multiple uses. This guidance does not limit its application to lands suitable for designation of WSAs; for instance, the guidance does not include a requirement for the lands at issue to generally comprise 5000-acre parcels or a requirement that the lands have all of the potential wilderness characteristics in order to merit protection. IM 2003-274 states that “BLM may continue to inventory public lands for resource or other values, **including wilderness characteristics**” and that the agency can “**manage them using special protections** to protect wilderness characteristics.” (emphasis added). Further, IM 2003-275, Change 1, reads:

The BLM can make a variety of land use plan decisions to protect wilderness characteristics, such as establishing Visual Resource Management (VRM) class objectives to guide the placement of roads, trails, and other facilities; establishing **conditions of use to be attached to permits, leases, and other authorizations to achieve the desired level of resource protection**; and designating lands as open, closed, or limited to Off Highway Vehicles (OHV) to achieve a desired visitor experience. (emphasis added).

Accordingly, administrative protection can and should be considered for lands not currently protected. In addition, the information submitted regarding citizen-proposed wilderness constitutes significant new information that must be addressed in this RMP revision. This information has not yet been analyzed in the existing land use plan, so NEPA requires analysis of the potential environmental direct, indirect and cumulative effects of oil and gas development on these areas and consideration of protection for them. *See*, 40 C.F.R. § 1502.9(c); Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 374 (1989). In a recent decision, the U.S. District for the District of Utah found that information regarding wilderness characteristics that was not considered in the existing land use plan was:

a textbook example of significant new information about the affected environment (the **wilderness attributes and characteristics** of the Desolation Canyon, Floy Canyon, Flume Canyon, Coal Canyon, and Flat Tops unit) that would be **impacted by oil and gas development**; information that was **not reflected in BLM’s existing NEPA analyses**.

Southern Utah Wilderness Alliance v. Norton, 457 F. Supp. 2d 1253 (D. Utah 2006) (attached). A compliant NEPA analysis requires not only assessment of potential impacts but also a consideration of potential mitigation measures, such as protecting lands with wilderness characteristics. 40 C.F.R. §§ 1502.14, 1502.16. The PEIS can and must consider protective measures tailored specifically to protect lands with wilderness characteristics as part of the RMP amendments.

Prior to identifying sites appropriate for solar development, we recommend that the agencies assess information received regarding wilderness characteristics, including inventorying lands identified, and exclude lands with wilderness characteristics, citizen-proposed wilderness, and

wilderness inventory units from the lands available for consideration of siting solar energy projects.

M. Environmental Protection and Energy Production are Both Desirable and Necessary, Not Mutually Exclusive

While we agree that these goals are not mutually exclusive, BLM is legally obligated to ensure protection of the environmental resources which it manages. For instance, FLPMA requires that: “In managing the public lands the [Secretary of Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C. §1732(b). FLPMA also mandates that the public lands be managed “without permanent impairment of the productivity of the land or quality of the environment.” 43 U.S.C. 1702(c). Similar obligations to prioritize protection of the environment and other resources of the public lands arise are contained in the Clean Air Act, Clean Water Act, Endangered Species Act, and National Historic Preservation Act. In complying with these laws, environmental protection must be given priority.

N. Consider and Analyze Climate Change Impacts, Including Anticipated Benefits from Solar

We support the BLM’s recognition of the importance of analyzing the effects of its action on climate change. Global climate change is now acknowledged to be a major consideration for effects of major federal actions. The Supreme Court has concluded that “[t]he harms associated with climate change are serious and well recognized.” Massachusetts v. E.P.A., 127 S.Ct. 1438, 1455 (2007). Further, the Supreme Court has held that while agency action may not completely reverse global warming, it does not relieve the agencies of the responsibility to take action to reduce it. Id. at 1458. In fact, an order issued by the Secretary of the Interior requires that:

Each bureau and office of the Department will consider and analyze potential climate change impacts when undertaking long-range planning exercises, when setting priorities for scientific research and investigations, when developing multi-year management plans, and/or when making major decisions regarding the potential utilization of resources under the Department’s purview.

U.S. Dept. of the Int., Sec. Order No. 3226 (Jan. 19, 2001), Section 3.

While there are many anticipated benefits to solar energy production over fossil fuels, the PEIS must address the potential for solar energy to have adverse impacts on climate change. For example, many western landscapes are already becoming increasingly fragile due to global climate change – especially desert landscapes that also have solar energy potential. In addition, these landscapes have important value as carbon “sinks,” which could be lost if they are developed.³ Further, undeveloped land has value as potential habitat as wildlife migrates to respond to climate changes. The destruction of these lands for solar energy production would thus contribute to the negative impacts of climate change. The PEIS should seek to mitigate

³ See, e.g., *Have Desert Researchers Discovered a Hidden Loop in the Carbon Cycle?*, Science, Vol. 320, pp. 1094-140 (June 13, 2008) (attached).

negative impacts on climate change through the designation of appropriate lands open to solar energy development.

In order to properly analyze the impact solar development will have on climate change, the process must be considered as a whole. The savings in carbon emissions that a solar energy project provides may be significantly reduced or cancelled out depending on how much carbon is emitted in the construction phase or in transporting workers and supplies to a site. Therefore, in assessing impacts to climate change, BLM must analyze *net* emissions. An additional factor to consider is whether fossil fuels will be transmitted on lines designated for solar energy.

BLM must analyze net impacts of solar energy development on climate change and include consideration of landscapes and wildlife that already are or have the potential to be affected by climate changes. BLM should establish best management practices to mitigate potential climate change impacts. The Natural Resources Defense Council has included a detailed discussion of climate change in its comments and we incorporate those by reference herein.

O. BLM Will Use Geospatial Data in GIS to Facilitate Discussions of Affected Environment, Formulation of Alternatives, Analysis of Environmental Consequences, Display of Results

1. Lands with wilderness characteristics and proposed wilderness: GIS layers needed to complete the PEIS.

Prior to identifying areas appropriate for solar energy development as part of the PEIS, it is imperative that the agencies gather the necessary information to ensure that wilderness quality lands are not disturbed. The agencies have before them a unique opportunity to act as stewards of the public domain on a southwest-wide scale. By collecting and using appropriate GIS data layers before considering appropriate places for solar development, the agencies can ensure that they avoid disturbing our nation’s wild places. **We recommend that the agencies collect and use the following GIS data layers to map areas that are unacceptable for siting corridors and in siting corridors to avoid impacting the identified areas:**

Citizen Proposed Wilderness Areas: The attached GIS layers document the most current citizen wilderness proposals and wilderness inventory units for Arizona, California, Colorado, New Mexico, and Utah. No comprehensive GIS layer exists for Nevada, so BLM should consult with the Nevada Wilderness Project (contact information below) to ascertain current proposal boundaries and areas of concern.

State	Contact Information
Nevada	<p>Address: John Tull Nevada Wilderness Project 8550 White Fir Street Reno, NV 89523</p> <p>Phone: (775) 746-7850</p> <p>Email: john.tull@wildnevada.org</p> <p>Website: http://www.wildnevada.org</p>

Many lands with wilderness characteristics have been inventoried and mapped by BLM field offices as part of RMP revisions. BLM should use this data to identify exclusion areas for solar development. Further, in identifying additional lands with wilderness characteristics, BLM should use GIS mapping to identify exclusion areas, and the agency should make these data layers available to the public as part of their PEIS.

2. Other GIS layers needed to complete the PEIS

As stated above, because the siting of solar energy development will have significant and long lasting impacts on public lands, it is critical that the agency gather, analyze, and make available to the public any GIS layers which describe sensitive or protected areas. In addition to the lands with wilderness characteristics, citizen proposed wilderness, and wilderness inventories discussed above, we recommend that the agencies **collect and use the following GIS data layers to map areas that are unacceptable for siting solar energy projects and in siting projects to avoid impacting the identified areas:**

1. Designated Wilderness Areas;
2. Wilderness Study Areas;
3. National Monuments;
4. National Conservation Areas;
5. Other lands within BLM's NLCS;
6. National Historic and National Scenic Trails;
7. National Wild, Scenic, and Recreational Rivers, study rivers and segments, and eligible rivers and segments;
8. ACECs;
9. Threatened, endangered and sensitive species habitat (available from USFWS⁴, state wildlife agencies and, for BLM lands, from NatureServe⁵; critical cores and linkages for wildlife habitat (available from USFWS and state wildlife agencies, including in State Wildlife Action Plans, as well as the Wildlands Project and its affiliated regional organizations⁶) important bird areas (available from BLM and the National Audubon Society⁷); and
10. Riparian areas (available from SWReGAP⁸, except for California, which is available from the UCSB Biogeography Lab⁹).

⁴ http://www.fws.gov/southwest/es/newmexico/ES_home.cfm

⁵ NatureServe was contracted to identify and map locations of threatened and endangered species habitat that exist only on BLM lands – making these areas even more critical to the survival of the species. This data can be found at www.natureserve.org

⁶ <http://www.twp.org/cms/page1158.cfm>

⁷ <http://www.audubon.org/bird/IBA/>

⁸ <http://ftp.nr.usu.edu/swgap/>

⁹ http://www.biogeog.ucsb.edu/projects/gap/gap_home.html

Recommendations: The PEIS should apply the proposed planning criteria with the additional clarification provided above.

IV. Issues for Further Analysis

As stated in the Notice of Availability:

As currently envisioned, the PEIS will evaluate direct, indirect, and cumulative impacts to wildlife, wildlife habitat, threatened and endangered species, and vegetation; proximity to wilderness or other special management areas; and impacts to cultural, paleontological, socioeconomic, visual, and water resources. These resources are recognized as significant issues associated with utility-scale solar energy development.

We support the issues identified above and in the proposed planning criteria as those that could lead to significant impacts and/or merit further, in-depth analysis in the PEIS. We have highlighted certain additional issues below for further discussion of the analysis required.

A. Lands with Wilderness Characteristics

As discussed above, the Solar PEIS provides an opportunity for the BLM to evaluate information regarding lands with wilderness characteristics and to take necessary steps to protect those characteristics.

Recommendation: The PEIS should evaluate information on wilderness characteristics and, where necessary, inventory its lands to confirm the existence of wilderness characteristics, then consider alternatives to protect some of all of these characteristics, and incorporate appropriate management prescriptions into the PEIS and resulting RMP amendments.

B. Protection of Wildlife Habitat

Significant portions of the land that will be considered for solar energy development in the PEIS contain core habitat areas and migration linkages between those core areas, all of which need to be preserved in order for the regional ecosystems to continue to function. Fragmentation of wildlife habitat affects the ecological composition, structure, and functions of a landscape. Habitat fragmentation has been defined as the “creation of a complex mosaic of spatial and successional habitats from formerly contiguous habitat” (Lehmkuhl and Ruggiero 1991). **Although fragmentation can be difficult to measure, there are a variety of metrics that can be used to assess the degree of existing habitat fragmentation and the condition of the landscape, then applied to available data regarding distribution of wildlife and habitat, and ultimately used to make decisions regarding appropriate locations for energy corridors. We recommend that the agencies complete such an analysis as part of the PEIS.**

Existing road density can be calculated by measuring the length of linear features in a given sub-area at regular intervals and then reported as miles of route per square mile (mi/mi²). The degree of habitat fragmentation, the distribution of unroaded areas, or core areas, can also be measured and calculated based on the amount of land beyond a given distance or effect zone, from transportation routes (Forman, 1999). Wildlife species respond to disturbances related to this type of network at varying distances, so determining the size distribution of core areas for a

range of effect zones (i.e., of 100ft, 250ft, 500ft and 1320ft) from all routes is also important. Wildlife literature will yield information on the effect zones for different species. For instance, an ongoing study by Sawyer et al. (2005, 2004, 2001) of GPS collared deer on the Pinedale Anticline observed that deer utilized habitat progressively further from roads and well pads over three years of increasing gas development and showed no evidence of acclimating to energy-related infrastructure. Birds are also impacted by roads and management practices associated with energy development, due to fragmentation, changes in vegetation and noise (Mabey and Paul, 2007; Robel, et al., 2004).

In addition to solar energy plants themselves, habitat fragmentation can be caused by transmission corridors, which will be necessary to transmit solar power to electricity grids. Wildlife habitat fragmentation caused by transmission lines (including branch powerlines), pipelines (including feeder pipelines) and roads generally fall into three broad categories:

1. Construction impacts (access, right-of-way clearing, construction of towers, stringing of cables);
2. Line maintenance impacts (inspection and repair); and
3. Impacts related to the physical presence and operation of the transmission line.

As such, wildlife habitat must be examined on an individual project and site-specific basis. The only way to accomplish this requirement is to ensure that each individual solar project is spatially evaluated for direct, indirect and cumulative impacts.

Specific activities that negatively impact wildlife and cause destruction of core habitat or habitat fragmentation include the construction of facilities, blading and scraping of the ground, disturbance of soil by the use of heavy machinery, noisy machinery during construction and maintenance, noise from helicopters, removal of vegetation, blasting, filling depressions (a.k.a. recontouring the landscape), disposal of waste and chemicals on site, use of herbicides, and the use of borrow pits.

The effects of these activities on wildlife can be severe and include removal of habitat, fragmentation of habitat, and the creation of edge effect vegetation and habitat (changes in composition, structure, microclimate, etc. of area adjacent to facility and transmission corridor). Species shown to avoid edges include red-backed vole, snowshoe hare, pine marten and red squirrels. In addition, it is logical to suspect that construction of facilities and transmission in previously undisturbed areas will lead to a direct loss of life to wildlife during construction, operation and service of transmission lines.

We have included The Wilderness Society's most recent Science and Policy Brief, "Habitat Fragmentation from Roads: Travel Planning Methods to Safeguard BLM Lands" (Appendix 1). Also included in Appendix 1 are four scientific reports prepared by TWS and discussed in the habitat fragmentation report. These include *Fragmenting Our Lands: The Ecological Footprint from Oil and Gas Development*, *Protecting Northern Arizona's National Monuments: The Challenge of Transportation Management*, *Wildlife at a Crossroads: Energy Development in Western Wyoming*, and *Ecological Effects of a Transportation Network on Wildlife*. In addition to summarizing the four reports included, "Habitat Fragmentation from Roads: Travel Planning

Methods to Safeguard BLM Lands” provides a summary of available scholarly and government reports and studies on the impact of habitat fragmentation on wildlife, provides methods for calculating habitat fragmentation, and provides recommendations on how to integrate fragmentation analysis into management.

Recommendation: BLM should use the information provided in Appendix 1 (as well as related information from State Wildlife Action Plans, Audubon Important Bird Areas, and the Wildlands Network) to identify core areas, measure habitat fragmentation, conduct a thorough fragmentation analysis, and inform decisions regarding designation of lands as available for solar energy in the PEIS, as well as incorporating these requirements into the PEIS to guide analysis of specific projects.

C. Special Management Areas

The Notice of Availability identified a number of different types of special management areas where utility-scale solar development is not appropriate. Areas in the National Landscape Conservation System are governed by other laws requiring protection as a priority.

- National Monuments are generally reserved by Presidential proclamation under the Antiquities Act of 1906 (16 U.S.C. § 432) to protect objects of historic or scientific interest, and must be managed to protect those values as a priority over other uses.
- National Conservation Areas are designated for the express purpose of protecting other natural values and management priorities are set out in enabling legislation.
- Section 10(a) of the Wild and Scenic Rivers Act provides similar management direction for wild and scenic river segments:

Each component of the national Wild and Scenic Rivers System shall be administered in such manner as to **protect and enhance the values which caused it to be included in said system** without, insofar as is consistent therewith, **limiting other uses that do not substantially interfere with public uses and enjoyment of these values.**

- National Historic Trails closely follow a historic trail or route of travel of national significance in order to identify and protect their history for public enjoyment. National Scenic Trails provide maximum outdoor recreation potential and to support the conservation and enjoyment of the various qualities – scenic, historical, natural, and cultural – of the areas they pass through. *See, e.g.,* BLM website on National Scenic and Historic Trails (<http://www.blm.gov/nlcs/nsht/>). The purpose for which the trails were created, as summarized in the National Trails System Act, is “to promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources of the Nation.” 16 U.S.C. § 1241(a).
- BLM is obligated to manage the WSAs in accordance with the Interim Management Policy (IMP) for Lands Under Wilderness Review (BLM Manual H-8550-1), which requires that WSAs are managed to protect their wilderness values. The IMP requires the BLM to manage WSAs in accordance with the nonimpairment standard, such that no activities are allowed

that may adversely affect the WSAs' potential for designation as wilderness. As stated in the IMP, the "overriding consideration" for management is that:

. . . preservation of wilderness values within a WSA is paramount and should be the primary consideration when evaluating any proposed action or use that may conflict with or be adverse to those wilderness values. (emphasis in original)

The IMP also reiterates that WSAs "must be managed to prevent unnecessary or undue degradation."

- FLPMA requires the BLM to "give priority to the designation and protection of areas of critical environmental concern [ACEC]." 43 U.S.C. § 1712(c)(3). ACECs are areas "where special management is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes." 43 U.S.C. § 1702(a).

Recommendation: The BLM is required to prioritize management to protect and enhance conservation values for special management areas, which is inconsistent with the development of solar energy development; these areas should be excluded from availability.

D. Socioeconomic Impacts

The socioeconomic impacts of potential solar energy development go far beyond the value of the electricity produced by such projects or the construction, operation and maintenance jobs which may be created. While certainly beneficial in our national quest for renewable energy and our important goal of reducing global warming pollutants, solar energy projects (as is the case with all industrial developments) will leave permanent impacts on the landscape of the West – a landscape which is both iconic and an important economic driver in this region. The public lands that may be impacted by solar energy projects enabled by the Solar PEIS are likely to include places which are important and valuable to all Americans. Development of these lands for solar energy development should be considered carefully and should account for all their potential values – both market and non-market. Only those projects that result in the highest and best use of our valuable open lands should be pursued.

Several specific areas of analysis which we feel should be addressed in the Solar PEIS are noted here and discussed in more detail below.

1. In developing criteria and priorities for approval of solar energy projects on public lands, the BLM and DOE should favor those projects which provide the greatest net benefits to the American public, by accounting for all the potential costs and benefits associated with such development.
 - a. The Solar PEIS should address the potential benefits to the local area economies that arise from these undeveloped public lands, and which will be impacted by the development of solar energy projects and related transmission corridors.
 - b. All opportunity costs of energy development on public lands should be fully examined in the Solar PEIS. The relative impacts of different power-generation

techniques should be compared and evaluated to ensure that net socioeconomic value of a project is maximized.

- c. The Solar PEIS should include an assessment of the potential benefits of siting utility scale solar projects on private lands compared with development on public lands. The potential fiscal returns to the American public from siting on public lands should be compared with the potential fiscal benefits that might accrue to a private landowners through siting solar facilities on private lands (ROW, rental fees)
 - d. The Solar PEIS should consider the benefits as well as mitigation of costs by siting solar energy facilities on Brownfields. By avoiding costs to the ecological integrity and outdoor opportunities, the net benefits of siting a solar project on contaminated lands may be considerable.
2. The Solar PEIS should account for all conceivable non-market values, including the impacts on local quality of life, which are associated with the undeveloped public lands that may be impacted by solar energy development.
 3. The socioeconomic analysis in the Solar PEIS should avoid the use IMPLAN and economic base models to assess the economic impacts of the proposed solar energy development and related transmission corridors on local communities. If the use of such models is unavoidable, these should not be the sole analytical tool for assessing the economic impacts. The socioeconomic analyses should assess the potential impacts of utility-scale solar energy projects and related transmission corridor development on local economies and residential and other private property values.
 1. Utility-scale solar energy development should maximum net public benefits.

In developing criteria and priorities for approval of solar energy projects on public lands, the BLM and DOE should favor those projects which provide the greatest net benefits to the American public, by accounting for all the potential costs and benefits associated with such development.

We expect that the Solar PEIS will recognize that solar energy development, like any industrial development sited on public lands, will have negative impacts on these lands. These impacts may be as great as those associated with other energy development; however, we also recognize that the production and use of solar energy, if it replaces that of fossil fuel energy, will also have benefits. These include the lessening of greenhouse gas emissions from electricity production which, in turn, will be beneficial to undeveloped public lands by reducing the already measureable impacts of climate change.

At the same time, in light of climate change, undeveloped public lands are also increasingly important as a source of habitat for species impacted by climate change, as a source of forest and other vegetation which acts as a "carbon sink" and is thus important for mitigation of climate change. Undeveloped lands are also a source of increasingly scarce clean water and other ecosystem services. Solar energy development projects sited on undeveloped lands (both public and private) will reduce these benefits. These costs should be included in the Solar PEIS's assessment of net public benefits.

The Solar PEIS should recognize that not all solar energy development projects will produce the same type and level of public benefits and costs. Emphasis and priority should be given to those

projects which produce the largest net benefits, accounting for both market and non-market impacts on the public, the ecosystem, and the climate change mitigating abilities of western lands, both public and private.

a. Benefits to the Local Economy from Undeveloped Public Lands

The Solar PEIS should address the potential benefits to the local area economies that arise from undeveloped public lands which may be impacted by the development of utility-scale solar energy projects and related transmission corridors. The mere presence of undeveloped public lands and the natural and recreational amenities that they provide produce measurable economic benefits for local communities.

The Solar PEIS should fully address the impacts that utility-scale solar energy development on undeveloped public lands will have on the local economies throughout the study area. The economic benefits of undeveloped lands for local economies is well documented and has grown in importance as the U.S. moves from a primary manufacturing and extractive economy to one more focused on service sector industries. This shift means that many businesses are free to locate wherever they choose. The “raw materials” upon which these businesses rely are people, and study after study has shown that natural amenities attract a high-quality, educated and talented workforce – the lifeblood of these businesses.

As the economy of the West evolves, public lands, especially areas protected from development, are increasingly important for their non-commodity resources – scenery, wildlife habitat, wilderness, recreation opportunities, clean water and air, and irreplaceable cultural sites. A vast and growing body of research indicates that the economic prosperity of rural Western communities depends more on the natural amenities found on public lands and less on the extraction of natural resource commodities.¹⁰ In a letter to the President and the Governors of all the Western states, 100 economists from universities and other organizations throughout the United States pointed out that, "The West's natural environment is, arguably, its greatest long-run economic strength" (Whitelaw et al. 2003).

New residents in the rural West often bring new businesses, and these are rarely tied to resource extraction. Some are dependent directly on the recreation opportunities on the surrounding public lands. Entrepreneurs are also attracted to areas with high levels of natural amenities. The Federal Reserve Bank of Kansas City has found that the level of entrepreneurship in rural communities is correlated with overall economic growth and prosperity (Low 2004). These businesses may be harmed or deterred if the quality of the scenic and natural amenities is degraded due to solar energy developments. The Solar PEIS must assess the value of undeveloped public lands and include criteria which will ensure that the economic role of these lands is not deterred when solar energy developments and any associated transmission lines are constructed.

Retirees and others who earn non-labor income are also important to rural western communities. Non-labor income makes up an average of 27% of total personal in the six-state region covered

¹⁰ See Whitelaw and Niemi 1989, Rudzitis and Johansen 1989, Johnson and Rasker 1993 and 1995, Freudenburg and Gramling 1994, Snepenger et al. 1995, Deller 1995, Power 1995 and 1996, Bennett and McBeth 1998, Duffy-Deno 1998, McGranahan 1999, Nelson 1999, Rudzitis 1999, Morton 2000, Lorah 2000, Deller et al. 2001, Johnson 2001, Shumway and Otterstrom 2001, Lorah and Southwick 2003, Rasker et al. 2004, Holmes and Hecox 2004 and Reeder and Brown 2005, Sonoran Institute 2006, and Barrens et al. 2006 for some examples. See Haefele et al. (2007) for a detailed description of the research on the amenity economy and the ways in which local economies benefit from protected public lands.

by the Solar PEIS.¹¹ If investment and retirement income were considered an industry it would be one of the largest in all of the states potentially impacted by proposed utility-scale solar energy development. Retirees are attracted by natural amenities that are available on undeveloped public lands. The potential impact that solar energy development will have on this source of income and economic activity must be accounted for in the Solar PEIS.

Growth in the professional and service sector is also tied to the natural and other amenities in the area. Protected public lands in the region enhance the West's attractiveness for both skilled workers and employers. Protected public lands provide indirect support for local and regional economies, a fact that is increasingly being recognized by communities throughout the West. These lands provide a scenic backdrop, recreation opportunities and a desirable rural lifestyle, and many other tangible and intangible amenities that attract new residents, businesses and income to the rural West. Many businesses are able to conduct national or international commerce from any location they choose. Other entrepreneurs simply choose to live in a particular place and build businesses in response to local needs. Research conducted by The Center for the Study of Rural America, at the Federal Reserve Bank of Kansas City (the Rural Center) has found that entrepreneurship is a strong indicator of rural economic health (Low 2004, Low et al. 2005, Thompson et al. 2006). The Rural Center has included entrepreneurship along with several other indicators of rural economic potential into a set of Regional Asset Indicators. These indicators include the natural and human amenities of a region – many of which are closely tied with undeveloped public lands (Weiler 2004). The six states included in the proposed Solar PEIS all have levels of human and natural amenities which are higher than the national average due in part to protected and undeveloped public lands. The role of these lands in the area's economy and the potential impact that solar energy development might have should be addressed in the Solar PEIS (Center for the Study of Rural America 2006a).

Research into what motivates entrepreneurs and businesses to choose particular locations consistently finds that amenities and quality of life top the list (Rasker and Hansen 2000, Snepenger et al. 1995, Rasker and Glick 1994, Whitelaw and Niemi 1989). Developing the proposed utility-scale solar energy projects on undeveloped public lands may hinder western communities ability to attract more small businesses into the region to further enhance this sector.

These findings together point to the value of public lands to strong local economies. Development of solar energy projects on these western lands could be seriously problematic, and this must be addressed in the Solar PEIS. To site solar energy development in a way that impairs these natural amenities would be short-sighted at best. The Solar PEIS should address this issue and provide detailed criteria to protect the economic benefits associated with undeveloped public lands.

Recommendations: The Solar PEIS must include a thorough examination of the full socioeconomic impacts likely to occur if utility-scale solar energy projects impact undeveloped lands. Some suggested analyses and sources of data can be found in “*Socio-Economic Framework for Public Land Management Planning: Indicators for the West’s Economy*” (attached).

¹¹ In Arizona, investment and retirement income is 27% of total personal income. This income is 25% in California, 24% in Colorado, 31% in Nevada, 27% in New Mexico and 24% in Utah. Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (<http://www.bea.gov/>)

b. *Opportunity costs*

All relative costs of solar energy development on public lands should be fully examined in the Solar PEIS, especially benefits to the public and local economies. As discussed above, there is potential for the loss of economic opportunity from tourism, hunting, fishing, wildlife viewing, and other forms of recreation if solar facilities are installed on lands that hold special value to people, wildlife, and other elements of the ecosystem. These costs should be assessed by the BLM or the DOE for every site on which there is a plan to construct and operate a solar power facility.

However, local communities can certainly benefit from the presence of new power-generating infrastructure. Temporary jobs are created to manufacture parts and to construct the power facility. Once up and running, permanent positions are also needed to operate and maintain the facilities. Table 1 presents estimates on employment information for different types of power-generating facilities.

Table 1. Annual Jobs Created Per Megawatt of Generating Capacity

Energy Source	Temporary Jobs(per MW)	Permanent Jobs(per MW)
Solar-PV ^a	1.2 ¹ -33 ³	0.25 ¹ -2.5 ³
Solar-CSP ^b	3.25 ⁴ -10 ⁵	0.275 ⁴ -1.0 ⁵
Central Solar*	3.42 ²	1.62 ²
Wind	0.15 ¹ -0.88 ¹	0.1 ¹
Coal	0.21 ¹ -3.57 ⁴	0.5 ⁴ -0.59 ¹
IGCC Coal	2.54 ⁶	0.36 ⁶
Gas	0.21 ¹	0.6 ¹

a) PV: Photovoltaic

b)CSP: Concentrated Solar Power

*Central Solar makes use of both PV and CSP technologies

¹ Daniel M. Kammen, Kamal Kapadia, and Matthias Fripp (2004) *Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Generate?* RAEL Report, University of California, Berkeley. P. 10.

² Navigant Consulting, Inc. estimates, June 2006.

³ Clean and Diversified Energy Initiative. Solar Task Force Report. January, 2006. Western Governors' Association.

⁴Suemedha Sood. *Harnessing the Sun: The Future of Green Jobs.* April 11, 2008. The Washington Independent. <http://washingtonindependent.com/view/harnessing-the-sun>

⁵ Dr. Franz Trieb. Powerpoint: Concentrating Solar Power Now: Clean Energy for Sustainable Development. German Aerospace Center. P. 11. 2007

⁶ Frequently Asked Questions. FutureGen Alliance, Inc. 2006. <http://www.futuregenalliance.org/faqs.stm>

Typically, construction of a power plant takes between 2 and 3 years. Even if we assume that a coal/gas power plant takes 30% longer to construct, solar facilities still provide more employment hours per MWh produced (Kammen, et al.). In addition, for every MW of power capacity, solar plants employ a greater number of workers than do fossil fuel-based facilities.

Integrated Gasification Combined Cycle (IGCC) coal power plants, however, are an exception. They have the potential to offer up to 3.4 more manufacturing/construction jobs per MW capacity than either normal coal or gas plants. This is directly linked to greater initial capital costs for an IGCC coal plant.¹² An IGCC coal facility requires the manufacture of more complex equipment, which also may require skilled installation. All of this raises the costs of providing electricity, which is then passed on to the consumer. However, as discussed above and below, clean energy such as solar power is likely to have higher net public benefits when the impacts associated with lower pollution levels are also considered.

The absence of harmful effluence is another serious benefit of implementing solar energy. For a single megawatt-hour (MWh) of energy, a coal plant may produce between 0.3 and 1.5 tons of carbon dioxide (Carma.org). Over a year at a run-of-the-mill coal plant, this comes to about 3.7 million tons of CO₂ and thousands of tons of other effluent.¹³ Natural gas combined cycle plants are one of the leading “clean” fossil fuel-based energy producers. Still, they emit about 1900 tons of CO₂, 0.045 tons of CO, and 0.075 tons of NO_x per MW of total capacity.¹⁴ IGCC coal facilities boast near-zero emissions from the technologies they implement. CO₂ effluence is largely eliminated, and SO₂ and NO_x effluence is considerably lower than standard coal/gas power plants. However, it is still effluence that could be curbed completely by using solar energy systems. In general, for every 1 MW of coal/gas power replaced by a renewable source: approx. 3,640 tons CO₂, 9.2 tons SO₂, 11.2 tons NO_x is avoided.¹⁵

These emissions have costs beyond the impairment of ecological services. Each year, effluence affects people across the country. Annually, there are hundreds of thousands of hospital visits and millions of lost worker days attributed to gases and particulate emitted by fossil fuel-based power plants.¹⁶

There are a number of additional costs to coal/gas power facilities. First, the fuel required to generate electricity is a resource into which considerable resources must be invested. Recovering gas/oil/coal often requires seismic analysis to locate the resource. Then the fuel must be extracted, processed, and transported to where it is needed. Solar power plants require only natural sunlight, which costs nothing to locate or transport. Coal power plants also use copious quantities of water. Traditional facilities annually use about 4.4 million gallons of water for every MW of capacity.¹⁷ IGCC plants may be worse, requiring up to 2500 gallons every minute.¹⁸ Even if significant water recycling is performed, the need still adds up. Furthermore, both traditional and IGCC coal facilities release waste water. Even if this waste water complies

¹² EnergyJustice.net. Fact Sheet: “Clean Coal” Power Plants (IGCC).
<http://www.energyjustice.net/coal/igcc/factsheet-long.pdf>

¹³ Environmental Impacts of Coal Power: Air Pollution. Union of Concerned Scientists. August 18, 2005.
http://www.ucsusa.org/clean_energy/coalvswind/c02c.html

¹⁴ L. Stoddard, J. Abiecunas, and R. O’Connell. Economic, Energy, and Environmental Benefits of Concentrating Solar Power in California. National Renewable Energy Laboratory. April, 2006.

¹⁵ Concentrated Solar Power. American Solar Energy Society, Solar Electric Division.
www.ases.org/divisions/electric/facts_csp.pdf

¹⁶ Data for U.S. Moving Toward Ban on New Coal-Fired Power Plants. Earth Policy Institute. February 14, 2008.
http://www.earth-policy.org/Updates/2008/Update70_data.htm

¹⁷ Environmental Impacts of Coal Power: Water Use. Union of Concerned Scientists. August 18, 2005.
http://www.ucsusa.org/clean_energy/coalvswind/c02b.html

¹⁸ Frequently Asked Questions. FutureGen Alliance, Inc. 2006. <http://www.futuregenalliance.org/faqs.stm>

with EPA standards, contaminants are still released into natural water systems.¹⁹ On the other hand, a 100 MW CSP plant only requires about 815,000 gallons of water every year, and there is very little waste water.²⁰

Land is another finite resource that is necessary for all types of infrastructure, including power facilities. Table 2 shows estimates of the acreage needed for every MW of capacity for different facilities.

Table 2. Acres Per Megawatt of Generation Capacity

Energy Source	Acres/MW
Solar-PV	2.47 ⁷ -12.36 ⁷
Solar-CSP	5.0 ¹⁰ -12.33 ⁸
Wind	24.71 ⁷ -50 ⁹
Coal	0.35 ⁹ -1.1 ¹¹
IGCC Coal	1.31 ¹² -2.36 ¹²
Gas	0.29 ¹³ -0.41 ¹³

⁷ PV FAQ's. U.S. Department of Energy, Energy Efficiency and Renewable Energy. National Renewable Energy Laboratory. (www.hubbertpeak.com/Apollo2/photovoltaics/HowMuchLandNREL.pdf)

⁸ Concentrating Solar Power: From Research to Implementation. European Commission. European Communities, 2007. (ec.europa.eu/energy/res/publications/doc/2007_concentrating_solar_power_en.pdf)

⁹ Cure for the Common Coal: Can Wind Power Replace Traditional Fossil Power? Time2Time. June 3, 2008. (<http://uva72.blogspot.com/2008/06/cure-for-common-coal-can-wind-power.html>)

¹⁰ Concentrating Solar Power. U.S. Department of Energy, Energy Efficiency and Renewable Energy. National Renewable Energy Laboratory. (solareis.anl.gov/documents/docs/NREL_CSP_1.pdf)

¹¹ Jonah Lamb. Killer Coal. Salt Lake City Weekly. May 3, 2007. (<http://www.slweekly.com/index.cfm?do=article.details&id=1CA7B2DC-2BF4-55D0-F1FC484A425B4016>)

¹² Final Site Selection Report. FutureGen Industrial Alliance, Inc. Submitted to Department of Energy, Dec. 18, 2007.

¹³ Eleanor Charles. A Flurry of Proposals for Gas-Fired Power Plants. The New York Times. October 24, 1998. (http://query.nytimes.com/gst/fullpage.html?res=9507E6D8123DF937A15753C1A96E958260&sec=&spon=&page_wanted=all)

In this category, fossil fuel-based power facilities appear to more efficient. However, the land necessary to extract and process their respective fuel sources should be reviewed in any adequate cost/benefit breakdown. There are also the costs of reclaiming sites where coal, oil, and gas have been extracted. These cost taxpayers hundreds of millions of dollars every year.²¹ Without considering all of the costs behind every unit of power produced, any analysis of costs and benefits is insufficient.

Regardless of the type of facility, there are some means of abating the costs of installing a power plant. Undeveloped lands may be worth considerably more to recreational purposes and the ecosystem than are lands that have already been disturbed from their natural states. Therefore,

¹⁹ EnergyJustice.net. Fact Sheet.

²⁰ Ivapah Solar Electric Generating System. The California Energy Commission. July 1, 2008. <http://www.energy.ca.gov/sitingcases/ivanpah/index.html>

²¹ Data Tables and Figures. 2006 Annual Report. OSM/DOI Strategic Plan Measures. Office of Surface Mining. 2006. <http://www.osmre.gov/annualreports/06AR11.pdf>

locating new facilities and corridors near existing infrastructure keeps essentially all of the benefits of a facility located anywhere while simultaneously reducing the market and non-market costs of installing the new infrastructure.

Recommendations: In order to ensure that any proposed utility-scale solar energy development results in maximum net public benefits, the analysis of such development must account for the all opportunity costs. This includes the costs associated with siting utility-scale solar energy development on undeveloped public lands, and the resulting loss of economic benefits, as well as the potential jobs and income to local communities. The analysis should also compare the relative costs of other forms of energy development

c. Benefits of siting on private lands

Within a consideration of reasonable alternatives, the BLM should consider whether siting a power facility on private lands has greater potential benefits than the equivalent project on public holdings.

The goal of installing any type of power-generating facility is to benefit the public as much as possible. If installed on public lands, annual ROW rents are collected by the BLM. If installed on private lands, payments would more often go directly to the local community, and through multiplier effects, would contribute to the vitality of local economies (and in turn the respective state and then federal economies) more than if the rent were collected by the federal government. It is therefore necessary to consider the direct impact on local economies from a new power facility being sited on private as opposed to federal land within the larger socioeconomic analysis.

Recommendations: The Solar PEIS should include an analysis of the relative benefits of siting utility-scale solar energy developments on private lands rather than on public lands. If the financial return to a private landowner would be higher, the agency should give a higher priority to siting on private lands.

d. Benefits as well as mitigation of costs by siting on Brownfields

There are millions of acres of contaminated lands in the U.S.²² Serious potential exists for installing renewable power generation infrastructure on these lands.

The conditions of many brownfields are particularly well-suited for the development and operation of power facilities. There are many sites where the ground is relatively level and significant vegetation is absent; much of this was done when these sites were originally established. In addition, most brownfields are located within 5 miles existing electricity transmission infrastructure, reducing the need to further impact the nearby area by developing transmission corridors.²³ Furthermore, most of these sites already exist in a “heavy industry” zoning classification that a power facility requires. This also provides access to established waste streams.²⁴

²² Powerpoint: Land-Based Initiatives and Climate Change. SRA International. EPA Land Revitalization Staff Office. June, 2007. <http://www.authorstream.com/Presentation/Margherita-45877-NARUC-Pres-July-15-Land-Based-Initiatives-Climate-ChangeJune-2007-Opportunities-GHG-Education-ppt-powerpoint/>

²³ Ibid.

²⁴ Energy Department Announces National Initiative to Redevelop Brownfields with Renewable Energy. U.S. Environmental Protection Agency. April 4, 2008. <http://www.epa.gov/brownfields/html-doc/brightfd.htm>

Installing renewable power infrastructure on brownfields also avoids many of the costs associated with developing open public and private lands. Ecological integrity and opportunities for recreation are already largely absent. In fact, many of these contaminated land sites can be improved. Progressive land restoration would improve environmental conditions and help to mitigate carbon emissions.²⁵

Recommendations: The Solar PEIS and consideration of individual projects should include an analysis of the relative benefits of siting utility-scale solar energy developments on brownfields and other degraded lands, both public and private. The analysis should examine the net public benefits of siting on these lands relative to siting on undeveloped lands, especially undeveloped public lands which may be more important for the climate change mitigation properties, the provision of recreation opportunities, their role in local economies and their provision of passive use and other non-market values.

2. Non-market values should be included in the economic analyses

One of the most important purposes of public lands, including those administered by the Bureau of Land Management, is the provision of public goods or non-market goods. Opportunities for solitude, outdoor recreation, clean air, clean water, the preservation of wilderness and other undeveloped areas would be underprovided if left entirely to market forces.

In the assessment of the socioeconomic impacts of solar energy development, the Solar PEIS must account for the non-market values associated with undeveloped wild lands. The agencies implementing the Solar PEIS have an inherent responsibility to see that these lands are not impaired in order to ensure that the public goods they produce continue to be provided and in quantities that meet the demand of all U.S. citizens.

Non-market values have been measured and quantified for decades. There is a well-established body of economic research on the measurement of non-market values, and the physical changes (which result in decreases in the source of these values) brought about by development are very easy to measure quantitatively.

This analysis is especially important when considering actions which would degrade or damage roadless areas or other lands with wilderness characteristics since these lands produce benefits and values that are seldom captured in the existing market structure. The literature on the benefits of wilderness and other undeveloped lands is well-established and should be used by the BLM and DOE to estimate the potential value of these lands where utility-scale solar energy development is proposed. Krutilla (1967) provides a seminal paper on the valuation of wilderness and has led the way for countless others who have done additional research all providing compelling evidence that these lands are worth much more in their protected state. Morton (1999), Bowker et al. (2005), Krieger (2001) and Loomis and Richardson (2000) provide overviews of the market and non-market, use and non-use values of wilderness and wildlands. See Walsh et al. (1984), Bishop and Welsh (1992), Gowdy (1997), Cordell et al. (1998), Loomis and Richardson (2001) and Payne et al. (1992) for several more examples.

Peer-reviewed methods for quantifying both the non-market and market costs of changing environmental quality have been developed by economists and are readily applicable to solar energy development. For a catalog of these methods see Freeman (2003). For a complete socioeconomic analysis, agencies implementing the Solar PEIC should adapt these methods to

²⁵ Land-Based Initiatives and Climate Change. 2007.

conditions in each of the proposed solar energy locations to obtain a complete estimate of the economic consequences of development.

The socioeconomic analysis in the Solar PEIS must also adequately address the potential impacts on the quality of life for residents of communities that will be impacted by solar energy development. The quality of life in many communities with abundant protected public lands is often tied inextricably with those lands. Any negative impacts on these lands from solar energy development may deteriorate aspects of the western quality of life. As discussed above, such a decline will create more than simply emotional or psychological impacts. Areas with high quality of life are better able to attract the entrepreneurs, skilled and creative workers, retirees and others who are important economic drivers of many western communities.

Recommendations: The Solar PEIS must measure and account for changes in non-market values associated with solar energy development. To do otherwise omits a very important socioeconomic impact that would directly result from solar energy development. The analysis must assess the non-market economic impacts to all Americans, including the passive use values of undeveloped public lands.

The Solar PEIS must also include an assessment of impacts on the local quality of life that are may result from utility-scale solar energy development on surrounding public lands. The potential resulting economic impacts of any decline in quality of life must also be assessed in order to fully evaluate the proposed development.

3. Recommended methods for socioeconomic analyses

a. Economic base models

The use of economic base models such as IMPLAN is insufficient to predict future economic impacts from solar energy development. While these models can be useful as a tool to develop static analyses of the regional economy, the agencies developing the Solar PEIS and local communities potentially impacted must be aware of the shortcomings and poor track record of such models as predictive tools. Economic base models do not consider the impacts of many important variables that affect regional growth in many rural communities, especially in the West. Attributes such as natural amenities, high quality hunting, fishing and recreational opportunities, open space, scenic beauty, clean air and clean water, a sense of community, and overall high quality of life are not measured or accounted for in economic base models, however these amenities are associated with attracting new businesses and migrants as well as retaining long-time residents. Many residents of Western communities (both long-time and new) earn retirement and investment income, and while it is technically possible, most economic base models completely fail to consider the important economic role of retirement and investment income.

Many economists have offered constructive critiques of the such models. See for example: Krikelas (1991), Tiebout (1956), Haynes and Horne (1997), Hoekstra, et al. (1990), Richardson, 1985 and the Office of Technology Assessment (1992). The ease of data acquisition for estimating the impacts of manufacturing, construction and resource extractive sectors combined with the difficulty of estimating the impacts of recreation and tourism underscores the potential bias favoring development in economic base models. The concern over the accuracy of these models combined with concern over the use of such models for planning, suggests that it is not

only inappropriate but a disservice to rural communities to rely on economic base analyses to estimate the economic impacts of public land management on rural communities.

Recommendations: We recommend that the analysis performed for the Solar PEIS not rely solely on IMPLAN or on other models derived from economic base theory to predict the economic impacts of solar energy development. As these comments demonstrate the relationship between public land management and local and regional economic prosperity and growth is far more complex than these models assume, and given the potentially significant impacts on many of the region's public lands, use of such models will result in an incomplete and inadequate analysis of the socioeconomic impacts.

b. Estimation of the impacts to property values

There is a large body of work which looks at the positive impacts of open space and protected public lands on property values. These studies can be applied to infer the inverse decline in property values associated with the loss of protected public lands and open spaces that may occur when solar energy projects are sited on such lands. Numerous studies show that there is a positive correlation between property values and open spaces and protected public lands. Given that solar energy development may impact public land and open space throughout the six-state area, it is likely to have negative impacts on the property values in the region.

Several examples of such studies include Earnhart (2006), Bengochea Moranco (2003), Espey and Owosu-Edusei (2001), Bolitzer and Netusil (2000), Lutzenhiser and Netusil (2001), Geoghegan et al. (2003), Geoghegan (2002), Acharya and Bennett (2001), Irwin (2002), Tajima (2003), Luttik (2000), Loomis et al. (2004) and Breffle et al. (1998). McConnell and Walls (2005) provide a good overview of both property values and non-use values associated with open spaces. All of these studies provide empirical evidence of the potential losses to western citizens from the conversion of open space to industrial use.

Recommendations: The Solar PEIS should include an examination of the impacts of solar energy development on residential and other property values. The agencies should make a quantitative assessment of these potential impacts.

E. Scope of NEPA analysis

NEPA requires the agencies to take a "hard look" at the potential environmental consequences of this proposed action, so that they must assess impacts and effects that include: "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8.

1. Analysis of environmental impacts should be conducted at the landscape level.

The scope of NEPA analysis must be appropriate to the scope of the proposed action. Kern v. United States Bureau of Land Management, 284 F.3d 1062, 1072 (9th Cir. 2002). **In the context of this PEIS, the agencies should look to the overall effect on the landscape of these six connected Western States, and the many resources it contains.** A landscape level analysis of proposed energy corridors will take into account the distribution of resources across the affected

states, complying with the agencies' legal obligations to truly assess potential impacts and yielding management decisions that will balance and protect the multiple resources of these public lands. The placement of and conditions placed on energy corridors can define which areas will remain or become roadless, and which areas will be disturbed and how. By affecting the fragmentation of the landscape, energy corridors can affect how naturally or unnaturally a landscape will behave in terms of water flow and quality, wildlife migration, and species composition and function. In considering the potential impacts of permitting an entire network of energy corridors, the agencies must consider how this placement will change the landscape and interfere with species' ability to migrate and survive.

The correct scope of analysis necessitates consideration of the connected landscapes of these states. For instance, as documented in the *Heart of the West Conservation Plan* (available at: http://wildutahproject.org/files/HOW_Executive_Summary.pdf) -- a science-based spatial analysis of the relative importance of various wildlife habitat cores and linkages throughout the Heart of the West ecoregion -- the areas of northeastern Utah, northwestern Colorado, and southwestern Wyoming are inextricably linked in an ecoregion with core habitat areas and key migratory linkages. As a result, impacts to wildlife habitat in one part of the Heart of the West ecoregion will affect wildlife viability throughout the ecoregion. Similarly, there are basin-wide impacts, in terms of changes to the water quantity and quality in the Green River system, and cumulative impacts to the common airshed, all of which affect the entire Heart of the West ecoregion. Other ecoregions in the planning area addressed by this PEIS are similarly interconnected. *See, e.g.*, the Wildlands Network - <http://www.twp.org/cms/page1158.cfm>.

A landscape approach is supported by NEPA guidance on cumulative impacts, which requires that the entire area potentially affected be included in a cumulative analysis and holds that a failure to include an analysis of actions within a larger region will render NEPA analysis insufficient. *See, e.g., Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1078 (9th Cir. 2002) (analysis of root fungus on cedar timber sales was necessary for entire area).

Thus, in order to accurately evaluate the potential environmental consequences of west-wide designation of energy corridors, the cumulative impact analysis would necessarily look at the cumulative impacts on all of the directly and indirectly affected landscapes. The Environmental Protection Agency, in providing direction to its reviewers, emphasizes the importance of ensuring that the cumulative impact analysis is based on “geographic and time boundaries large enough to include all potentially significant effects on the resources of concern. The NEPA document should delineate appropriate geographic areas including natural ecological boundaries, whenever possible, and should evaluate the time period of the project's effects.” U.S. Environmental Protection Agency, 1999, *Consideration Of Cumulative Impacts In EPA Review of NEPA Documents*. (emphasis original).

The Council for Environmental Quality's (CEQ) guidelines on cumulative effects analysis provide the following steps for determining the appropriate geographic boundary of cumulative impact analysis:

1. Determine the geographic area that will potentially be directly affected by an action – known as the “project impact zone”;
2. Identify resources in the project impact zone that could be affected by the action;

3. Determine the geographic areas occupied by the resources outside the project impact zone.
4. Identify the appropriate area for analysis of cumulative effects based on the largest of the areas determined in step 3. Council on Environmental Quality, 1997, *Considering Cumulative Effects Under the National Environmental Policy Act*.

For the energy corridors, the geographic area of impact will include the resources, such as wildlife, within areas of proposed development and their habitat extending outside such areas. The agencies can and should take the overall impacts of the corridors on the affected landscapes into account when considering their potential environmental consequences. *See, e.g., Newmont Mining Corp.*, 151 IBLA 190 (1999) (Where the Bureau of Land Management could take into account the overall degradation from existing and connected proposed operations, a cumulative analysis of all impacts was required); *Kern v. United States Bureau of Land Management*, *supra*. (BLM must perform cumulative impact analysis of reasonably foreseeable future timber sales on spread of root fungus before approving single proposed sale). A landscape level analysis is an important part of a programmatic EIS, even if site-specific analysis might be deferred until authorization of specific projects. For instance, the U.S. Court of Appeals for the Ninth Circuit has held that analyzing the overall environmental risks involved in transporting oil from off-shore leases was appropriate and necessary in a PEIS, although specific analysis of individual pipeline locations could be deferred. *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1376-1377 (2nd Cir. 1977) (It was “essential to consider and weigh the environmental aspects of transportation, as well as of exploration and production.”). In order to fulfill the mandate of NEPA that the agencies make an informed assessment of the environmental consequences of its actions, the landscape level effects of an expanded large-scale corridor system must be assessed.

2. Cumulative impact analysis should include other pending programmatic efforts and additional development to be supported by new corridors.

As noted above, NEPA requires the agencies to consider the cumulative impacts of the proposed corridors. The CEQ’s NEPA regulations define “cumulative impact” as:

the impact on the environment which results from the **incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions**. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7. (emphasis added).

The analysis of impacts included in the PEIS must address the cumulative impacts of both the development of utility-scale solar energy projects and other foreseeable connected activities within the same general areas. The resources that allow an ecosystem to function often share a common geography, such that changes to the water quantity and quality in a river system or impacts to an airshed (which may be affected by activities such as oil and gas drilling), all contribute in common. Similarly, changes to these resources may affect the core habitat and linkages that are critical for survival of wildlife and vegetation in a region. Accordingly, where

there are shared environmental resources that can act as indicators of the health of ecosystems, the agencies must analyze all of the direct and indirect impacts that affect them.

The Environmental Protection Agency provides the following guidance to its reviewers on assessing the range of other activities to be considered in cumulative impacts analysis:

1. the proximity of the projects to each other either geographically or temporally;
2. the probability of actions affecting the same environmental system, especially systems that are susceptible to development pressures;
3. the likelihood that the project will lead to a wide range of effects or lead to a number of associated projects; and
4. whether the effects of other projects are similar to those of the project under review.
5. the likelihood that the project will occur -- final approval is the best indicator but long range planning of government agencies and private organizations and trends information should also be used;
6. temporal aspects, such as the project being imminent. U.S. Environmental Protection Agency, 1999, *Consideration Of Cumulative Impacts In EPA Review of NEPA Documents*.

In this case, the BLM's obligation to analyze impacts must encompass not only the proposed and projected solar energy projects, but also the cumulative impacts of the projects, taken together with the impacts of existing, proposed, or reasonably foreseeable projects, on the environment. Thus, the BLM must analyze the cumulative impacts not just of the solar development projects, but also of other projects that will impact resources in common with this proposed action. As discussed above, there are other initiatives to support development and transmission of renewable energy projects and it is critical that the BLM coordinate with these processes and consider the cumulative impacts, which presumably can be reduced by proactive coordination, as well.

In determining the appropriate scope of environmental analysis for an action, the Government must consider not only the single proposed action, but also three types of related actions:

- (1) Connected actions - Actions which are closely related and:
 - (i) Automatically trigger other actions which may require environmental impact statements.
 - (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; or
 - (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.
- (2) Cumulative actions – Actions, which when viewed with other proposed actions, have cumulatively significant impacts.
- (3) Similar actions – Actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental

consequences together, such as common timing or geography. 40 C.F.R. § 1508.25. Under any of these classifications, the coordinated actions that the agencies are taking through this PEIS trigger a broader assessment of the cumulative impacts.

The increased level of solar energy development projects that will follow the completion of this PEIS are also connected to new transmission projects that are likely to trigger preparation of an EIS. Impacts from transmission projects include direct affects to lands, wildlife and natural resources from the construction, ongoing maintenance and monitoring of transmission infrastructures and rights-of-way (ROW). These impacts include direct impacts to soils and vegetation due to clearing ROW, as well as direct wildlife impacts in terms of avian collisions and electrocutions. Indirect impacts include wildlife displacement, increased raptor prey opportunities on vertical structures and habitat fragmentation impacts on a variety of wildlife species. Additional transmission/ROW impacts to consider include noise, EMF, visual and aesthetic concerns.

In addition, the clustering of solar energy development projects with projects to develop more traditional forms of energy in order to access the new transmission corridors proposed in the West-wide Energy Corridor PEIS are likely to have a cumulatively significant effect on the resources in the area. And, since the energy corridors and new transmission will be tied, at least to some extent, on the location of developable energy sources, including solar, these projects are certainly similar in terms of geography. Both the various programs and the increased development projects will have a connected and cumulative effect on resources ranging from elk and pronghorn herds to bird of prey populations, sage grouse populations, air quality, water quality (and erosion and sedimentation), and overall potential for primitive recreation. Therefore, their combined impact should be taken into account as part of the analysis of cumulative impacts associated with this PEIS.

With the western U.S. already possessing over 100,000 linear miles of power lines, the Solar PEIS should analyze opportunities to maximize current grid assets to transport newly developed solar energy instead of new power lines in new ROW. In addition, the PEIS should analyze opportunities at the major population centers to reduce generation import (and therefore transmission) needs by maximizing efficiency, distributed generation resources and other demand-reducing efforts.

3. Site- and use-specific analysis must be conducted prior to designation and approval of energy corridors.

As noted above, the scope of NEPA analysis must be appropriate to the scope of the proposed action. Kern v. United States Bureau of Land Management, 284 F.3d at 1072. In the context of this PEIS, the future approval of individual solar development projects must be based on specific analysis of the proposed locations and uses of the corridors. If the PEIS will not seek to approve individual projects or take the place of site-specific analysis, then the scope of NEPA analysis can be focused more on the general types of impacts and the overall effect of this policy initiative, as is most common for a programmatic EIS. See, Northcoast Env't'l v. Glickman, 136 F.3d 660, 688 (9th Cir. 1998) (Programmatic EIS is used to examine “an entire policy initiative.”). However, if the PEIS will commit the BLM to a specific course of action, such as

authorizing actual projects, then a site-specific and use-specific analysis of each corridor must be completed. *See, State of California v. Block*, 690 F.2d 753, 765 (9th Cir. 1982); *County of Suffolk v. Secretary of Interior*, 562 F.2d at 1378.

We recommend that the PEIS include definitive commitments to conduct site-specific NEPA analyses when individual project locations and specifications are identified. In fact, BLM’s resource management plans and project-level EISs often state that site-specific analysis is not possible until a particular activity, such as a pipeline, is proposed. This approach would also be consistent with the NEPA regulation governing tiering environmental analysis for a site-specific action to a broader programmatic EIS. The regulation envisions that agencies can tier to a “broad environmental impact statement” so that the subsequent environmental document “shall concentrate on the issues specific to the subsequent action.” 40 C.F.R. § 1502.20. In the context of the PEIS, this broader programmatic document should analyze the general effects of an increased level of development of utility-scale solar development. However, tiering to this type of analysis cannot support the approval of projects, which would require a NEPA analysis of the environmental consequences, as “specific to the subsequent action,” be included in the PEIS.

4. Range of alternatives

The range of alternatives is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. NEPA requires BLM to “rigorously explore and objectively evaluate” a range of alternatives to proposed federal actions. *See* 40 C.F.R. §§ 1502.14(a) and 1508.25(c).

NEPA’s requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative -- is thus an integral part of the statutory scheme.

Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), cert. denied, 489 U.S. 1066 (1989) (citations and emphasis omitted).

An agency violates NEPA by failing to “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. *See, e.g., Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein); *see also Env’tl Defense Fund., Inc. v. U.S. Army Corps. of Eng’rs*, 492 F.2d 1123, 1135 (5th Cir. 1974); *City of New York v. Dept. of Transp.*, 715 F.2d 732, 743 (2nd Cir. 1983) (NEPA’s requirement for consideration of a range of alternatives is intended to prevent the EIS from becoming “a foreordained formality.”); *Utahns for Better Transportation v. U.S. Dept. of Transp.*, 305 F.3d 1152 (10th Cir. 2002), modified in part on other grounds, 319 F.3d 1207 (2003); *Or. Env’tl. Council v. Kunzman*, 614 F.Supp. 657, 659-660 (D. Or. 1985) (stating that the alternatives that must be considered under NEPA are those that would “avoid or minimize” adverse environmental effects).

The current range of alternatives does not contain a sufficient range of alternatives that avoid or minimize environmental effects. Both the “no action” alternative and the “limited development” alternative are ways to proceed with considering solar application on a case-by-case basis. The “facilitated development” alternative (the proposed action) provide for the BLM to develop a solar energy program. There is no consideration of alternatives that would ensure more environmentally responsible approaches to solar energy development. In order to comply with the requirements of NEPA, the PEIS should include additional alternatives that consider:

- A facilitated program with exclusions for all lands with wilderness characteristics, critical habitat and migration corridors in addition to those exclusion areas identified in the Notice of Availability;
- A facilitated program that would be limited by disturbance of only a specific percentage of lands with solar potential at any given time – both for the entire planning area and for the individual field offices affected – to ensure that ecological functions are preserved. Additional disturbance would only be permitted once affected lands with existing disturbance had been restored;
- A facilitated program that prioritizes projects that can show that they will have a net benefit in impacting climate change; and/or
- A facilitated program that would only permit construction of solar projects in close proximity (i.e., within 5 miles) to existing transmission lines or within zones being designated through the RETI or WREZ processes.

Recommendations: NEPA analysis in the PEIS should be conducted at the landscape level, address cumulative impacts, set out standards for additional site-specific analysis for proposed projects, and include more environmentally protective alternatives.

F. Transmission

The Notice of Intent states: “The PEIS will consider whether designation by BLM of additional electricity transmission corridors on BLM-administered lands is necessary to facilitate utility-scale solar energy development.” As discussed in detail above, the designation of new corridors should be considered in relation to not only existing transmission lines and the corridors currently being planned by the West-wide Energy Corridors PEIS, RETI, and WREZ processes, as well as others. If the BLM is going to designate new corridors in the PEIS, then BLM must complete all of the necessary NEPA analysis for those corridors, including a thorough discussion as to why the ongoing corridor designation processes will not be sufficient. In making a determination about the need for additional corridors, the BLM should commit to first coordinating with the ongoing designation processes and prioritize using those corridors, instead of designating still more corridors without coordination.

Recommendations: The PEIS must clearly address whether it is merely determining the potential need for new corridors to facilitate new solar energy projects or if the PEIS will also be designating corridors based on projected development. We would recommend that the PEIS focus on using existing and planned corridors, and coordinate with ongoing designation processes to ensure that corridors to support project solar energy development are being designated, instead of designating new corridors.

V. Department of Energy Solar Energy Program

Like the BLM, the DOE must adequately assess all impacts, market and non-market, associated with the development of the agency's solar energy program.

A. Current DOE Solar Energy Program

DOE should disclose the types of solar projects that it currently funds, as well as the specific environmental concerns that are currently addressed by the DOE Solar Energy Technologies Program. This will foster public understanding and participation in the PEIS process. DOE should also establish which program offices, in addition to the Solar Energy Technologies Program, will potentially utilize the PEIS in decision-making.

B. Issues to be Addressed in PEIS

The DOE should incorporate the planning criteria and significant issues identified by the BLM and also those listed in Section IV above for analysis in developing principles for awarding funding for solar energy projects. The scope of DOE's analysis and categories of lands and resources should be broader, however, since the agency's programs can fund projects sited on federal, state, private and tribal lands. For the same reason, socioeconomic impacts are of particular concern. As discussed within the socioeconomic section above, there may be various benefits (social, ecological, and economic) to placing a solar project on private lands or even state or tribal lands, which should be identified in an analysis of potential projects to be funded.

DOE should commit to only supporting solar projects that fully meet the criteria recommended in these comments. Environmentally protective stipulations should be included in all DOE grants; failure to comply with these criteria at any stage in the project should result in loss of funding. The Draft PEIS should include specific mitigation measures and best management practices that the agency, industry, and stakeholders will be expected to adhere to. It's essential that the public has the opportunity to review and comment on these practices during the PEIS process.

C. Range of Alternatives

The DOE should provide a broader range of alternatives than BLM because the agency can fund projects on tribal, state, private, and other federal lands in addition to BLM-administered lands and has no affirmative obligation to process ROWs. These alternatives can include prioritizing projects that have economic benefits, prioritizing projects that are the least environmentally destructive, and prioritizing projects on already degraded lands such as Brownfield or Superfund sites. The Draft PEIS should establish a range of alternatives for the agency to analyze and the public to comment on.

Recommendations: DOE should use this opportunity to mirror the process and analysis being conducted by the BLM, so it can develop a comprehensive set of principles for funding solar projects.

Thank you for considering these scoping comments and for your collective commitment to supporting renewable energy. Please include all of the undersigned in your list of interested persons for this PEIS.

We look forward to continuing to participate in this process. Please feel free to contact us if you have any questions or need additional information. We would also welcome the opportunity to meet with you to present and discuss these comments in person.

Sincerely,

Nada Culver
Senior Counsel, Public Lands Campaign
BLM Action Center
(303) 650-5818 Ext. 117
Nada_culver@twso.org

AND ON BEHALF OF:

Great Old Broads for Wilderness

Veronica Egan, Executive Director
649 E. College Drive
PO Box 2924
Durango, CO 81302

Californians for Western Wilderness

Michael J. Painter, Coordinator
PO Box 210474
San Francisco, CA 94121-0474

Grand Canyon Trust

Roger Clark, Air & Energy Director
2601 N. Fort Valley Road
Flagstaff, AZ 86001

Soda Mountain Wilderness Council

Dave Willis
P.O. Box 512
Ashland, OR 97520

California Wilderness Coalition

Monica Argandoña, Desert Program Director
167 North Third Avenue, Suite M

Upland, CA 91786

Western Environmental Law Center

Monique DiGiorgio, Conservation Strategist
679 East Second Avenue, Suite 11B
Durango, CO 81301

San Luis Valley Ecosystem Council

Christine Canaly
PO Box 223
Alamosa, CO 81101

Wyoming Outdoor Council

Bruce Pendery, Staff Attorney & Program Director
444 East 800 North
Logan, UT 84321

Southern Utah Wilderness Alliance

Heidi McIntosh, Conservation Director
425 East 100 South
Salt Lake City, UT 84111

Sierra Club

Bill Corcoran, Senior Regional Representative
3435 Wilshire Blvd., Suite 660
Los Angeles, CA 90010

Natural Resources Defense Council

Johanna H. Wald, Senior Attorney
111 Sutter Street
San Francisco, CA 94104

Red Rocks Forests

Terry Shepherd, Executive Director
90 West Center Street
Moab, UT 84532

**Center for Water Advocacy
& Local Green Party of Moab**

Harold Shepherd, Executive Director
PO Box 331
Moab, UT 84532

San Luis Valley Water Protection Coalition

Ceal Smith

PO Box 351
Alamosa, CO 81101

Western Resource Advocates

Tom Darin, Energy Transmission Attorney
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Defenders of Wildlife

Peter Nelson, Director, Federal Lands Program
1130 17th Street NW
Washington DC 20036-4604

Arizona Wilderness Coalition

Kevin Gaither-Banchoff, Executive Director
P.O. Box 40340
Tucson, AZ 85717

Colorado Environmental Coalition

Elise Jones, Executive Director
1536 Wynkoop Street #5C
Denver, CO 80202

Friends of the Missouri Breaks Monument

Dennis Tighe, President
717 13th Street SW
Great Falls, MT 59401

Nevada Wilderness Project

John Tull
8550 White Fir Street
Reno, NV 89523

Attachments

1. Letter from William H. Meadows, President of The Wilderness Society, to the House Appropriations Committee, July 8, 2008.
2. Haefele, M., P. Morton, and N. Culver. 2007. *Natural Dividends: Wildland Protection and the Changing Economy of the Rocky Mountain West*. Washington DC: The Wilderness Society.
3. Motion to Stay Briefing and for a Status Conference, September 9, 2005.
4. Southern Utah Wilderness Alliance v. Norton, 457 F. Supp. 2d 1253 (D. Utah 2006).
5. *Citizen-Wilderness Proposals*, CD of GIS Data.

6. The Wilderness Society. 2006. *Socio-Economic Framework for Public Land Management Planning: Indicators for the West's Economy*. Washington DC: The Wilderness Society.
7. *Have Desert Researchers Discovered a Hidden Loop in the Carbon Cycle?*, Science, Vol. 320, pp. 1094-140 (June 13, 2008).

Appendix 1

- a. *Habitat Fragmentation from Roads: Travel Planning Methods to Safeguard BLM Lands*
- b. *Fragmenting Our Lands: The Ecological Footprint from Oil and Gas Development*
- c. *Protecting Northern Arizona's National Monuments: The Challenge of Transportation Management*
- d. *Wildlife at a Crossroads: Energy Development in Western Wyoming*
- e. *Ecological Effects of a Transportation Network on Wildlife*

References

- Acharya, G. and L. L. Bennett. 2001. Valuing open space and land-use patterns in urban watersheds. *Journal of Real Estate Finance and Economics* 22(2-3): 221-237
- American Solar Energy Society. 2008. Concentrated Solar Power, Solar Electric Division. (www.ases.org/divisions/electric/facts_csp.pdf, accessed July 8, 2008)
- Barrens, R., J. Talberth, J. Thacher, M. Hand. 2006. Economic and Community Benefits of Protecting New Mexico's Inventoried Roadless Areas. Center for Sustainable Economy, Santa Fe, NM. Available at: <http://www.sustainable-economy.org/uploads/File/Final%20Report.pdf> (accessed February 22, 2007)
- Bennett, K., and M.K. McBeth. 1998. Contemporary western rural USA economic composition: Potential implications for environmental policy and research. *Environmental Management* 22(3): 371-381.fs
- Bengochea Moranco, A. 2003. A hedonic valuation of urban green areas. *Landscape and Urban Planning* 66(1): 35-41.
- Bishop, R. C. and M. P. Welsh. 1992. Existence Values in Benefit-Cost Analysis and Damage Assessment. *Land Economics* 68(4): 405-417.
- Bolitzer, B. and N.R. Netusil. 2000. The impact of open spaces on property values in Portland, Oregon. *Journal of Environmental Management* 59(3): 185-193.
- Bowker, J. M., J. E. Harvard III, J. C. Bergstrom, H. K. Cordell, D. B. K. English, and J. B. Loomis. 2005. The net economic value of wilderness. In: Cordell, H. K., J. C. Bergstrom, and J.M. Bowker (eds), *The Multiple Values of Wilderness*. State College, PA: Venture Publishing.

- Breffle, W. S., E. R. Morey and T. S. Lodder. 1998. Using contingent valuation to estimate a neighbourhood's willingness to pay to preserve undeveloped urban land. *Urban Studies* 35(4): 715-727.
- California Energy Commission. July 1, 2008. Ivanpah Solar Electric Generating System. (<http://www.energy.ca.gov/sitingcases/ivanpah/index.html>, accessed July 9, 2008)
- Center for the Study of Rural America. 2006a. Regional Asset Indicators: Human Amenities. May 16, 2006. http://www.kansascityfed.org/RegionalAffairs/Indicators/Humanamenities_506.pdf
- Center for the Study of Rural America. 2006b. Regional Asset Indicators: The Creative Workforce. July 2006. http://www.kansascityfed.org/RegionalAffairs/Indicators/Creative%20Workers_706.pdf
- Cordell, H.K., M.A. Tarrant, B.L. McDonald and J. C. Bergstrom. 1998. How the public views wilderness: More results from the USA survey on recreation and the environment. *International Journal of Wilderness* 4(3): 28-31.
- Cure for the Common Coal: Can Wind Power Replace Traditional Fossil Power? Time2Time. June 3, 2008. <http://uva72.blogspot.com/2008/06/cure-for-common-coal-can-wind-power.html>
- Deller, S.C. 1995. Economic Impacts of Retirement Migration. *Economic Development Quarterly* 9(1): 25-38.
- Deller, S.C., T. Tsai, D.W. Marcouiller, and D.B.K. English. 2001. The Role of Amenities and Quality of Life in Rural Economic Growth. *American Journal of Agricultural Economics* 83(2): 352-365.
- Duffy-Deno, K. T. 1998. The Effect of Federal Wilderness on County Growth in the Intermountain Western United States. *Journal of Regional Science* 38(1): 109-136.
- Earnhart, D. 2006. Using contingent-pricing analysis to value open space and its duration at residential locations. *Land Economics* 82(1):17-35.
- Earth Policy Institute. 2008. Data for U.S. Moving Toward Ban on New Coal-Fired Power Plants. (http://www.earth-policy.org/Updates/2008/Update70_data.htm, accessed July 9, 2008)
- Espey, M. and K. Owosu-Edusei. 2001. Neighborhood parks and residential property values in Greenville, South Carolina. *Journal of Agricultural and Applied Economics* 33(3): 487-492.
- Energy Justice Network. 2007. "Fact Sheet: 'Clean Coal' Power Plants (IGCC)." (<http://www.energyjustice.net/coal/igcc/factsheet-long.pdf>, accessed July 9, 2008)
- European Commission. 2007. "Concentrating Solar Power: From Research to Implementation." (http://ec.europa.eu/energy/res/publications/doc/2007_concertrating_solar_power_en.pdf, accessed July 9, 2008).
- The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) (German) 2003. Concentrating Solar Power Now – Clean Energy for Sustainable

- Development. (<http://www.escocyprus.com/epa/Specifications/CSP1.pdf>, accessed July 9, 2008)
- Forman, R.T. 1999. Estimate of the area affected ecologically by the road system in the United States. *Conservation Biology* 14: 31-35.
- Freeman, A.M. III, 2003, *The Measurement of Environmental and Resource Values*, 2nd Edition, Resources for the Future, Washington, D.C.
- FutureGen Industrial Alliance, Inc. 2007. Final Site Selection Report, Submitted to the U.S. Department of Energy, Dec. 18, 2007.
- FutureGen Alliance, Inc. 2006. Frequently Asked Questions. (<http://www.futuregenalliance.org/faqs.stm>, accessed July 9, 2008)
- Geoghegan, J. 2002. The value of open space in residential land use. *Land Use Policy* 19(1): 91-98
- Geoghegan, J., L. Lynch, and S. Bucholtz. 2003. Capitalization of open spaces into housing values and residential property tax revenue impacts of agricultural easement programs. *Agricultural and Resource Economics Review* 32(1): 35-45.
- Gowdy, J. M. 1997. The Value of Biodiversity: Markets, Society, and Ecosystems. *Land Economics* 73(1): 25-4`.
- Haefele, M., P. Morton, and N. Culver. 2007. *Natural Dividends: Wildland Protection and the Changing Economy of the Rocky Mountain West*. Washington, D.C.: The Wilderness Society. (available at: <http://www.wilderness.org/Library/Documents/NaturalDividends.cfm>).
- Haynes, R. W.; Horne, A.L. 1997. Economic Assessment of the Basin. In T.M. Quigley and S.J. Arbelbide (eds.), *An assessment of ecosystem components in the Interior Columbia Basin and portions of the Klamath and Great Basins: Volume IV. 1715-1870*. USDA Forest Service, PNW-GTR-405, Pacific Northwest Research Station, Portland, OR.
- Hoekstra, T.W., Alward, G.S., Dyer, A.A., Hof, J.G., Jones, D.B., Joyce, L.A., Kent, B.M., Lee, R., Sheffield, R.C., Williams, R. 1990. Analytical tools and information. Critique of Land Management Planning, Volume 4. USDA Forest Service, FS-455. 47 pp. Available at: http://www.fs.fed.us/institute/planning_center/1990_Critique_First_Planning_Round/critique%20of%20LMP-Vol%204%20ACR5%2090.pdf
- Holmes, F.P. and W.E. Hecox. 2004. Does Wilderness Impoverish Rural Regions? *International Journal of Wilderness* 10(3): 34-39.
- Irwin, E.G. 2002. The effects of open space on residential property values. *Land Economics* 78(4): 465-480.
- Johnson, J. and R. Rasker. 1993. The Role of Amenities in Business Attraction and Retention. *Montana Policy Review* 3(2).
- Johnson, J., and R. Rasker. 1995. The Role of Economic and Quality of Life Values in Rural Business Location. *Journal of Rural Studies* 11(4): 405-416.
- Johnson, T.G. 2001. The Rural Economy in a New Century. *International Regional Science Review* 24(1): 21-37.

- Kammen, D.M., K. Kapadia, and M. Fripp. 2004. Putting Renewables to Work: How Many Jobs Can the Clean Energy Industry Generate? RAEL Report,
- Krieger, D. J. 2001. Economic Value of Forest Ecosystem Services: A Review. Washington D.C.: The Wilderness Society.
- Krikelas, A.C. 1991. Industry structure and regional growth: A vector autoregression forecasting model of the Wisconsin regional economy. Ph.D. Dissertation. University of Wisconsin-Madison.
- Krutilla, J. 1967. Conservation reconsidered. *American Economic Review*. 57: 787-796.
- Lehmkuhl, J.F., and L.F. Ruggiero. 1991. Forest fragmentation in the Pacific Northwest and its potential effects on wildlife. Pages 35-46 in Ruggiero, L.F., K.B. Aubry, A.B. Carey, and M.H. Huff, tech. coords. *Wildlife and Vegetation of Unmanaged Douglas-fir Forests*. USDA Forest Service Gen. Tech. Rep. PNW-GTR-285. Portland, OR.
- Loomis, J. B. and R. Richardson. 2000. Economic Values of Protecting Roadless Areas in the United States. Washington, D.C.: The Wilderness Society and Heritage Forests Campaign.
- Loomis, J. B. and R. Richardson, 2001. Economic values of the U.S. wilderness system: Research evidence to date and questions for the future. *International Journal of Wilderness* 7(1): 31-34.
- Loomis, J., V. Rameker, and A. Seidl. 2004. A hedonic model of public market transactions for open space protection. *Journal of Environmental Planning and Management* 47(1): 83-96.
- Lorah, P. 2000. Population Growth, Economic Security and Cultural Change in Wilderness Counties. In McCool, S.F., D.N. Cole, W.T. Borrie, and J. O'Loughlin, comps. *Wilderness Science in a Time of Change Conference, Volume 2: Wilderness within the Context of Larger Systems, 1999 May 23-27*. Missoula, MT. Proceedings RMRS-P-15-VOL 2., U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Lorah, P. and R. Southwick. 2003. Environmental Protection, Population Change, and Economic Development in the Rural Western United States. *Population and Environment* 24(3): 255-272.
- Low, S. 2004. Regional Asset Indicators: Entrepreneurship Breadth and Depth. *The Main Street Economist*, September, 2004. Center for the Study of Rural America, Federal Reserve Bank of Kansas City, Kansas City, MO.
- Low, S., J. Henderson, and S. Weiler. 2005. Gauging a Region's Entrepreneurial Potential. *Economic Review (Third Quarter)* Federal Reserve Bank of Kansas City.
- Luttik, J. 2000. The value of trees, water and open space as reflected by house prices in the Netherlands. *Landscape and Urban Planning* 49: 161-167
- Lutzenhiser, M. and N.R. Netusil. 2001. The effect of open spaces on a home's sale price. *Contemporary Economic Policy* 19(3): 291-298.
- Mabey, Sarah, Ph.D. and Ellen Paul. 2007. Critical Literature Review, Impact of Wind Energy and Related Human Activities on Grassland and Shrub-Steppe Birds. (available at

<http://www.nationalwind.org/pdf/IMPACTOFWINDENERGYANDRELATEDHUMANACTIVITIESONGRASSLANDANDSHRUB-STEPPEBIRDS.pdf>, accessed July 14, 2008)

- McGranahan, D.A. 1999. Natural Amenities Drive Rural Population Change. U.S. Department of Agriculture, Economic Research Service, Food and Rural Economics Division. Agricultural Economics Report No. 781.
- Morton, P. 1999. The economic benefits of wilderness: theory and practice. Denver University Law Review, 76(2): 465-518.
- Morton, P. 2000. Wilderness, the Silent Engine of the West's Economy. The Wilderness Society, Washington, DC.
- National Association of Regulatory Commissioners, 2007. "Land-Based Initiatives and Climate Change." (Power Point presentation) SRA International. EPA Land Revitalization Staff Office. ([http://www.narucmeetings.org/Presentations/NARUC%20Pres%20July%2015.ppt#486,2,Land-Based Opportunities](http://www.narucmeetings.org/Presentations/NARUC%20Pres%20July%2015.ppt#486,2,Land-Based%20Opportunities), accessed July 9, 2008) Navigant Consulting, Inc. estimates, June 2006.
- Nelson, P.B. 1999. Quality of Life, Nontraditional Income, and Economic Growth: New Development Opportunities for the Rural West. Rural Development Perspectives 14(2): 32-37.
- New York Times. October 24, 1998. "A Flurry of Proposals for Gas-Fired Power Plants." By Eleanor Charles (<http://query.nytimes.com/gst/fullpage.html?res=9504EFDC173FF936A15753C1A96E958260> accessed July 9, 2008)
- Payne, C., J. M. Bowker, and P. C. Reed. (compilers) 1992. The economic value of wilderness: Proceedings of the conference; 1991 May 8-11; Jackson, WY. Gen. Tech. Rep. SE-78. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station. 330 pp.
- Power, T. 1995. Economic Well-Being and Environmental Protection in the Pacific Northwest: A Consensus Report by Pacific Northwest Economists. University of Montana, Missoula, MT.
- Power, T. M. 1996. Lost Landscapes and Failed Economies. Island Press, Covelo, CA.
- Rasker, R. and D. Glick. 1994. Footloose Entrepreneurs: Pioneers of the New West? *Illahee* 10(1): 34-43.
- Rasker, R. and A. Hansen. 2000. Natural Amenities and Population Growth in the Greater Yellowstone Region. *Human Ecology Review* 7(2): 30-40
- Rasker, R., B. Alexander, J. van den Noort, and R. Carter. 2004. Public Lands Conservation and Economic Well-Being. The Sonoran Institute, Tucson, AZ. Available at: <http://www.sonoran.org/programs/prosperity.html>.
- Reeder, R. J. and D. M. Brown. 2005. Recreation, Tourism and Rural Well-Being. U.S. Department of Agriculture, Economic Research Service. Economic Research Report Number 7. 38 pp.

- Richardson, H.W. 1985. Input-Output and Economic Base Multipliers: Looking backward and forward. *Journal of Regional Science* Vol. 25(4).
- Robel, Robert J. et al. 2004. Effect of Energy Development and Human Activity on the Use of Sand Sagebrush Habitat by Lesser Prairie-Chickens in Southwestern Kansas. (available at <http://kec.kansas.gov/wptf/robertrobels.pdf>, accessed July 14, 2008)
- Rudzitis, G. 1999. Amenities Increasingly Draw People to the Rural West. *Rural Development Perspectives* 14(3): 9-13.
- Rudzitis, G., and H.E. Johansen. 1989. Amenities, Migration, and Nonmetropolitan Regional Development. Report to National Science Foundation. Department of Geography, University of Idaho, Moscow, ID.
- Rudzitis, G. and R. Johnson. 2000. The Impact of Wilderness and Other Wildlands on Local Economies and Regional Development Trends. In McCool, S.F., D.N. Cole, W.T. Borrie, and J. O'Loughlin, comps. *Wilderness Science in a Time of Change Conference, Volume 2: Wilderness within the Context of Larger Systems*, 1999 May 23-27. Missoula, MT. Proceedings RMRS-P-15-VOL 2., U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Salt Lake City Weekly. May 3, 2007. "Killer Coal" by Jonah Owen Lamb (<http://www.slweekly.com/index.cfm?do=article.details&id=1CA7B2DC-2BF4-55D0-F1FC484A425B4016>, accessed July 9, 2008)
- Sawyer et al., 2005 Annual Report, Sublette Mule Deer Study (Phase II): Long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area, (October 2005) <http://www.west-inc.com/reports/PAPA_2005_report_med.pdf> (visited November 23, 2005).
- Sawyer, H., and F. Lindzey. 2004. Assessing Impacts of Oil and Gas Development on Mule Deer. *Transactions from the 69th North American Wildlife and Natural Resources Conference*.
- Sawyer, H., and F. Lindzey. 2001. Sublette Mule Deer Study. Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming, Laramie. 51pp.
- Shumway, J.M. and S.M. Otterstrom. 2001. Spatial Patterns of Migration and Income Change in the Mountain West: the Dominance of Service-Based, Amenity-Rich Counties. *Professional Geographer* 53(4): 492-501.
- Snepenger, D.J., J.D. Johnson, and R. Rasker. 1995. Travel-Stimulated Entrepreneurial Migration. *Journal of Travel Research* 34(1): 40-44
- Sonoran Institute. 2006. "The Potential Economic Impacts of Wilderness in Dona Ana County, New Mexico."
- Stoddard, L., J. Abiecunas, and R. O'Connell. 2006. Economic, Energy, and Environmental Benefits of Concentrating Solar Power in California. Golden, CO: National Renewable Energy Laboratory. 69 pp. (<http://www.nrel.gov/docs/fy06osti/39291.pdf>, accessed July 9, 2008)

- Tajima, K. 2003. New estimates of the demand for urban green space: implications for valuing the environmental benefits of Boston's Big Dig project. *Journal of Urban Affairs* 25(5): 641-655.
- Tiebout, C.M. 1956. Exports and regional economic growth. *Journal of Political Economy* 64:160-64.
- Thompson, E., G. Hammond, and S. Weiler. 2006. Amenities, Local Conditions, and Fiscal Determinants of Factor Growth in Rural America. RWP 06-08, Research Working Papers, The Federal Reserve Bank of Kansas City, Economic Research Department.
- Union of Concerned Scientists. 2005. "Environmental Impacts of Coal Power: Air Pollution." (http://www.ucsusa.org/clean_energy/coalvswind/c02c.html, accessed July 9, 2008).
- Union of Concerned Scientists. 2005. "Environmental Impacts of Coal Power: Water Use." (http://www.ucsusa.org/clean_energy/coalvswind/c02b.html accessed July 9, 2008)
- United States Congress, Office of Technology Assessment. 1992. Forest Service planning: Accommodating uses, producing outputs, and sustaining ecosystems, OTA-F-505. Washington, DC.
- University of California, Berkeley. P. 10.(<http://rael.berkeley.edu/old-site/renewables.jobs.2006.pdf>, accessed July 9, 2008)
- U.S. Environmental Protection Agency. 2008."Energy Department Announces National Initiative to Redevelop Brownfields with Renewable Energy." (<http://www.epa.gov/brownfields/html-doc/brightfd.htm>, accessed July 9, 2008)
- U.S. Department of Energy, Energy Efficiency and Renewable Energy. National Renewable Energy Laboratory. 2004 PV FAQ's. (www.hubbertpeak.com/Apollo2/photovoltaics/HowMuchLandNREL.pdf, accessed July 9, 2008)
- U.S. Department of Energy, Energy Efficiency and Renewable Energy. National Renewable Energy Laboratory. "Concentrating Solar Power." solareis.anl.gov/documents/docs/NREL_CSP_1.pdf
- U.S. Department of the Interior, Office of Surface Mining. 2006. Annual Report Data Tables and Figures.(<http://www.osmre.gov/annualreports/06AR11.pdf>, accessed July 9, 2008)
- Walsh, R. G. J. B. Loomis, and R. A. Gillman 1984. *Valuing Option, Existence, and Bequest Demands for Wilderness*. *Land Economics*, 60(1): 14-29.
- Washington Independent Harnessing the Sun: April 11, 2008."The Future of Green Jobs." by Suemedha Sood. (<http://washingtonindependent.com/view/harnessing-the-sun>, accessed July 9, 2008)
- Weiler, S. 2004. *Racing Toward New Frontiers: Helping Regions Compete in the Global Marketplace*. The Main Street Economist, March 2004. Center for the Study of Rural America, Federal Reserve Bank of Kansas City, Kansas City, MO.
- Western Governors' Association, Clean and Diversified Energy Initiative. 2006. Solar Task Force Report.

Whitelaw, E., and E.G. Niemi. 1989. Migration, Economic Growth, and the Quality of Life. In Proceedings of the Twenty-Third Annual Pacific Northwest Regional Economic Conference, Corvallis, OR, pp 36-38.

Whitelaw, E., et al. 2003. A Letter from Economists to President Bush and the Governors of Eleven Western States Regarding the Economic Importance of the West's Natural Environment. (100 total authors.) Available at: <http://www.ourforests.org/fact/120303letter.pdf> (accessed January 17, 2008)



May 22, 2009

Delivered via U.S. mail (including data CD attachment) and electronic mail (without data attachment).

Linda Resseguie
Solar PEIS Project Director
Bureau of Land Management
Mail Stop 1000LS
1849 C Street NW
Washington, DC 20240

Re: Considerations for Solar Energy Study Areas in BLM Solar Energy Development Programmatic Environmental Impact Statement

We are writing in response to news that the Bureau of Land Management (BLM) is considering developing an alternative in the Draft Solar Energy Development Programmatic Environmental Impact Statement (PEIS) which would designate "Solar Energy Study Areas" (Study Areas) and providing information based on our current understanding of this process. Since it informs our recommendations, we are summarizing our understanding of this process below:

- Study Areas will be selected for lands which have high solar potential, proximity to existing transmission and other infrastructure, and limited environmental and other land use conflicts;
- The PEIS will complete detailed analysis of potential impacts from solar development in these Study Areas, allowing future projects within Study Areas to benefit from environmental analysis tiered to the PEIS;
- BLM has already begun the process of identifying Study Areas, and has mapped candidate Study Areas in each of the six states analyzed in the PEIS.

The Wilderness Society supports the efforts of the agencies to develop a PEIS to address the many benefits and challenges of solar energy development on public lands. A thoughtful approach to renewable resource development, including transmission, is vital.

Identifying the best places for solar energy development is an important first step in ensuring that the transition to a clean energy future does not come at the expense of our lands, water, wildlife, and communities. For this reason, we support the BLM's consideration of designating "least conflict" areas as priority Study Areas for development; however, the manner in which Study Areas are selected will ultimately determine whether this is a successful approach.

Thorough consideration of input from the broad array of stakeholders in this process will be crucial in a successful Study Areas designation process. The Wilderness Society and our conservation partners have much to offer in this regard, and hope to be as helpful as possible to the BLM in refining the Study Areas. As of now, the BLM has not provided maps or GIS data depicting the candidate Study Areas, nor has the agency provided detailed information on the criteria used to identify the Study Areas. Without this information, providing detailed input and review will be challenging. To make our participation as useful as possible, we urge the BLM to provide for review maps and GIS data of the Study Areas as well as detailed information on the identification criteria used.

Whether or not additional data is provided, The Wilderness Society still intends to provide input on appropriate criteria for designating Study Areas, and has begun the process of coordinating with conservation partners. As a threshold matter, however, we are providing the GIS data for Citizens' Proposed Wilderness areas (Appendix A, attached), so that the BLM can screen candidate Study Areas for conflict and remove any overlap. These data were submitted with our scoping comments last summer and are already part of the record, but we are providing them again for your convenience.

These Citizens' Proposed Wilderness areas have been inventoried by various citizens groups, conservationists, and agencies and found to have "wilderness characteristics," including naturalness, solitude and the opportunity for primitive recreation. These lands also provide important wildlife habitat, cultural and scientific resources, invaluable ecosystem services including clean air and water, important economic benefits, and many other resources and values. Though they do not represent all lands with wilderness characteristics in the West, the lands referenced in this letter and Appendix A (attached) are the most current representation of lands identified by the responsible groups to-date. Development in Citizens' Proposed Wilderness areas would be ecologically irresponsible and would lead to high levels of conflict; they should be excluded from Study Areas.

In sum, The Wilderness Society supports the BLM's efforts to identify priority "least conflict" Study Areas for development in the PEIS, and we will be working with our conservation partners to provide detailed input on designation of Study Areas.

To ensure the Study Areas are as useful as possible in promoting responsible, sustainable solar energy development, we recommend that the BLM:

- Provide maps and GIS data of the candidate Study Areas, as well as detailed information on the criteria used to identify them;
- Provide an opportunity for public comment on the proposed Study Areas;
- Screen the candidate Study Areas for conflict with Citizens' Proposed Wilderness areas and remove any overlap;
- Fully consider additional forthcoming detailed input from The Wilderness Society and conservation partners.

Thank you for your consideration of our recommendations. We would be happy to discuss these further at your convenience or upon submission of our additional materials.

Sincerely,

Alex Daue, Renewable Energy Coordinator
BLM Action Center
The Wilderness Society
1660 Wynkoop, Suite 850
Denver, CO 80202

Cc:

Eddie Arreola, Arizona State BLM Solar Energy Development PEIS Lead
Ashley Conrad-Saydah, California State BLM Solar Energy Development PEIS Lead
Maryanne Kurtinaitis, Colorado State BLM Solar Energy Development PEIS Lead
Patrick Gubbins, Nevada State BLM Branch Chief for Non-Renewable Resources
Brian Amme, Nevada State BLM Planning and Environmental Coordinator
Cynthia Sandoval, New Mexico State BLM Solar Energy Development PEIS Lead
Mike DeKeyrel, Utah State BLM Solar Energy Development PEIS Lead



Shaping the Future of the West

www.sonoraninstitute.org

TUCSON, ARIZONA

BOZEMAN, MONTANA

PHOENIX, ARIZONA

MEXICALI, BAJA CALIFORNIA

HELENA, MONTANA

CHEYENNE, WYOMING

DENVER, COLORADO

GLENWOOD SPRINGS, COLORADO

August 13, 2009

Teri Raml
Phoenix District Office Manager
BLM Arizona State Office
One North Central Avenue, Suite 800
Phoenix, AZ 85004-4427

Re. Restoration Design Energy Project, Call for Projects

Dear Ms. Raml:

The Sonoran Institute, The Wilderness Society, Sierra Club, Arizona Wilderness Coalition, and Tonopah Area Coalition are pleased that the Bureau of Land Management (BLM) is providing an additional opportunity to consider siting of renewable energy projects on BLM lands through its National System of Public Lands Restoration Design Energy Project.

In response to the BLM's request for project proposals, we looked at three parcels of land identified by the BLM as candidates for land disposal in the Agua Fria National Monument and Brandshaw-Harquahala and the Sonoran Desert National Monument-Phoenix South resource management plans which may be worthwhile candidates for solar energy projects. We selected these parcels because they met the BLM's Solar Study Area criteria for solar resource, slope, parcel size, and proximity to existing utility corridors. Also, because of the BLM criteria for identifying parcels for disposal, such parcels also meet the Restoration Design Energy Project's criteria for parcels that "do not have higher resource values and may be suitable for energy development."

We conducted rapid site assessments for these parcels (site assessment for each site are included as an attachment). These assessments identified a number of issues that will require further investigation by the BLM should the agency decide that these sites merit consideration as project sites. Rather than get into a detailed discussion of the individual sites, we would like to highlight issues that we believe will likely cut across these sites and other project proposals that the BLM may assess (highlighting these issues may contribute toward the development of criteria that the BLM can use in the selection of proposed projects to evaluate):

- Locating near other approved or proposed solar projects – There are a number of solar projects likely to be sited on private and state trust lands that are near BLM lands. There is value in having the BLM assess proposed projects near these sites, both for the cumulative impact analysis that would result and also because it may encourage

the location of sites in close proximity to each other, thereby reducing the cost and environmental impacts associated with dispersed siting and transmission and other infrastructure development.

- Aligning with other planning efforts – Proposed solar projects may conflict with local land-use plans, as well as regional transportation and utility corridor planning. Consultation with local government and state agencies is critical.
- Engaging Neighboring Developers – To the extent that proposed projects are adjacent or close to land that has been platted for development, there may be opportunities to explore with landowners their interest in promoting solar power on BLM lands for their development projects.
- Engaging Federal Facilities – Same point as above. The BLM may be able to provide land for siting and the federal agency housed at the facility secures funding for the solar power project from the Federal Energy Management Program.
- Engaging Other Landowners – We note that landfills, CAP canal, correctional facilities, communication sites, private businesses and other facilities may be interested in siting smaller-scale power generating opportunities on neighboring BLM lands.
- Siting Near Adjacent Power Plants – Locating near existing power plants may offer opportunities to take advantage of existing infrastructure and water resources, such as treated effluent to cool solar plants.
- Encouraging Low-water Use Project – We note that water use by solar projects is likely to emerge as a serious concern for any proposed project in Arizona. We would encourage the BLM to establish some additional criteria for proposed projects that encourage low- or no-water use proposals.

We thank you for the opportunity to share our thoughts on this promising initiative. We would be happy to discuss the disposal sites we assessed, as well as any other candidate project sites you are considering.

John Shepard
Senior Adviser
Sonoran Institute

Sandy Bahr
Chapter Director
Sierra Club

Rebecca Knuffke
Central Arizona Campaigns Coordinator
The Wilderness Society

Kevin Gaither-Banchoff
Executive Director
Arizona Wilderness Coalition

David Schwake
Tonopah Area Coalition

**Protocol Among the Members of the Western Governors Association,
The U.S. Department of the Interior,
The U.S. Department of Agriculture,
The U.S. Department of Energy, and
The Council on Environmental Quality
Governing the Siting and Permitting of
Interstate Electric Transmission Lines in the Western United States**

A. BACKGROUND

1. Open transmission access has accelerated the regionalization of electric power markets in the West. Existing electric transmission systems that were generally designed to move power within local utility systems, bring power from generation sites to regulated utility customers, and interconnect neighboring utilities to improve reliability with some coordination transactions are now increasingly being used to enable power sales across large geographic areas.
2. The transmission system in the continental United States is organized into three separate electric interconnections. The Western Interconnection, which covers all or parts of 14 Western states, two Canadian provinces and northwest Mexico, has a different transmission topology than the other interconnections because of highly variable seasonal demand within the interconnection and the long distances between where the power is generated and where it is consumed. In the West, power sales have taken place across large geographic areas and between regions for decades.
3. Generally, authority to site transmission lines and grant the power of eminent domain for the construction of new transmission facilities has been exercised by the states.
4. Although Western states have a sterling record in permitting interstate transmission lines, expanding regional wholesale electricity markets and the preponderance of federally-administered lands in the West necessitate closer cooperation among states, local governments, federal agencies and tribal governments to ensure an efficient permitting and siting of new interstate transmission facilities.
5. This Protocol is a step in implementing the *Memorandum of Understanding Among the U.S. Department of Energy, U.S. Department of the Interior, U.S. Department of Agriculture, U.S. Environmental Protection Agency, Council on Environmental Quality, and the Members of the Western Governors' Association Regarding Energy Development and Conservation in the Western United States*, signed in 2001.

B. POLICY POSITION

1. The purpose of this Protocol is to establish a framework that will enable affected states, local governments, federal agencies and tribal governments to participate in a systematic, coordinated, joint review process for siting and permitting of interstate transmission lines in the Western Interconnection.
2. The Protocol is intended to increase the efficiency of the siting process by including all affected governmental entities with authority for siting and permitting interstate transmission facilities. It is the intent of Western Governors to work with the appropriate local governments, federal land management agencies, and tribal governments and solicit their participation on Project Teams established under this Protocol.
3. The Western Governors believe that a coordinated joint review process involving states, local governments, federal agencies, and tribes can expedite the siting and construction of needed transmission facilities to better ensure adequate, affordable and reliable electricity supply to Western consumers.
4. When linked with a pro-active regional transmission planning and implementation process that considers transmission and non-transmission alternatives and appropriate systems for financing new transmission and alternatives, a coordinated, interstate joint review of proposed interstate transmission facilities will enable identification and consideration of interstate needs, facilitate the construction of needed transmission, and ensure that the public interest is protected.

C. OBJECTIVES IN DEVELOPING A COORDINATED JOINT REVIEW PROCESS

1. Create an efficient environmental review process that results in documents that can be shared and used by all entities with jurisdiction in the siting and permitting process.
2. Establish and periodically review joint time lines for the conduct and timely completion of review and regulatory decision-making.
3. Establish a common understanding of the informational needs, regulatory requirements, and public interest issues prior to the environmental review proceeding.
4. Eliminate duplication of agency pre-application, scoping, and permit review meetings among affected state, local, federal and tribal authorities.
5. Create a transparent streamlined review process that is structured, user friendly and predictable.

6. Facilitate early notification and sharing of information among affected states, local governments, federal agencies, tribal governments and the project sponsors.
7. Preserve and protect authority of each affected state, local government, tribal government, and federal agency.

D. IMPLEMENTATION

1. To implement this process, the parties to this agreement will adopt the following elements as part of the coordinated joint review of specific proposed interstate transmission projects:
 - a. Designation of a Project Team – The governors of states affected by a proposed transmission line shall convene a team of appropriate representatives from each state to coordinate the review of a proposed project and to ensure the timely notification, consultation, and joint sharing of information and solicitation of recommendations among states, local jurisdictions, and other affected parties. Representatives of federal agencies (and federal agency teams) and tribal governments with permitting or land management responsibilities shall be invited to join the Project Team. Participation on the Project Team shall in no way diminish the responsibilities or authority of any member.
 - b. Determination of Need – The Project Team shall evaluate assessments of the need for the project developed through regional transmission planning processes and other processes and shall provide the assessments and their evaluation, as necessary, to any agency. The Project Team's evaluation shall in no way bind determinations and decisions made by the appropriate state, federal, tribal, and local authorities.
 - c. Federal Agencies' Responsibilities – The appropriate federal land management agency(ies) will participate on the Project Team, as necessary, to expedite the siting review process and improve efficiencies of the application process consistent with Executive Order 13212. The Fish and Wildlife Service will commit to consult and cooperate by participating early and, as appropriate and as resources are available, throughout the review process to assist the Project Team members in meeting their Endangered Species Act and Migratory Bird Treaty Act compliance requirements. The Bureau of Land Management, Forest Service and Fish and Wildlife Service will follow the process described in the August 30, 2000, *Memorandum of Agreement – Endangered Species Act Section 7 Programmatic Consultations and Coordination among the Bureau of Land Management, Forest Service, National Marine Fisheries Service and Fish and Wildlife Service*.

- d. **Decisions, Activities, and Records** – The Project Team shall establish procedures to encourage joint activities, records, and decisions regarding planning, evaluating, and monitoring of a proposed transmission line or facility. The specific activities which the Project Teams and other interested parties agree to perform jointly, the manner of execution, including level of detail, methodology, management and staff interaction, dollar value, and such other items as the parties deem necessary and appropriate shall be negotiated and clearly set forth in work plans and/or subsequent agreements covering individual energy projects. Any decision issued by a state, federal or local authority which is appealed or protested is not binding on the decisions that may be issued by other agencies who are members of the Project Team.
- e. **Consolidated Environmental Review** – The activities which the parties hereby agree to undertake jointly may include, but are not limited to: preparation of environmental assessments and environmental impact statements, as appropriate; the evaluation of baseline conditions of the natural, social, and economic environment; evaluation of potential impacts of a project and alternatives; public involvement efforts; monitoring impacts of project construction and operation; and all other activities that are required to determine compliance with federal, state, local, and tribal laws and regulations. The Project Team shall jointly develop procedures for a consolidated environmental review of a proposed project.
- f. **Timelines** –The Project Team shall establish and periodically review common, mutually agreeable deadlines for activities, reviews, and decisions. The Project Team will identify where joint decisions are to be made, and by whom. Timelines will include and account for the time that may be needed to address and dispose of disputes or administrative appeals of decisions made by all jurisdictional authorities, should such disputes or appeals of decisions be filed.
- g. **Information Requests** – The Project Team shall serve as a clearinghouse for agency requests for information from developers of the proposed project and provide information to the developer about necessary permits, licenses, approvals, processes, and information requirements.
- h. The Project Team shall provide that all non-proprietary or non-privileged information on the project and the work of the Team is available to the public, to the extent allowed by law. Among other methods, the Project Team will develop and maintain an internet-based information system that links to the permitting processes and activities of state, federal, tribal, and local agencies. Such transparent information will help to develop a common understanding of the project among permitting agencies and with the public.

- i. Project-specific agreements will be developed and may be modified or amended by written mutual agreement among the parties, and terminated by mutual agreement or after 30 days' written notice by any party.
 - j. Each Project Team shall establish procedures that can be used to address disagreements on subjects, including, but limited to, scheduling, data requirements, data adequacy and jurisdictional issues raised by the participating entities.
2. Western governors will work with grid organizations in the West, including the Western Electricity Coordinating Council, the Mid-Continent Area Power Pool, the Western Utility Group and any Regional Transmission Organizations that form in the West, and others to facilitate the exchange of information needed by appropriate federal, state, tribal, and local agencies for planning, siting, and reviewing permit applications.
3. The Federal Power Marketing Administrations (PMA) support efforts to streamline and expedite the transmission facility siting process. Each PMA shall review their siting process for federal interstate transmission lines in order to ensure the provision of timely notification and joint sharing of information, and to explore the possibility of consolidating required reviews.
4. Nothing in this Protocol shall be construed to limit, repeal, or in any manner modify the existing legal rights, privileges, and duties of the signatories to this protocol as provided by agreement, statute or any other law or applicable court decision. Nothing in this Protocol shall commit federal agencies to enter into any contract or other binding obligation.
5. Nothing in this Protocol may be construed to obligate the United States to any current or future expenditure of resources in advance of the availability of appropriations from Congress.

E. AUTHORITIES

The National Environmental Policy Act of 1969, 42 U.S.C. 4321, 4331(b) provides the authority for the Federal Government's participation in this Protocol. Additional authority is provided to the Bureau of Land Management under the Federal Land Policy and Management Act, 43 U.S.C. 1701, 1737 (b), to the Fish and Wildlife Service under the Fish and Wildlife Coordination Act, 16 U.S.C. 661, and to the Bureau of Indian Affairs under the Synder Act, 35 U.S.C. 2, 13, and 25 U.S.C. 324.

F. ADMINISTRATIVE PROVISIONS

1. The Governors intend that all states in the Western Interconnection sign the Protocol and will seek to secure the same from the appropriate federal agencies, tribal governments and Canadian provinces.

2. Each signatory to this Protocol will provide the Western Governors' Association with the name of a point of contact within the appropriate governmental agency for the implementation of this Protocol, including the necessary notifications herein.
3. Governors will give copies of this Protocol to state agencies with responsibilities for the review of transmission proposals.
4. Any party to the Protocol can unilaterally withdraw its participation in the agreement.
6. The Protocol can be amended or modified if all parties agree.
7. Upon signature, the protocol immediately will be effective and the Governors intend that executive orders or other administrative action to implement this Protocol be completed within 120 days of the signing.
8. The Western Governors' Association, through its affiliate, the Western Interstate Energy Board, will provide a report on the implementation of this Protocol at each annual meeting of the Association, and may provide interim reports as warranted.
9. The signatories will review the Protocol and its implementation on an annual basis.

Jane Dee Hull
 Chair of the Western Governors' Association

6/23/02
 Date

Judy Martz
 Vice Chair of the Western Governors' Association

 Date

Jim Lerringer
 WGA Lead Governor for Energy

6/23/02
 Date

John A. Kuffner
 WGA Lead Governor for Energy

6/23/02
 Date

[Signature]
 Secretary of Energy

6/23/02
 Date

Mark Roy
Secretary of Agriculture

7/26/02
Date

Steven Quils
Secretary of the Interior

6/23/02
Date

Janice
Chairman, Council on Environmental Quality

6/20/02
Date

Toy Knuth

6/23/02

Marie E Johnson

6/23/02

Michael Lovitt

6/23/02

Bill Wens.

6/23/02

Dick Kerth

6/23/02

Kenneth Humm

6/23/02

Ang Locke

6/23/02

Gray Davis

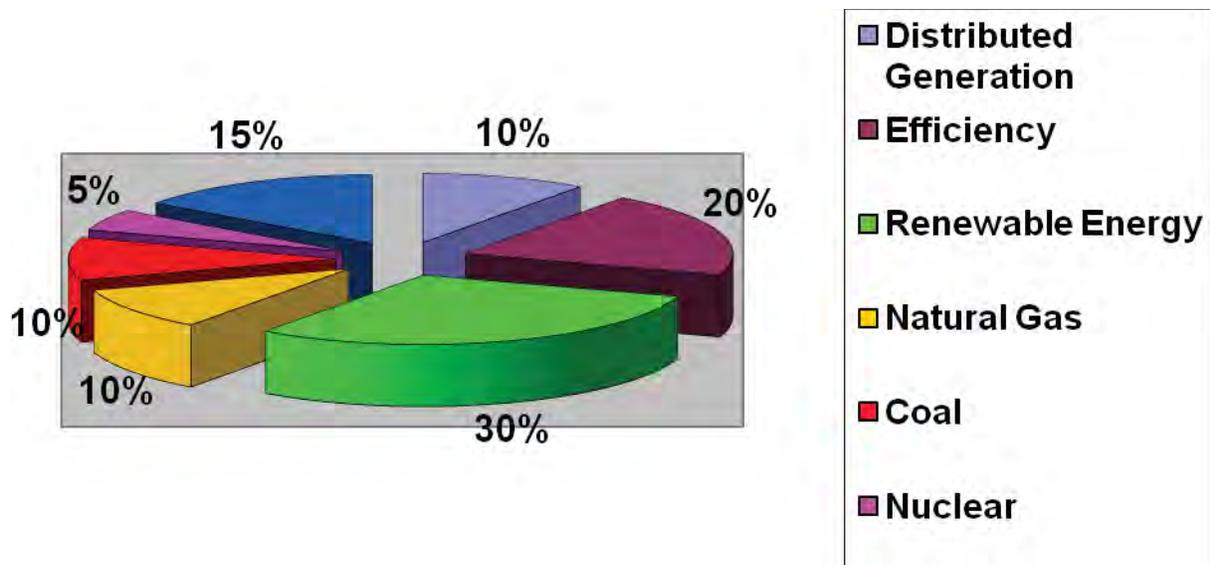
9/4/02

Exhibit 5 – Scenario Development for Identifying Megawatt Target

Scenario development would start with a west-wide load forecast for 2030. The 2030 scenario would include adding load requirements for vehicle electrification and targets to meet the carbon emission-reductions goals. Major resource components for scenarios would include: demand-side features (efficiency, demand management, distributed generation, smart grid and demand response, vehicle-to-grid, etc.); existing gas, coal, nuclear and hydro contributions; planned retirements for coal and other carbon-heavy power generation; and, the contribution of large-scale renewable energy resources such as solar. Different scenarios would include meeting state RPS requirements; using energy conservation, greatly increased efficiency and demand-side management to meet a large percentage of our resource needs; putting a price on carbon emissions; and retirement of existing coal plants to reduce greenhouse gas emissions.ⁱ

As a baseline, in 2007, electric generation in the western U.S. was comprised of: 31% coal; 31% natural gas; 23% hydro; 10% nuclear; and 5% renewables. For illustration purposes, a hypothetical scenario of resources to meet 2030 load is provided below.

Hypothetical Scenario of Resources to Meet 2030 Load in the Western Interconnection



BLM will benefit greatly from this exercise as part of the PEIS. Having a clear vision and goal will help the agency identify what its contribution should be toward an overall renewable energy goal. For example, a long-term clean energy vision for the West might result in the identification of 80,000 MW of newly installed renewable energy by 2030. This would include contributions from wind, solar and geothermal. Under this example, solar contributions might be estimated at 40,000 MW of the 80,000 MW total. If 25% of the solar contribution came from private and tribal lands, that would allow BLM in the PEIS to focus on finding sites appropriate for 30,000 MW of large-scale solar. With that type of a long-term and realistic target, BLM would have a much easier time of identifying already-disturbed sites and other locations with minimal resource conflicts to locate future projects. In addition, developing a long-term clean energy vision for the West with multiple scenarios would allow the agency to

focus on a much narrower set of corridors for transmission expansion, again allowing the agency to look at existing and already-disturbed corridors to facilitate solar resources.

ⁱ Forecasting energy demand and the associated levels of energy production on public lands is a very complicated and dynamic process that should be re-visited at regular intervals. For example the RETI process has revised its net short estimate at least once since the RETI process began.

Exhibit 6: Site-specific Comments on Solar Energy Study Areas – Arizona

The comments in this exhibit are a subset of comments prepared by the Sonoran Institute and are included with their permission. Please accept and fully consider these comments, submitted on behalf of the following groups: Arizona Wilderness Coalition, The Wilderness Society, Western Resource Advocates, and Wild Utah Project.

At the end of the document are narratives from site assessments Sonoran Institute conducted for the three AZ SESAs. Each assessment includes a set of accompanying maps. Due to the maps' size, we were unable to include these with our comments, but these can be requested by contacting John Shepard at the Sonoran Institute (520-290-0828).

I. Overarching concerns regarding SESAs in Arizona – impacts on wildlife corridors and habitat.

In identifying low known conflict areas that might be candidates for SESAs, the BLM relied on Arizona Department of Fish and Game (AZGFD) data that ultimately precluded significant amount of BLM lands from consideration as SESAs. We note that this data was used as part of the WGA's WREZ initiative, and that during that process concerns were raised that AZGFD may have overstated the amount of wildlife habitat that would be significantly impacted by solar energy development. As a result, the AZGFD agreed to revisit its findings.

Recommendations: The BLM should request that, once it has revisited its findings, the AZGFD provide the agency and make publicly available the multiple wildlife data layers that are part of its analysis, so that all interested parties have the opportunity to assess and prioritize the various wildlife values that will be under consideration as part of the PEIS.

II. Joint planning/venture opportunities with Arizona State Land Department

Given the fragmented nature of land ownership between the BLM and the Arizona State Land Department's trust lands, there are likely economies of scale and financial advantages to both agencies working together to identify and approve lands for solar siting. The three proposed SESAs in Arizona underscore this opportunity. Significant amount of trust lands are either immediately adjacent to or in close proximity to the SESAs. Moreover, the SESA's relatively small size and the likelihood that site constraints might be identified may lessen their viability for utility-scale solar projects. Collaborative planning between both agencies could expand siting opportunities on their lands, as well as enhance the appeal of these lands to solar developers by allowing one or more projects co-locate and share infrastructure.

Recommendations: The BLM should effectively engage the Arizona State Land Department as a cooperating agency and, if the Land Department consents, consider extending the PEIS to include trust lands adjacent to SESAs as a precursor to collaborative planning.

III. Site-specific Issues

a. Gillespie SESA

The current configuration of this SESA (narrow width and scenic road bisecting the proposed area) would appear to present problems for siting a utility-scale project. We would request that the BLM consider possible adjustments to the area's boundaries away from Webb Mountain and closer to the transmission corridor, including moving the north-eastern boundary toward the natural gas pipeline and using scenic road as southern boundary.

We note that trust lands lie north of the proposed area. (If reconfigured as we suggest, these trust lands would be immediately adjacent to the area's boundaries.). We would encourage the BLM to include an alternative in the PEIS which analyzes the development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

The area falls within the Phoenix Active Management Area, so there are some restrictions on what water resources might be available for a utility-scale solar plant. We do note that the proposed area is located south-west of an area identified by Arizona Department of Water Resources as experiencing significant subsidence (primarily west of Arlington School Road). The PEIS should assess the impact that a utility-scale, wet-cooled solar plant's groundwater pumping will have on subsidence rates on nearby lands.

Recommendations: The PEIS should consider reconfiguring the Gillespie SESA's boundaries away from Webb Mountain and closer to the transmission corridor, consider expanding the PEIS to include trust lands (with the Land Department's consent), and assess potential impacts of water use for utility-scale solar development .

b. Brenda SESA

We suggest that the BLM consider possible boundary adjustments in order to preserve the wash and drainage area in northwest corner, which may involve aligning the western boundary with Avenue 42 East and moving southern boundary toward U.S. 60.

We note that trust lands lie immediately north and east of the proposed area's current boundaries. We would encourage the BLM to include an alternative in the PEIS which analyzes the development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

We also note that the proposed area lies adjacent to a large BLM Solar Energy ROW application (#AZA 034750) that is now closed. This demonstrated interest by industry in developing solar projects on these adjacent lands, in addition to the likelihood that they may have similar characteristics to the Brenda SESA, warrant their consideration as

potential SESA lands. We recommend that the BLM evaluate the lands covered under this application for inclusion in the Brenda SESA or as a separate SESA.

Recommendations: The PEIS should consider reconfiguring the Brenda SESA's boundaries to preserve wash and drainage areas, consider expanding the PEIS to include trust lands (with the Land Department's consent), and consider expanding or creating a separate SESA to include all or a part of the lands included in the closed ROW application (#AZA 034750).

c. Bullard Wash SESA

There is a significant Joshua Tree forest on the northern portion of the area. We would request consideration of a boundary adjustment in order to preserve this forest. Also, there appears to be some overlap between the area's northwest reach and a wildlife linkage corridor as identified by Arizona Game and Fish and the Arizona Department of Transportation.

We note that trust lands lie immediately west, east, and south of the proposed area's current boundaries. We would encourage the EIS to include as an alternative the development of these lands as part of a joint planning effort between the BLM and the Arizona State Land Department.

On July 1, 2009, during a site visit of the SESA, a Southwest Willow Flycatcher was observed flying over the parcel, but no nests were identified. The BLM should analyze any potential impacts to Southwest Willow Flycatcher habitat as part of the PEIS.

Recommendations: The PEIS should consider reconfiguring the Brenda Wash SESA's boundaries to preserve the Joshua Tree forest on its northern edge and consider expanding the PEIS to include trust lands (with the Land Department's consent).

IV. Consideration of additional SESAs

Because the BLM's stated goal of identifying and analyzing SESAs in the PEIS is to determine the most appropriate locations for solar development on public lands, it is critical that a robust set of SESAs be identified and development be guided to these lands. A description of the methodology used by Arizona BLM to identify the three Arizona SESAs (Attachment A, attached) indicates that there were five other SESAs identified through the screening process. These SESAs were not included in the SESAs published for public comment because of overlap with existing solar ROW applications. Overlap with existing ROW applications was not included in the exclusion criteria directed by the BLM WO to the states, and any such overlap does not diminish an area's potential to be a successful SESA. In fact, SESAs included for public comment in several other states overlap with existing ROW applications. The BLM should analyze these additional five areas for potential inclusion as SESAs.

Recommendations: The BLM should analyze the additional five areas identified in the Arizona BLM screening process for potential inclusion as SESAs.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Kevin Gaither-Banchoff, Executive Director
Arizona Wilderness Coalition
P.O. Box 40340
Tucson, AZ 85717

Tom Darin, Staff Attorney, Energy Transmission
Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

SESA Site Assessments

BRENDA SOLAR ENERGY STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Brenda Solar Energy Study Area of approximately 4,325 acres on BLM land.

LOCATION: The Solar Energy Study Area (SESA) is 115 miles west of Phoenix and is two miles east of Brenda, AZ, in La Paz County. Site is 15 miles east of Quartzsite and 30 miles west of Salome AZ. Highway US 60 is one mile south of the site. Ave 42E bisects the west side of the area, while Ave 47 and Bouse Wash are on the eastern side of the site. Brenda is three miles north of Interstate 10 but lacks an exit. Central Arizona Project (CAP) is five miles east of SESA. Bear Hills are one mile west and south. The

Ranegras Plain follows Bouse Wash northwest to southeast. See T4N, R16W Sections 1-5, 8,9,10 & T5N R15W Section 31.

Brenda SESA is overlaid with Pending Solar Application AZA 035155. Site was surrounded on east, south, and west by BLM ROW Solar Energy Application AZA 034750, which is now closed. The SESA is bordered by BLM land, private land on southeast, and State Trust land on north.

TRANSMISSION CORRIDORS: South of the Brenda SESA is a proposed WVEC transmission corridor that runs parallel with Interstate 10. This corridor is 3 miles south of SESA. Paralleling US 60 is lower voltage transmission line in a corridor one mile south of Brenda SESA.

INSOLATION: The west half of the area is rated at 7,341 watt-hours / per sq. meter/ day of incoming solar radiation. The east half of the SESA is rated at 7,297 by National Renewable Energy Laboratory (NREL) modeling.

CLIMATE: In this region, of the Sonoran Desert, precipitation ranges from 3.7 - 13.4 inches per year. To the east, a 100-year precipitation average of 6.8 inches per year is recorded for Salome, AZ. (Brenda lacks weather station.) However, the Brenda SESA borders the Lower Colorado River Subdivision that records even lower amounts of annual rain. Cloud free days dominate. Summer temperatures can reach over 114 degrees. Drought for past decade has stressed this region.

SOILS: In this area an alluvial fan stretches from the nearby volcanic mountain range south and east to a plain that has a gradual slope towards Bouse Wash. This site contains a top level of small, darkened 'varnished' basalt rocks. This layer forms 'desert pavement.' This unique layer comes from the erosion of parent mountains and is bound together by fine grain soil. By providing a crust that stabilizes sand and dirt, this layer results in erosion and dust control, and is a rare scenic feature. Patches of desert pavement stretch diagonally across the Solar Study Area to Bouse Wash. In the lowest elevation, like the Bouse Wash floodplain and Ranegras Plain, soft 'flour like' soil caps the alluvial basin. (Soil resource for this region is under study. No data is currently available from National Resource Conservation Service.)

SLOPE: The 4,325 acre SSA slopes < 3 percent gradually south west to north east across 5.5 miles of bajada and alluvial plain to Bouse Wash. One major wash (not named) on the west side and many arroyos (gullies) divide the site diagonally.

VEGETATION: Within the Lower Colorado River Valley Subdivision, this area also includes some flora of the neighboring Arizona Upland Subdivision of the Sonoran Desert. This region of bajadas and desert plains is characterized by creosote bush, triangle bursage, ironwood, and buckhorn cholla. Additions (from AZ Upland) include saguaros and ocotillo.

Cattle grazing allotments and terrain are key factors affecting the Sonoran desert vegetation within the SESA. The western points visited show a long history of grazing. Additional stress due to a decade of drought has resulted in sparse amounts of small bushes and grasses. Today, the west side corral and tank is maintained. These improvements are inside the Brenda Solar Energy Study Area. Similar effects of significant cattle grazing were found inside the northeast corner of the SESA and along a small mesquite bosque near Bouse Wash. Retirement of one or more cattle allotments may affect land outside of the SESA.

The creosote bush-dominated desert floor is divided by numerous small washes that are lined with Palo Verde, mesquite, and ironwood trees, plus compass barrel, buckhorn cholla, and saguaro cactus. In this area, these small, but numerous, washes are the arteries between the peninsulas of the ‘desert pavement’ in the topography of this part of the Sonoran Desert environment. Studies show that desert regions like this one can only support vegetation on less than 30% of the surface.

Broken surface allows invasive (non-native) plants to out compete native plants in areas that have been disturbed. Invasive plants (like Tamarisk) have already affected roads, development sites, and abandoned farm land in this region.

Significant amount of abandoned farmland exists near east side of Solar Energy Study Area.

WILDLIFE: Evidence of jackrabbits, gophers, lizards, coyote, doves, and turkey vultures were found during short hikes into the SESA. Arizona Game & Fish Department analysis of this area lists Species of Concern: Sonoran Desert Tortoise. BLM has given this area a “sensitive” designation for the Sonoran Desert Tortoise.*

HISTORIC: Plomosa Windmill, cattle tank, and corral on west side of Solar Study Area are over 50 years old. The Ranegras Plain follows Bouse Wash. Ranegras is described as a corruption of a Hualapai word (hanagas) which means “good”. The possibility that General Patton trained troops near the SESA relates to a historic structure and known activity north and south of SESA.

ECONOMIC: This site is remote. Few residents live in this region. Once based on mining, Brenda is now tied to tourism and winter snowbirds via three large, and several small, RV Parks, plus a restaurant and vehicle repair shop. Salome and Quartzsite are larger towns but are outside of this region. Abandoned farm land exists east of the Bouse Wash. A sewage sludge disposal plant northeast of area may represent the region’s only industry. Further east a group of cattle feed lots exist along Vicksburg Road. Unincorporated Brenda is in the Salome Consolidated elementary and high school district.

REMAINING POINTS: The Brenda SESA shows considerable stress from cattle grazing and drought. In this region, a considerable amount of farmland is fallow. Questions exist regarding hook-up to 500kV Transmission Corridor along with

competition with neighboring ROW application. Review of possible cultural resource, grazing allotment(s), land subsidence, and groundwater or CAP resource for SESA are still needed. Brenda SESA is Department of Defense Airspace Consultation Area.

*Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.
(Updated 0909.)

BULLARD WASH SOLAR ENERGY STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Bullard Wash Solar Energy Study Area covers 8,203 acres of BLM land.

LOCATION: Bullard Wash Solar Study Area (SESA) is approximately 20 miles northwest of Wickenburg, AZ, in Yavapai County. North access of the area is via Highway 93, a.k.a. Joshua Tree Parkway, and Alamo Road, which runs parallel with the north edge of SESA. Bullard Wash is near the southern boundary. Tres Alamos Wilderness is five miles north. Harcuvar Mountain Wilderness and Bullard Peak (3,124 elevation) are six miles southwest of SESA. See T9N, R9W Sections 1-5, 7, 9, 10, 22-25. Pending ROW Solar Application AZA 035156 overlays much of this SESA.

TRANSMISSION CORRIDORS: A transmission corridor that contains two 500kV lines is five miles east of SESA. (The corridor runs north south).

INSOLATION: The north 80% is rated at 7,500 and 7,498 watt-hours / per sq. meter / day of incoming solar radiation. The southern 20% is rated at 7,389 by National Renewal Energy Laboratory (NREL) modeling. This SESA has the highest insolation of the three study areas.

CLIMATE: In this region, of the Sonoran Desert, precipitation averages 11.2 inches per year (Wickenburg, AZ). This is nearly twice the rain fall that the other two SESA receive annually. Summer temperatures can reach over 109 degrees. Drought for over the past decade may have stressed this region. Estimated 200-240 frost-free days.

SOILS: The Basin and Range Province provides deep alluvial valleys with through-flowing drainage. In this area, fine to medium textured soils are well drained alluvium made of sands and rocks. South of the SESA, on the desert floor, fine 'flour like' soil caps the basin. Whitlock or Whitlock Anthony gravelly sandy loam and Mojave sandy loam dominate the SESA.

SLOPE: Bullard Wash is a 8,203 acre SESA that slopes gradually from northeast to southwest at < 3 percent. Many minor washes and arroyos divide the site northeast to southwest with small undulations.

VEGETATION: The elevation of the SESA is 2,851' vs. 1,117' of Phoenix. Area combines the flora of the Arizona Upland Subdivision of the Sonoran Desert with a mingling of plants, like Joshua tree, tied to the Mohave Desert.

The SESA is characterized by a transition zone that combines velvet mesquite, creosote bush, triangle bursage, ocotillo, hedgehog, fishhook barrel, compass barrel, buckhorn cholla, and saguaro cactus with, soap tree yuccas, tall grasses, and Joshua trees.

This unique combination of plants is reduced within the area as it slopes southwest to an elevation approximately 450 feet lower. The SESA north boundary is approximately ½ mile south of the unmaintained Alamo Road. This separates the SESA from the road and the highest quality vegetation but does not remove it completely from the transition zone. However, the southern (and lower) half of the SESA lacks the flora diversity seen in the north half. There, creosote dominates the plain.

While cattle grazing allotment(s) cover this entire SESA and are combined with neighboring State Trust allotment(s), the effects are spread over a large and relatively lush desert environment. The west tank (on private land in holding) shows decades of damaging cattle traffic. However, other stock tanks show less damaging impacts. Cattle grazing allotment(s) and terrain are key factors affecting Sonoran desert vegetation within the SESA. Retirement of one or more cattle allotments may affect more land than just the SESA.

WILDLIFE: Evidence of jackrabbits, lizards, coyote, ringtail cat, deer, doves, Swainson’s hawk, southwestern willow flycatcher, and turkey vultures were seen during visits. Numerous examples demonstrate the quality of the environment and a wide variety of wildlife. This area is part of Arizona Game & Fish Department (AZGF) Hunting Unit 44A. Analysis by AZGF of this area lists Species of Concern: Sonoran Desert Tortoise, Banded Gila Monster, California Leaf-Nosed Bat, Cave Myotis (bat). Endangered: Desert Pupfish and Gila Topminnow*. BLM “Sensitive” designation for Sonoran Desert Tortoise, and Leaf-Nosed Bat.

HISTORIC: Corral in north half of SESA is over 50 years old. Small amounts of historic debris were found at the corral and two camp sites. No other historic resources were found except for three dammed wash-style water tanks. No analysis was made regarding cultural resources.

ECONOMIC: This site is remote. No residents live in this region. Mines exist; however, few if any are active. Ranching is active on many, maybe even most, of the allotments on BLM and State Trust land within this region. The SESA is within Congress (AZ) Elementary School District.

REMAINING POINTS: Ground water resource and cultural resource are unknown at this time. The remote location, rugged terrain, and large (8,203 acre) size make this a difficult SSA to appraise. During both visits training flights of two F-16’s from Luke Air Force Base were seen over this SESA and neighboring Wilderness Areas. The Bullard Wash SESA is within the Department of Defense’s Airspace Consultation Area.

* Species of Concern (SC) term defined under Endangered Species Act – Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.

GILLESPIE SOLAR ENERGE STUDY AREA

Field Investigation
July 2009
Sonoran Institute

SUMMARY: Proposed BLM Gillespie Solar Energy Study Area of approximately 3,790 acres.

LOCATION: The Solar Energy Study Site (SESA) is 50 miles west of Phoenix and southwest of Arlington (valley) AZ in Maricopa County. The east edge of the SESA is two miles west of the Gila River and Old US 80 Highway. After four miles Agua Caliente Scenic Road reaches the SESA. Site includes portions of sections in T2S, R6W & T2S, R7W.

Nearby Pending ROW Solar Energy Applications include: AZA 035157 (includes part of SESA) and AZA 035166 directly north of Gillespie SESA; AZA 034799 and AZA 034758 are northwest of the SESA (four and nine miles respectively); and closed application AZA 034806. Palo Verde Nuclear Generating Station and PV/Salt River Project transmission hub are nine miles north.

The Gillespie Solar Energy Study Area is two miles north of Webb Mountain and Woolsey Peak Wilderness, three miles northeast of Signal Mountain Wilderness, and four miles east of Arizona Game and Fish Department Gila River Wildlife area.

TRANSMISSION CORRIDORS: Two 500kV Transmission Corridors border the SESA. One touches the east corner. Another 500kV line runs parallel with the west end of the SESA and has been approved for expansion by 2012. This corridor includes Southern Pacific Rail Road track. El Paso Natural Gas lines run parallel with the SSA one mile north of the boundary. El Paso Natural Gas Gila Station (compressor site) is one mile from north east corner of the SESA.

INSOLATION: The west half of the area is rated at 7,431 watt-hours / per sq. meter / day of incoming solar energy. The east half of the area is rated at 7,364 by National Renewal Energy Laboratory (NREL) modeling.

CLIMATE: In this region of the Sonoran Desert, precipitation averages 7.5 inches per year to the north (Tonopah) and 6.1 inches to the south (Gila Bend). Cloud free days dominate. Summer temperatures can reach over 113 degrees. Drought for over that past decade has stressed this region. Region is rated at 260-320 frost-free days.

SOILS: The region hosts patches of cryptobiotic soil. Portions of this area expose a top level of small, darkened 'varnished' basalt rocks. This layer forms 'desert pavement'. This layer comes from the erosion of parent mountains and is bound together by fine grain soil. This rare feature provides a crust that stabilizes sand and dirt, plus it provides

a unique type of erosion and dust control. The area also includes well-drained soil dominated by extremely gravelly coarse sandy loam of Gunsight Cipriano complex.

SLOPE: In this basin and range region, the SESA is dominated by nearby volcanic mountain ranges south and west of the area. Webb Mountain drains north toward the SESA where a major wash bends around an escarpment and divides the east half from the west half. This ‘terrace’ makes up the largest part of SESA and allows a gradual slope north for two miles toward Centennial Wash.

The western part of the SESA has a gentle slope of < 3 percent with only arroyos (gullies) dividing the area. However the 3,790 acre SESA is divided by a significant wash and undulating terrain in the middle of the area. Parts of this middle band have slopes of 3-7 percent. While the narrow eastern extension of the SESA is again flat at < 3 percent slope.

VEGETATION: This area contains the flora common to the Arizona Upland Subdivision of the Sonoran Desert. This region’s bajada is characterized by plants like creosote bush and triangle bursage; trees like mesquite, ironwood, and Palo Verde, plus cactus like barrel, cholla, and saguaro. Due to cattle grazing allotment(s) and terrain, the vegetation variety and density varies within this area. A long history of grazing is shown by a lack of small plants like triangle bursage. A decade of drought may also contribute to sparse amounts of bushes and grasses. Retirement of cattle allotment(s) may affect more land than just the SESA.

The ‘flat top terrace’ of the escarpment (the western half of SESA) is dominated by creosote bush but also supports scattered buckhorn and pencil cholla plus saguaro cactus that line the arroyos.

Invasive (non-native) plants compete with native plants in areas that have been disturbed and can be a development issue. Roads, abandoned farm land, and developed property have been affected by invasive plants in this region. One plant is listed on Arizona Game & Fish Department (AZGFD) web site for this specific area is Straw-top cholla (native plant law ‘salvage restricted; collection only with permit’).*

WILDLIFE: Evidence of jackrabbits, gophers, lizards, coyote, deer, doves, road runner, red tail hawk, and turkey vultures were seen during short hikes into this area. AZGFD analysis of this area lists Species of Concern as Sonoran Desert Tortoise, California Leaf-Nosed Bat, Cave Myotis (bat). Listed as Endangered under ESA: Southwestern Willow Flycatcher, Yuma Clapper Rail. BLM “Sensitive” designation for Sonoran Desert Tortoise, California Leaf-Nosed Bat*.

HISTORIC: Agua Caliente Scenic Road (BLM defined) bisects half of the study area. It has experienced several alignments since the 1920’s. Near the road, a small debris site inside the SESA could be from 1930’s. Poison Well, over 50 years old, (historic), is near SESA southeast corner. Outside the SESA are a dozen small mines that dent the earth’s

surface near Webb Mountain. The Gillespie Dam trestle bridge and Enterprise Canal (1886) are historic features three miles east of SESA.

ECONOMIC: No residents live close to this remote site. Mining was short lived in this region. However, farming in nearby Arlington Valley along the Gila River has over a 100-year history. Ranching on tracts of private, BLM, and State Trust land continues. The Desert Rose restaurant & bar, a post office, the Hassayampa General Store, a small feed lot, and a grade school are all located nearby. Abandoned cotton gin site and abandoned farm land exist (private and State Trust land) in this region. Area is within Arlington Unified School District (elementary) and Buckeye Union High School District.

REMAINING POINTS: The Gillespie SESA shows stress from cattle grazing and drought. In this region significant farmland is fallow. Cultural resource, grazing allotment(s) and ground water resources need further evaluation. El Paso Pump Station near east SESA boundary has EPA posting regarding Chromate discharge from plant. Remediation and off-site ground water monitoring continues. Gillespie SESA is over-flight zone for Luke AFB and considered an Airspace Consultation Area by Department of Defense.

*Arizona Game & Fish Department web site & on-line environmental review tool. Data from AZGFD Heritage Data Management System.

Exhibit 7: Site-specific Comments on Solar Energy Study Areas – California

Please accept and fully consider these comments, submitted on behalf of the following groups: The Wilderness Society, Mojave Desert Land Trust, Defenders of Wildlife, Desert Protective Council, California Wilderness Coalition, California Native Plant Society, Wild Utah Project, and Californians for Western Wilderness.

Introduction

In response to BLM interest in siting criteria for solar projects on public lands, a number of organizations¹ including NRDC and The Wilderness Society developed a list of criteria specifically designed for use by the BLM to identify appropriate areas for solar development in the California Desert Conservation Area (CDCA). These criteria were developed with input from conservation professionals, biologists and other scientists familiar with the CDCA and its land resource values. They were designed to aid in the identification of lands potentially suitable for solar energy development with the least amount of environmental conflict. The criteria were designed primarily to “filter out” lands having high environmental resource values and high sensitivity with respect to relatively large-scale land-disturbing activities. The criteria are attached as Attachment A.

The siting criteria were developed with the following assumptions:

1. The criteria are to be used in the identification of potentially suitable public lands administered by BLM in the CDCA.
2. Public lands within the Solar Energy Study Areas that meet the siting criteria attached to these comments should be given the highest priority for solar energy development by the permitting agencies.
3. Public lands meeting the siting criteria but located outside the four SESAs currently proposed should also be considered for Solar Energy Study Areas.

The BLM should use these siting criteria in order to minimize environmental concerns and facilitate development of environmentally responsible solar projects in a timely manner. The criteria facilitate distinguishing between public lands as follows: 1) Public lands in the CDCA that are not suitable for solar energy pilot projects, and 2) Public lands in the CDCA that are potentially suitable for such development.²

Analysis

We applied the siting criteria to the four proposed SESAs in California using GIS analysis. In order to minimize environmental conflicts, the proposed SESAs should be modified to address the concerns identified below. It is important to note that there are

¹ In alphabetical order: California Wilderness Coalition, Center for Biological Diversity, Defenders of Wildlife, Desert Protective Council, National Parks Conservation Association, Natural Resources Defense Council, Sierra Club, The Nature Conservancy, The Wilderness Society, The Wildlands Conservancy, Western Watersheds Project.

² Public lands described in the criteria are represented by specific names commonly used in the CDCA Plan and other planning/environmental review documents. We use these names to represent actual public land areas within the CDCA rather than list lands by legal description.

some discrepancies between GIS shape files for cultural resources and mapped cultural resources in BLM documents. Better data are needed on these important resources. It is critical that the BLM consult with tribal chairpersons to obtain clarification on the location of all significant cultural sites.

We are providing as Attachment B the map “*Potential Solar Energy Study Areas*” that was previously submitted by environmental stakeholders to the BLM in May 2009. The map has one revision -- the Imperial West area no longer appears on the map as a viable solar energy study area due to new information regarding the occurrence of species of concern in this area.

Proposed California SESA Comments

Iron Mountain SESA: We recommend eliminating this SESA due to the high occurrence of sensitive resources and general inconsistency with our siting criteria, as follows:

- Includes lands in Citizens Wilderness Inventory
- Inadequate electrical transmission facilities
- Connectivity and biological linkage in the ecotone between the Mojave and Colorado Deserts (opportunities exist to improve biological connectivity across the MWD Aqueduct for the desert tortoise, bighorn sheep and other wide-ranging species)
- Desert tortoise habitat in the western, northwestern and northeastern areas
- Mojave fringe toed lizard, desert rosey boa, desert night lizard present
- Western edge overlaps with known range of bighorn sheep
- Possible conflict with Patton’s Iron Mountain Divisional Camp ACEC³
- This area has been identified by Native American tribes as having great cultural significance⁴
- Large drainage which functions as an ephemeral stream
- Very good occurrence of the dune interior verbena - FWS special status and BLM special management
- Numerous occurrences of other rare plants⁵

³ Patton's Iron Mountain Divisional Camp overlaps southwestern portion of SESA. The boundaries of the ACEC are outside the SESA but the cultural polygon that we have in GIS overlaps - need clarification on cultural resources within study area. Mojave Desert Land Trust. (2008). *A Constraints Study of Cultural Resource Sensitivity within the California Desert*. Unpublished manuscript. p. 33. Attachment C.

⁴ The Salt Song Trail incorporates the sacred landscapes and cultural areas of the Nuwuvi, Southern Piute (14 bands) across four states. These landmarks are described in the Nuwuvi Salt Songs and represent ancient villages, gathering sites for salt and medicinal herbs, trading routes, historic sites, sacred areas, ancestral lands and pilgrimages in a physical and spiritual landscape of stories and songs. Bands outside California may also have an interest in siting of energy projects and utility corridors. Source: The Cultural Conservancy, San Francisco State University Department of American Indian Studies. The Salt Song Trail Project – contact Philip Klasky pklasky@igc.org (415) 561-6594. For information on importance of the Iron Mountain and Ward Valley area contact The Native American Land Conservancy, Kurt Russo, Ex. Dir. frkvalues@aol.com, 800-670-6252.

⁵ CNPS listed plants - *Androstephium breviflorum* (CNPS List 2.2, State Rank S1.2) *Eriastrum harwoodii* (CNPS List 1.B, State Rank S2, Global Rank G2). Iron Mountain is largely unknown in terms of botanic resources.

- Probable bighorn sheep movement corridors⁶
- Visual impacts as identified in CEC letter to the Renewable Energy Transmission Initiative dated November 19, 2008 (p.4) (Attachment D)

Riverside East SESA: The SESA in eastern Riverside County should be reduced to avoid impacts to sensitive resources identified below:

- Desert Tortoise Critical Habitat outside ACEC in western and southern areas
- Desert tortoise habitat in the western, northwestern and northeastern areas⁷
- Connectivity and biological linkage for desert tortoise:
 - between the Northern Colorado and Eastern Colorado Recovery Units⁸
 - between the Chuckwalla and Chemehuevi Critical Habitat Units
- Microphyll woodland habitat and newly discovered plant species surrounding Palen Dry Lake
- Western half of the study area is heavy microphyll woodland and is on transition zone between Mojave and Sonoran ecoregions
- Probable important linkage function provided by Pinto Wash, a large wash on the far northwestern boundary which drains into Chuckwalla Valley
- Many cultural and archaeological resources:
 - Sidewinder Well ACEC and Palen Dry Lake ACEC and shoreline contain prehistoric habitation sites, mesquite processing sites and lakeshore sites⁹
 - Ford Dry Lake may contain potentially important cultural resources¹⁰
 - Colorado Desert aboriginal trails
 - The South McCoy Mountains may contain potentially important cultural resources¹¹
 - Possible Papago Creation site north of Desert Center¹²
 - Overlaps with the boundaries of historic Camp Rice, that has been recommended eligible for the National Register of Historic Places¹³
- Southeastern portion of Joshua Tree National Park
- Probable bighorn sheep movement corridors^{14, 15}

⁶ Bare *et al.* (2009). *Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave*.

⁷ (CNDDDB 2009)

⁸ This linkage was used by the USFWS to justify combining these two recovery units in the recent Draft Revised Recovery Plan)

⁹ Mojave Desert Land Trust. (2008). p. 34.

¹⁰ *Ibid.* p. 35.

¹¹ The McCoy Wash Petroglyph Site is located in this area, but the petroglyph site is included inside the McCoy Mountains wilderness area and does not overlap with the proposed SESA boundary. The area around the petroglyph site is extremely sensitive to any ground disturbance. Mojave Desert Land Trust. (2008).

¹² Location has been identified based upon public concern for the location. Research regarding the site needs to be conducted. Mojave Desert Land Trust. (2008). p.45.

¹³ Part of the World War II (WWII) Desert Training Center/ California–Arizona Maneuver Area

¹⁴ Bare, L., Bernhardt, T., Chu, T., Gomez, M., Noddings, C., Viljoen, M. (2009). *Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave: Effects on habitat quality, physical movement of species, and gene flow*. Unpublished manuscript, University of California, Donald Bren School of Environmental Science and Management, Santa Barbara, CA. Attachment E.

- Yellow warbler and Mojave fringed toed lizard occupy Carl's Dunes (adjacent to Blythe)
- Rare plants occurrences and habitats¹⁶
- Important biological connectivity for all plants and animals between the Mojave and Colorado Deserts¹⁷

Pisgah SESA: We recommend reducing this study area to avoid impacts to the following:

- Rare plant occurrences and habitats¹⁸
- Desert Tortoises and habitat, and associated movement corridor along the western edge of the Cady Mountains that provides biological connection between the Ord-Rodman and Superior-Cronese Critical Habitat Units
- Sensitive cultural resources sites¹⁹
- Significant drainage from the Cady Mountains (not yet mapped by the National Wetlands Inventory)
- Pisgah lava flow (site of current research into biological evolution)
- Two sections of former Catellus lands acquired for purposes of conservation of habitat and the associated species

Imperial East SESA: Based on currently available information there are few anticipated resource conflicts with this proposed SESA:

- Flat-tailed horned lizard range, but not in a designated Flat-tailed Horned Lizard Management Area
- Field research is being conducted by the California Native Plant Society to determine if special status plants occur here

Additional Areas for Study

The Solar PEIS must include a robust alternatives analysis to comply with NEPA requirements and each “action alternative” should include alternative SESAs for

¹⁵ Epps, C., Wehausen, J.D., Bleich, V.C., Torres, S.G., Brashares, J. S., “Optimizing dispersal and corridor models using landscape genetics,” *Journal of Applied Ecology* 44 (2007): 721.

¹⁶ The sand dune habitats at the eastern end of the Eagle Mountains currently support 2 CNPS listed rare plants (*Cryptantha costata*, *Eriastrum harwoodii*), and one watchlist plant (*Astragalus aridus*). Other CNPS listed species impacted are: *Cryptantha costata*, CNPS List 4.3, *Proboscidea althaeifolia*, a CNPS List 4.3 plant, *Colubrina californica*, *Senna covesii*, *Ditaxis californica*, *Ditaxis claryana*, *Abronia villosa* var. *aurita*, *Hymenoxys odorata*, *Teucrium cubense* ssp. *depressum*, *Wislizenia refracta* ssp. *refracta*, *Grusonia parishii*, *Astragalus insularis* var. *harwoodii*, *Corypantha alversonii*, *Castela emoryi*.

¹⁷ Opportunities exist to improve biological connectivity across the I-10 corridor for the Desert Tortoise, Bighorn Sheep and other wide-ranging species.

¹⁸ Very good occurrence of white margin beard tongue in northeastern part of SESA and in Lavic Lake/Pisgah Crater. Rare and special status plants: *Penstemon albomarginatus*, a CNPS List 1B.1, *Androstephium breviflorum*, *Castela emory* CNPS listed.

¹⁹ Trails out of the Cady Mountains towards Cronese Dry Lake and obsidian chipping sites; Troy Lake on western edge has not been surveyed to professional standards. This area contains geoglyphs, habitation sites, lithic scatters, rock art, and isolated hearths on both sides of Interstate 40. Troy and Cronese Dry Lakes need to be thoroughly inventoried. Research regarding the site needs to be conducted. Mojave Desert Land Trust. (2008). p.45.

consideration. Using the same siting criteria applied to the four proposed SESAs, we have so far identified three additional areas in the CDCA that may be appropriate for solar development. These areas contain significant amounts of public land that could be aggregated with adjacent private land for solar development, contain little or few resources of concern, and are near existing electrical transmission facilities. They are shown on the map provided as Attachment B.

Antelope Valley

The Antelope Valley in Kern County meets several key criteria for environmentally responsible solar energy development. It is comprised of large expanses of abandoned agricultural lands, is near existing transmission lines, and is near urban areas where ample housing is available. The Antelope Valley appears to be an important, strategically located area for potential long-term solar energy development that could be addressed through a partnership involving the Department of Energy, state and local agencies, and BLM.

The Antelope Valley area contains 4,040 acres of public land and there are 82,379 acres of private land in the immediate vicinity that may also be appropriate for solar development.

Chocolate Mountains

Portions of the East Mesa near the Coachella Canal, which we are calling the Chocolate Mountains Area, should be considered as a possible SESA. This area contains 6,370 acres of public land, and there are 7,068 acres of private land in the immediate vicinity that may also be appropriate for solar development. It should be noted that this area has the potential to contain archeological sites on the east and west side of the Salton Sea.²⁰ A cultural survey and consultation with the Argonne people would be necessary in this area.

Westmoreland

The Westmoreland area contains 4,460 acres of public land that should be considered as a possible SESA, and there are 582 acres of private land in the immediate vicinity that may also be appropriate for solar development.

Conclusion

The BLM must provide clear rationales for selection of criteria and methodology for applying those criteria to support decisions made regarding the SESAs and their possible designation as Solar Energy Zones. We strongly recommend that the BLM use the attached siting criteria and the GIS data provided by numerous NGOs in California to make its analysis as robust and thorough as possible. The criteria represent the very hard work of numerous organizations and reflect the shared expertise of conservation professionals, biologists and other scientists familiar with the CDCA and its land

²⁰ The area has the potential to contain “archeological sites, including fish traps and rock art which are within the band of shoreline sites in Imperial County that have not been previously noted in the archeological record. These sites are on the east and west side of the Salton Sea and should be noted as significant features on the landscape. The sites should be considered to be fragile and are in need of documentation.” Mojave Desert Land Trust. 2008. p. 45.

resource values. Our organizations believe that there are opportunities to develop utility-scale solar projects in low conflict areas on public lands in California, and we look forward to working with the BLM and its partners to find these appropriate locations.

Sincerely,

Alice Bond, California Policy Analyst
The Wilderness Society
655 Montgomery St., Suite 1000
San Francisco, CA 94111

Pat Flanagan, Resource Advocate
Mojave Desert Land Trust
6393 Sunset Road
Joshua Tree, CA 92252

Peter Nelson, Federal Lands Program, Director
Defenders of Wildlife
1130 17th Street N.W.
Washington D.C. 20036-4604

Nick Ervin, Board of Directors President
Desert Protective Council
P.O. Box 3635
San Diego, CA 92163

Monica Argandona, Desert Program Director
California Wilderness Coalition
167 N. Third Avenue, Suite M
Upland, CA 91786

Greg Suba, Conservation Program Director
California Native Plant Society
2707 K Street
Sacramento, CA 95816

Michael J. Painter, Coordinator
Californians for Western Wilderness
P.O. Box 210474
San Francisco, CA 94121

Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

Exhibit 8: Site-specific Comments on Solar Energy Study Areas – Colorado

Please accept and fully consider these comments, submitted on behalf of the following groups: The Wilderness Society, Center for Native Ecosystems, Colorado Environmental Coalition, Western Resource Advocates, and Wild Utah Project.

Overall, the four Solar Energy Study Areas (SESAs) identified in Colorado appear to have been well selected to avoid insurmountable conflicts with other resources and values, and we support their inclusion and detailed analysis in the Draft PEIS. However, there are resource concerns for all of the Colorado SESAs which will need to be addressed with detailed analysis and proposed impacts minimization and mitigation strategies in the Draft PEIS. Further, as described in detail below, to ensure that BLM follows its obligations under the Endangered Species Act and the BLM Special Status Species Manual, the agency may want to consider revising the boundaries of the SESAs to avoid impacts to occupied Gunnison's prairie dog colonies and areas that may contribute to Gunnison's prairie dog recovery.

I. Special Management Areas – Sangre de Cristo National Heritage Area¹

The Notice of Availability identified a number of different types of special management areas where utility-scale solar development is not appropriate. National Heritage Areas are governed by laws requiring management for protection, enhancement, and interpretation of the natural, cultural, historic, scenic, and recreational resources of the Heritage Area. Legislation was passed in March of 2009 designating Conejos, Costilla and Alamosa counties as the Sangre de Cristo National Heritage Area (NHA). This area also includes the Los Caminos Antiguos scenic by-way.

The mission of the Sangre de Cristo NHA is to promote, preserve, protect and interpret the profound historical, religious, environmental, geographic, geologic, cultural and linguistic resources of the area. These efforts will contribute to the overall national story, engender a spirit of pride and self-reliance, and create a legacy in the Colorado counties of Alamosa, Conejos, and Costilla.

The geologic resources found in the NHA are directly associated with human habitation. The layered water systems first brought in game that attracted many Native tribes to the area, going back 12,000 years. Hispanic settlers from the south were enticed by the water to raise crops and sheep. This area boasts the oldest town in Colorado (San Luis), the oldest parish in Colorado (Our Lady of Guadalupe), and the oldest water rights in Colorado. Anglo ranchers and farmers historically raised cattle and wheat, and today raise crops of alfalfa, potatoes, and lettuce. The geographic isolation of the area has essentially preserved the cultural identity of those groups.

Historically, the SLV area was a crossroads of culture. Mt. Blanca, southeast of the Great Sand Dunes, marks the eastern boundary of the Navajo. Mt. Blanca is considered

¹ Much of the information in this section was gathered by the San Luis Valley Ecosystem Council. It has been edited and included with their permission.

one of four mountain peaks in the four corner area to be sacred among various tribes who inhabited and traded in this area.

Three of the four SESAs are located within the Sangre de Cristo NHA – Four Mile East, Los Mogotes East, and Antonito Southeast. Four Mile East is also bisected by the Scenic by-way route and gateway to the Great Sand Dunes National Park.

Recommendation: BLM should analyze the potential impacts of designating the Four Mile East, Los Mogotes East and Antonito Southeast SESAs and the impacts of potential solar development in those SESAs to the Sangre de Cristo NHA and the Los Caminos Antiguos scenic by-way, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated. BLM should ensure that any SESA designations and subsequent solar development are consistent with the management requirements of the Sangre de Cristo NHA.

II. Biological Resources

a. General habitat issues to be addressed in the Draft PEIS

The San Luis Valley is home to a rich and varied ecosystem. A GIS analysis performed by Center for Native Ecosystems identified overlap with habitat for several species (see Appendix A), as well as overlap with the Colorado Natural Heritage Program Mineral Hot Springs Potential Conservation Area (PCA). Though a larger set of data were used to screen the SESAs (see Appendix B), overlap was only identified in data from the Colorado Division of Wildlife, the Southern Rockies Network Vision, and the Colorado Natural Heritage Program. This overlap is also mapped in Google Earth kmz files (included in the attached CD, Attachment A).

Recommendation: BLM should analyze potential impacts to wildlife habitat and the Colorado Natural Heritage Program Mineral Hot Springs PCA from designating the Colorado SESAs and the impacts of potential solar development in the SESAs, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

b. Overlap with occupied Gunnison's prairie dog colonies and recovery areas

Gunnison's prairie dogs are highly imperiled. Solar energy projects could create major conflicts for prairie dog recovery by destroying and/or fragmenting habitat, introducing perching structures for raptors, creating new roads that allow access for prairie dog shooters and weeds, and adding structures to the landscape that make it more difficult for prairie dogs to detect predators and communicate with other individuals in order to avoid predation.

Montane populations like those of the San Luis Valley (see attached map of Gunnison's prairie dog range, Attachment B) are at particular risk of extinction, and the U.S. Fish and Wildlife Service has determined that these warrant protection under the Endangered

Species Act (73 Fed. Reg. 6660-6684 (Feb. 5, 2008)). This determination places obligations on BLM to reduce or eliminate threats to this species, including solar energy projects, and to promote conservation of this species and minimize the likelihood of listing. To comply with its obligations under the Endangered Species Act and its Special Status Species Manual, BLM should consider revising the SESA boundaries to exclude occupied Gunnison's prairie dog colonies, including a half-mile buffer around colonies, and to exclude likely-to-be-reoccupied habitat that is essential to the recovery of the Gunnison's prairie dog.

In addition, the Colorado Division of Wildlife is in the process of approving a statewide Conservation Strategy for Gunnison's and White-tailed Prairie Dogs, and is also developing Individual Population Area Action Plans. BLM should also ensure that its actions are consistent with these Gunnison's prairie dog recovery efforts. Appendix A includes overlap with occupied Gunnison's prairie dog colonies, and the overlap is also mapped in Google Earth kmz files (included in the attached CD, Attachment A).

Recommendations: To ensure that BLM follows its obligations under the Endangered Species Act and its Special Status Species Manual, the agency should ensure that solar projects on public lands do not pose a threat to this species or increase the necessity of listing Gunnison's prairie dogs under the Endangered Species Act. To ensure compliance with these obligations, BLM should consider revising the SESA boundaries to exclude occupied Gunnison's prairie dog colonies, including a half-mile buffer around colonies, and to exclude likely-to-be-reoccupied habitat that is essential to the recovery of the Gunnison's prairie dog. BLM should also analyze the potential impacts to Gunnison's prairie dogs of designating the SESAs and the impacts of potential solar development in the SESAs, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Josh Pollock, Conservation Director
Center for Native Ecosystems
1536 Wynkoop St, Ste 303
Denver, CO 80202

Carrie Curtiss, Program Director
Colorado Environmental Coalition
1536 Wynkoop St., Ste. 5C

Denver, CO 80202

Tom Darin, Staff Attorney, Energy Transmission
Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

Appendix A – Overlap with Species Habitat

Note: overlap with Gunnison’s prairie dog colonies **highlighted**.

Study Area	Conservation Type	Acres of Conflict
Antonito Southeast	Pronghorn overall range	9,591
	Pronghorn winter range	9,591
	Elk Severe Winter Range	5,442
	Elk Overall Range	9,591
	Elk Winter Range	5,442
	Black Bear Overall Range	9,591
	Bald Eagle Winter Range	9,592
	Bald Eagle Winter Forage	9,575
	Gunnison's Prairie Dog Overall Range	9,591
	Gunnison's Prairie Dog Colonies	9
	Southern Rockies Network Vison - Wildlife Linkage	9,560
	Southern Rockies Network Vison - Medium Use Compatible	27
	Mountain Lion Overall Range	9,591
	Mule Deer Overall Range	9,591
DeTilla Gulch	Pronghorn overall range	1,520
	Pronghorn Perennial Water	22
	Pronghorn Winter Range	1,520
	Pronghorn Winter Concentration	608
	Elk Winter Range	497
	Elk Severe Winter Range	497
	Elk Overall Range	1,520
	Black Bear Overall Range	1,520
	Bald Eagle Winter Range	747
	Gunnison's Prairie Dog Overall Range	1,520
	Gunnison's Prairie Dog Colonies	352

	Southern Rockies Network Vison - Medium Use Compatible	1,518
	CNHP PCA - Mineral Hot Springs	1,026
	Mountain Lion Overall Range	1,520
	Mule Deer Overall Range	1,520
	Mule Deer Winter Range	1,127
Fourmile East	Elk Overall Range	3,878
	Elk Summer Range	213
	Pronghorn overall range	3,878
	Pronghorn winter range	3,878
	Elk Highway Crossings	6
	Black Bear Overall Range	3,878
	Bald Eagle Winter Range	3,878
	Gunnison's Prairie Dog Overall Range	3,878
	Gunnison's Prairie Dog Colonies	1,016
	Southern Rockies Network Vison - Low Use Compatible	3,840
	Mountain Lion Overall Range	3,878
	Mule Deer Overall Range	3,878
Los Mogotes East	Pronghorn overall range	5,905
	Pronghorn Winter Range	5,905
	Pronghorn Perennial Water	26
	Pronghorn Winter Concentration	3,142
	Pronghorn Severe Winter Range	5,693
	Elk Severe Winter Range	5,905
	Elk Winter Range	5,905
	Elk Overall Range	5,905
	Black Bear Overall Range	5,905
	Bald Eagle Winter Range	5,905
	Gunnison's Prairie Dog Overall Range	5,905
	Gunnison's Prairie Dog Colonies	518
	Southern Rockies Network Vison - Low Use Compatible	5,737
	Mountain Lion Overall Range	5,905
	Mule Deer Overall Range	5,905
	Mule Deer Winter Range	134

Appendix B – Entire List of GIS Data Used to Screen SESAs

Full Colorado CNE Screen List	Source
BLM Designated ACEC's	BLM
Citizens Proposed Wilderness	SRCA

Colorado Natural Heratage Program (CNHP) Element Occurrences	CNHP
CNHP Potential Conservaiton Areas	CNHP
CNHP Networks of Conservation Areas	CNHP
Colorado Natural Areas Program (CNAP) Natural Areas	CNAP
Colorado State Wildlife Areas (CDOW)	CDOW
USFS Roadless Areas	USFS
USFS Research Natural Areas (RNA)	USFS
Proposed Research Natural Areas (CNAP)	CNAP
Heart of the West Wildlands Network Design	Wild Utah Project
Potential RNA Pike-San Isabel NF and Commanche-Cimmeron NG	USFS
SRCA inventoried Roadless Areas	SRCA
TNC Southern Rocky Mountains Ecoregional Plan Portfolio	TNC
Southern Rockies Ecosystem Project (SREP) Southern Rockies Wildlands Network Design	CNE
SREP Wildlife Linkages	CNE
Dudly Bluffs rare wildflowers	unknown
Susans's Purse-making Caddisfly	unknown
BALD EAGLE-active nestsites	CDOW
BALD EAGLE-communal roost	CDOW
BALD EAGLE-inactive nestsite	CDOW
BALD EAGLE-roost sites	CDOW
BALD EAGLE-unknown nestsites	CDOW
BALD EAGLE-winter concentration	CDOW
CST GROUSE-winter range	CDOW
CST GROUSE-overall range	CDOW
Columbian sharp tailed grouse production area	CDOW
CST GROUSE-production area	CDOW
Comanche mtn plover nest survey	unknown
greater prairie chicken production area	CDOW
greater prairie chicken overall range	CDOW
greater prairie chicken historic range	CDOW
CDOW greater sage-grouse leks	CDOW
greater sage grouse winter range	CDOW
greater sage grouse severe winter	CDOW
greater sage grouse brood area	CDOW
greater sage grouse brood area	CDOW
greater sage grouse production area	CDOW
greater sage grouse production area	CDOW
CDOW potential greater sage grouse core areas	CDOW
greater sage grouse leks 4 mile buffer TWS	CDOW
gunnison sage grouse winter range	CDOW
gunnison sage grouse severe winter	CDOW
gunnison sage grouse production area	CDOW

gunnison sage grouse overall range	CDOW
gunnison sage grouse historic habitat	CDOW
gunnison sage grouse brood area	CDOW
gunnison sage grouse habitat status	CDOW
Commanche lesser prairie chicken leks	CDOW
lesser prairie chicken special management area	CDOW
lesser prairie chicken production area	CDOW
lesser prairie chicken overall range	CDOW
lesser prairie chicken historic range	CDOW
least tern production area	CDOW
least tern foraging area	CDOW
plains sharp tailed grouse production area	CDOW
plains sharp tailed grouse winter range	CDOW
plains sharp tailed grouse overall range	CDOW
piping plover production area	CDOW
piping plover foraging area	CDOW
mexican spotted owl FS protected activity centers	CDOW
mexican spotted owl FS survey	CDOW
mexican spotted owl proposed critical habitat	FWS
mexican spotted owl designated critical habitat	FWS
mexican spotted owl protected activity centers	FWS
bonytail chub designated critical habitat	FWS
colorado pikeminnow designated critical habitat	FWS
razorback sucker designated critical habitat	FWS
humpback chub designated critical habitat	FWS
CO river cutthroat watersheds	CDOW
CO River cutthroat Trout habitat	CDOW
greenback cutthroat watersheds	CDOW
rio grande cutthroat watersheds	CDOW
TX horned lizard overall range	CDOW
BToad CurrentRange	CDOW
boreal toad CNHP eors 02 2002	CNHP
boreal toad breeding sites	CDOW
boreal toad observations	CDOW
boreal toad potential translocation sites	CDOW
boreal toad surveying	CDOW
KIT FOX-overall range	CDOW
CDOW LYNX potential habitat	CDOW
BLM & FS lynx linkages	USFS & BLM
BLM & FS lynx analysis units	USFS & BLM
FS NE Lynx habitat	USFS
FS SW lynx habitat	USFS
potential douglas county pocket gopher habitat 1990	Douglas County
potential douglas county pocket gopher habitat 2003	Douglas County
prarie dog all layers combined	CDOW

prebles m. j. mouse critical habitat	FWS
prebles m. j. mouse critical habitat stream names	FWS
prebles m. j. mouse occupied range	FWS
prebles m.j. mouse trapping survey points 2004	FWS
swift fox overall range	CDOW
Astragalus debequaeus-Iliamna grandiflora-Lomatium concinnum-Oenothera acutissima-Oxytropis besseyi var abnapiformis-Penstemon gibbensii	unknown
Cirsium perplexans BLM	BLM
Mentzelia rhizomata BLM	BLM
Penstemon debilis	unknown
Penstemon grahmii proposed critical habitat	FWS
Porter feathergrass	unknown
eriogonum pelinophilum	unknown
AbertsSquirrelOverallRange	CDOW
BighornMigrationPatterns	CDOW
BighornMigrationCorridors	CDOW
BighornMineralLick	CDOW
BighornOverallRange	CDOW
BighornProductionArea	CDOW
BighornSevereWinterRange	CDOW
ElkMigrationPatterns	CDOW
MooseMigrationPatterns	CDOW
MuleDeerMigrationPatterns	CDOW
PronghornMigrationPatterns	CDOW
BighornSummerConcentrationArea	CDOW
BighornSummerRange	CDOW
BighornWaterSource	CDOW
BighornWinterConcentrationArea	CDOW
BighornWinterRange	CDOW
BlackBearFallConcentration	CDOW
BlackBearHumanConflictArea	CDOW
BlackBearOverallRange	CDOW
BlackBearSummerConcentration	CDOW
BTPrarieDogOverallRange	CDOW
BWQuailConcentrationArea	CDOW
BWQuailOverallRange	CDOW
ElkHighwayCrossings	CDOW
ElkLimitedUseArea	CDOW
ElkMigrationCorridors	CDOW
ElkOverallRange	CDOW
ElkProductionArea	CDOW
ElkResidentPopulationArea	CDOW
ElkSevereWinterRange	CDOW
ElkSummerConcentrationArea	CDOW

ElkSummerRange	CDOW
ElkWinterConcentrationArea	CDOW
ElkWinterRange	CDOW
GBHeronForagingArea	CDOW
GBHeronHistoricNestArea	CDOW
GBHeronNestingArea	CDOW
GeeseBroodConcentrationArea	CDOW
GeeseForagingArea	CDOW
GeeseMoltingArea	CDOW
GeeseProductionArea	CDOW
GeeseWinterConcentrationArea	CDOW
GeeseWinterRange	CDOW
MassasaugaOverallRange	CDOW
MooseConcentrationArea	CDOW
MooseOverallRange	CDOW
MoosePriorityHabitat	CDOW
MooseSummerRange	CDOW
MooseWinterRange	CDOW
MtnGoatConcentrationArea	CDOW
MtnGoatMigrationCorridors	CDOW
MtnGoatMineralLick	CDOW
MtnGoatOverallRange	CDOW
MtnGoatProductionArea	CDOW
MtnGoatSummerRange	CDOW
MtnGoatWinterRange	CDOW
MtnLionHumanConflictArea	CDOW
MtnLionOverallRange	CDOW
MtnLionPeripheralRange	CDOW
MuleDeerConcentrationArea	CDOW
MuleDeerCriticalWinterRange	CDOW
MuleDeerHighwayCrossing	CDOW
MuleDeerLimitedUseArea	CDOW
MuleDeerMigrationCorridors	CDOW
MuleDeerOverallRange	CDOW
MuleDeerResidentPopulationArea	CDOW
MuleDeerSevereWinterRange	CDOW
MuleDeerSummerRange	CDOW
MuleDeerWinterConcentrationArea	CDOW
MuleDeerWinterRange	CDOW
OspreyForagingArea	CDOW
OspreyNestsites	CDOW
PeregrineMigratoryHuntingHab	CDOW
PeregrineNestingArea	CDOW
PeregrinePotentialNesting	CDOW
PheasantConcentrationArea	CDOW

PheasantOverallRange	CDOW
PipingPloverForagingArea	CDOW
PipingPloverProductionArea	CDOW
PronghornLimitedUseArea	CDOW
PronghornConcentrationArea	CDOW
PronghornMigrationCorridors	CDOW
PronghornOverallRange	CDOW
PronghornPerennialWater	CDOW
PronghornResidentPopulationArea	CDOW
PronghornSevereWinterRange	CDOW
PronghornWinterConcentration	CDOW
PronghornWinterRange	CDOW
PtarmiganOverallRange	CDOW
PtarmiganOverallRange	CDOW
RiverOtterConcentrationArea	CDOW
RiverOtterNatalDen	CDOW
RiverOtterOverallRange	CDOW
RiverOtterWinterRange	CDOW
ScaledQuailOverallRange	CDOW
THLizardOverallRange	CDOW
TurkeyOverallRange	CDOW
TurkeyProductionArea	CDOW
TurkeyRoostSites	CDOW
TurkeyWinterConcentrationArea	CDOW
TurkeyWinterRange	CDOW
WhPelicanForagingArea	CDOW
WhPelicanNestingArea	CDOW
WhPelicanOverallRange	CDOW
WTDeerConcentrationArea	CDOW
WTDeerHighwayCrossing	CDOW
WTDeerOverallRange	CDOW
WTDeerWinterRange	CDOW
Miscellaneous	COMaP Version 7

Exhibit 9: Site-specific Comments on Solar Energy Study Areas – Nevada

These comments are a subset of the comments prepared by the Nevada Wilderness Project and are included with their permission.

Please accept and fully consider these comments, submitted on behalf of the following groups: The Wilderness Society, Western Resource Advocates, and the Wild Utah Project.

In this section, we provide information about conservation concerns that we have identified for each of the SESAs. We also provide suggestions for how some of the SESAs might be improved and ways that impacts on the ground might be lessened or addressed with further research into the on-the-ground conditions at the SESA. We have organized these by Field Office.

Briefly, NWP filtered the sites against available biological data including Nevada Natural Heritage Program (NNHP) data, Nevada Department of Wildlife (NDOW) data, and data from other conservation groups using a Geographic Information System. The biological information from this filtering process provides valuable baseline information for each SESA and is useful in identifying potential wildlife conflicts. Only species that have some conservation concern within the state (e.g., NDOW species of concern or species where limited information is available on their overall state). NWP also examined SESAs against a composite model of species diversity for Nevada that we produced using Southwest Regional GAP Analysis Project 30-m wildlife habitat models. This model included all models available for profiled species in Nevada's Wildlife Action Plan and species that were in the NNHP dataset but not in the Wildlife Action Plan. Overall, 96 species were used after removing several problematic species or models (e.g., no bat species were included as their habitat models were too general to be informative). This will be referred to as the biodiversity model below.

Overall, the SESAs appear to have been chosen well, and, notwithstanding the issues raised and boundary revision recommendations outlined below, should be included in the Draft PEIS for detailed analysis and consideration for designation.

Battle Mountain Field Office

Gold Point: There were no records in the NNHP dataset. The long-nosed leopard lizard was listed in the NDOW data. Overall, there are very few apparent conflicts from the data. The biodiversity model shows low overall diversity for the site relative to other study areas.

Millers: There were no NNHP records, but desert horned lizard and long-nosed leopard lizard are present from NDOW data. This solar study area lies north of Hwy 6/95 and northwest of the Miller's rest stop, an important bird migration stop and birding location; consideration of possible impacts on migratory birds should be included. The Big Smoky Valley is heavily impacted with roads and mineral exploration throughout this area making this a site that has already sustained a fair amount of developmental impacts. The northeast portion is comprised of stabilized dunes, habitat rich in small mammal diversity and worth trying to avoid due to the preponderance of important vertebrate and invertebrate species often found in these sites (e.g., pallid kangaroo mice, desert kangaroo rat, dune beetles, etc.). Although there are no records present in the available datasets, this is likely an unstudied area that would benefit from investigation. NWP recommends that the stabilized sand dunes be explicitly excluded from the Millers SESA.

Ely Field Office

Dry Lake Valley North: Eastwood milkweed appears in the NNHP dataset for the area and should be excluded. The dark kangaroo mouse, desert horned lizard and burrowing owl are present based on the NDOW data. Burrowing owl colonies and dark kangaroo mice areas should also be excluded. We can assist in defining these exclusions by providing maps under separate cover. Overall, this site has numerous roads and a relatively high incidence of annual grass invasion along the east based on modeling of annual grasses for Nevada by NNHP. The prevalence of several rare or important species warrants careful monitoring of impacts from development.

East Mormon Mountain: A small population of Las Vegas buckwheat has been identified at this site, and measures to avoid this species should be made. A model of desert tortoise habitat indicates that this area is good habitat for the species. Recent fires to the north and west of the SESA might be worth consideration for development if site suitability for solar exists. It might be possible to adjust the site so desert tortoise habitat that has not already burned is removed and replaced with areas that are burned. Additionally, The Nature Conservancy's "Meadow Valley Wash - Muddy River - Mormon Mesa" priority landscape. Transmission already exists at the site, so it could provide utility-scale solar to the grid with minimal development of transmission.

Delamar Valley: There are no obvious conflicts from the available data. The site is placed along the planned SWIP corridor, so transmission has to be developed before the site can be available for solar development. Much of the SESA is on a dry lakebed. It should be noted that bighorn migration corridors to the south between the Desert Refuge and the Delamar and Meadow Valley Ranges may be negatively affected by future transmission development associated with this site. NWP would like to work with NDOW, USFWS, the BLM and other appropriate agencies to ensure landscape permeability for bighorn sheep as transmission development proceeds.

Dry Lake: This SESA has desert tortoise and rosy two-tone beardtongue from the NNHP data. Several intersections occur with NDOW mapped movement corridors for desert bighorn sheep, but wildlife corridors are supposed to be excluded in SESA designation. Adjustments should be made to exclude those corridors. The NDOW data shows the presence of the banded Gila monster, common chuckwalla, desert banded gecko, desert horned lizard, desert night lizard, LeConte's thrasher, long-nosed leopard lizard, sage sparrow and western banded gecko. The proximity to Las Vegas, and existing transmission development in the area make this one of the more heavily inventoried SESAs in Nevada; it also makes this an area that has seen impacts from exurban activities that are damaging to the quality of wildlife habitats (an example of cumulative impacts). Because rocky outcrops are high-quality habitat for many of the lizard species of conservation concern and because solar energy construction may require the removal these large boulders, NWP recommends the BLM explicitly exclude rock outcrops from the SESA. The area also shows high biodiversity potential, typical of much of the Mojave Desert. Because of the many species showing up in the southern portion of this SESA, it would seem more feasible to limit the site to the northern portion of the current SESA. A preferred alternative SESA is depicted below where the northern portion is kept and the SESA is extended to the east following I-15 and the Moapa Valley Indian Reservation, shown as black cross-hatching in the image. This configuration would avoid bighorn movement corridors and not press up against bighorn habitat in the Arrow Canyon Range. Additionally, some of the more sensitive species found in the south

of the current SESA are excluded. The alternative SESA is approximately 13,500 acres (see Figure 1).

Amargosa Valley: Desert tortoise (NNHP), desert horned lizard, desert iguana and long-nosed leopard lizard (NDOW) are recorded on the site. The SESA is well outside of the buffer zone established by the Nevada State Water Engineer to protect the endangered Devil's Hole pupfish, although there is still considerable controversy over the biological meaning of that buffer. There are several disturbances on-site, including a railway grade and roads that bisect the site making it a relatively fragmented area. There are no other identifiable conflicts from our filtering, and the site shows only moderate biodiversity in the biodiversity model.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Tom Darin, Staff Attorney, Energy Transmission
Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

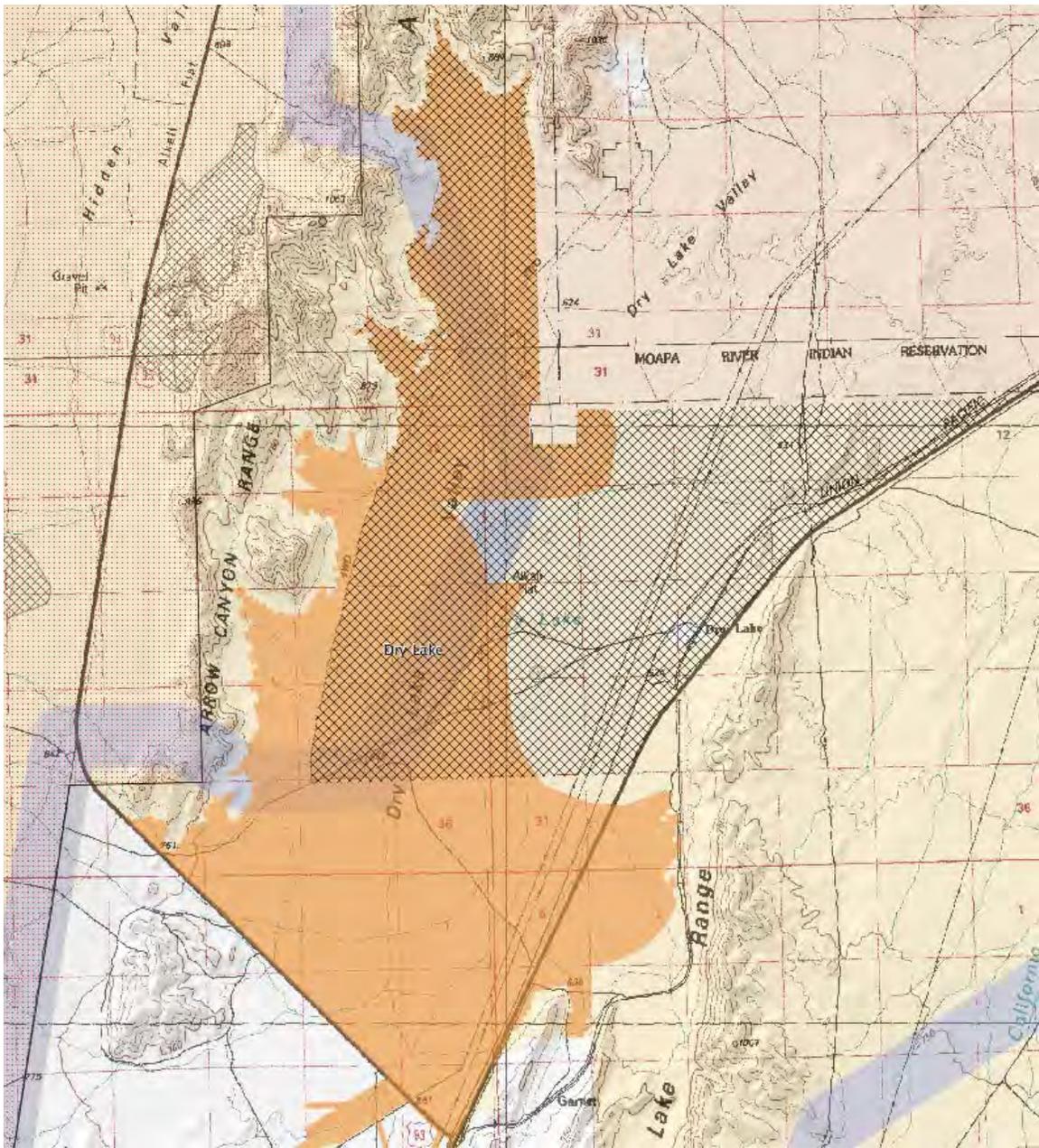


Figure 1. Dry Lake proposed alternative Solar Energy Study Area, Nevada. Cross-hatched area represents the NWP proposed SESA.

Exhibit 10: Site-specific Comments on Solar Energy Study Areas – New Mexico¹

Please accept and fully consider these comments, submitted on behalf of the following groups: The Wilderness Society, Western Resource Advocates, and Wild Utah Project.

A positive aspect of the three New Mexico Solar Energy Study Areas (SESAs) is that they are all located near existing infrastructure, and thus would require less new road building than if they were located more remotely. The Afton SESA may need boundary adjustments to avoid important reptile habitat, but overall appears to contain the least amount of potential conflicts with natural and cultural resources and should be included for detailed analysis in the Draft PEIS.

The Mason Draw and Red Sand SESAs have significantly more conflicts. Though the BLM Las Cruces field office originally identified the Mason Draw and Red Sand SESAs as potentially appropriate areas for solar development, the field office has undertaken subsequent, more detailed review and identified unacceptable conflicts. Because of these conflicts with natural and cultural resources and wildlife management areas, the field office has sent a letter to BLM Washington Office recommending that both the Mason Draw and Red Sand SESAs be dropped from consideration. It is clear that much potential for conflict exists in these areas, and BLM will need to study these areas in detail to determine whether they are appropriate for inclusion as SESAs.

In addition to consultation with BLM and others, these comments are informed by a GIS analysis. This analysis screened the SESAs with the following data layers:

1. Designated Critical Habitats for species protected as Threatened and Endangered under the Endangered Species Act
2. BLM ACECs and Special Management Areas
3. TNC Ecoregional portfolios
4. NM Highlands Wildlands Network SITES analysis
5. New Mexico Wilderness Alliance BLM Inventory Units
6. USGS Southwest ReGAP: overall species richness, and by taxonomic group

Mason Draw SESA

- This SESA intersects southwestern corner of New Mexico Wilderness Alliance (NMWA) BLM Citizens' Wilderness Inventory Unit "Sleeping Lady Hills" by approx. 350 acres and also clips the "Robledos-Las Uvas" unit by approx. 480 acres (see Figure 1; GIS data for the NMWA Citizens' Wilderness Inventory Units included in Exhibit 2 of broad comments submitted under the same cover as these New Mexico-specific comments). This overlap is unacceptable and unnecessary – the Mason Draw SESA should, at a minimum, be redrawn to exclude these inventory areas.

¹ Much of this information was gathered by Defenders of Wildlife. It has been edited and included with their permission.

The NMWA inventory of the area found that the Robledos-Las Uvas complex contains a wide variety of biological, archaeological and historic resources. Given its close proximity to this roadless area complex, it is likely that the Mason Draw solar energy study area shares many of these characteristics and values.

The Robledos-Las Uvas complex contains a high diversity of vegetation types, especially cacti (including the State-endangered night-blooming cereus). Pronghorn, mule deer, mountain lion, bobcat, coyote, bats, rock squirrels and other rodents, quail, and numerous other birds also call this area home. The grasslands found here are important to a declining grassland fauna and provide habitat for rare birds like the Aplomado falcon and Baird's sparrow. The abundance of cliffs in the mountains provides nesting and perching sites for many raptors, including bald and golden eagles, various hawks and owls, and the Federal-endangered peregrine falcon. Reptile diversity is also high; banded rock rattlers, Madrean alligator lizards, and Trans-Pecos rat snakes are all found here, as are other reptiles that reach the northern or western limits of their range.

Archaeological and historic resources are also rich in the Greater Robledo Mountains – Sierra de las Uvas Complex. At least 20 historic and prehistoric sites are known to occur within or adjacent to the Robledo Mountains Wilderness Study Area, including some of the earliest known prehistoric habitation sites in southern New Mexico. Also included are several undisturbed pothouse villages, two Lithic Indian sites in Horse Canyon, and at least two excellent petroglyph sites in the Sierra de las Uvas. More prehistoric sites likely exist, but no comprehensive survey has taken place. The historic Butterfield Trail also runs through the area.

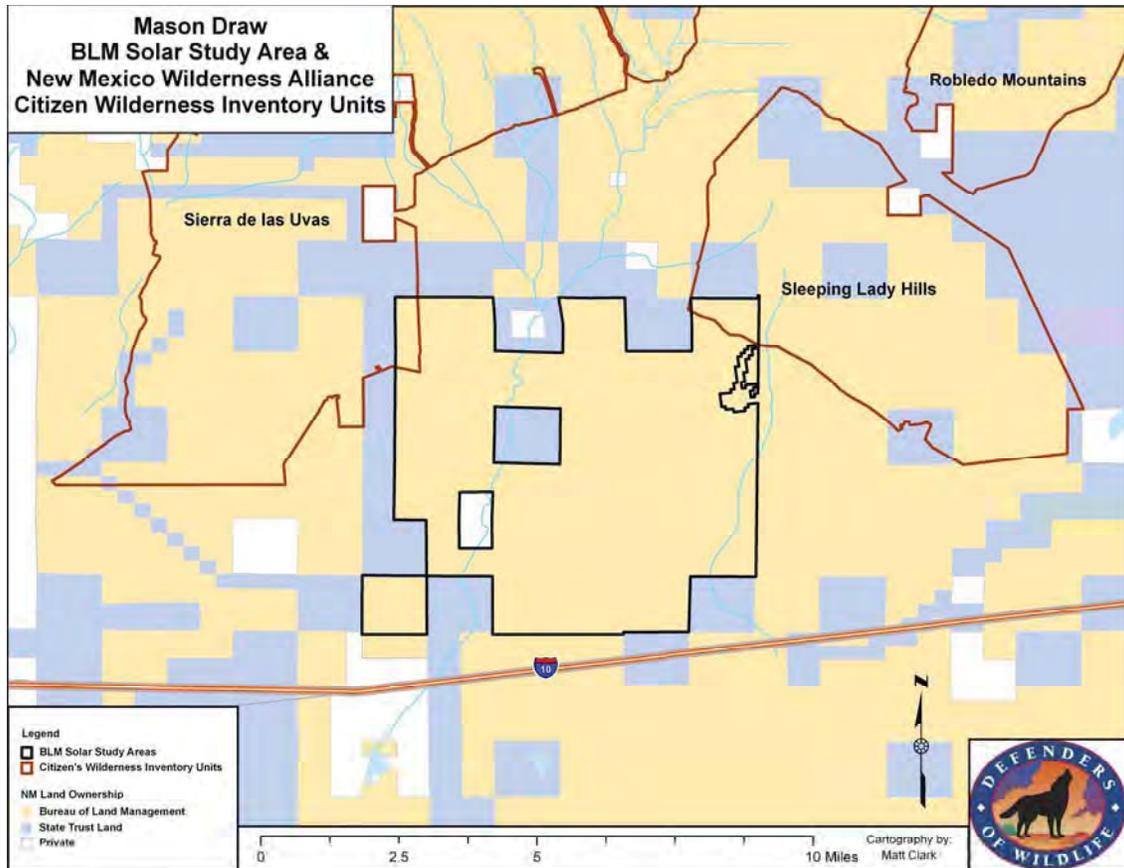
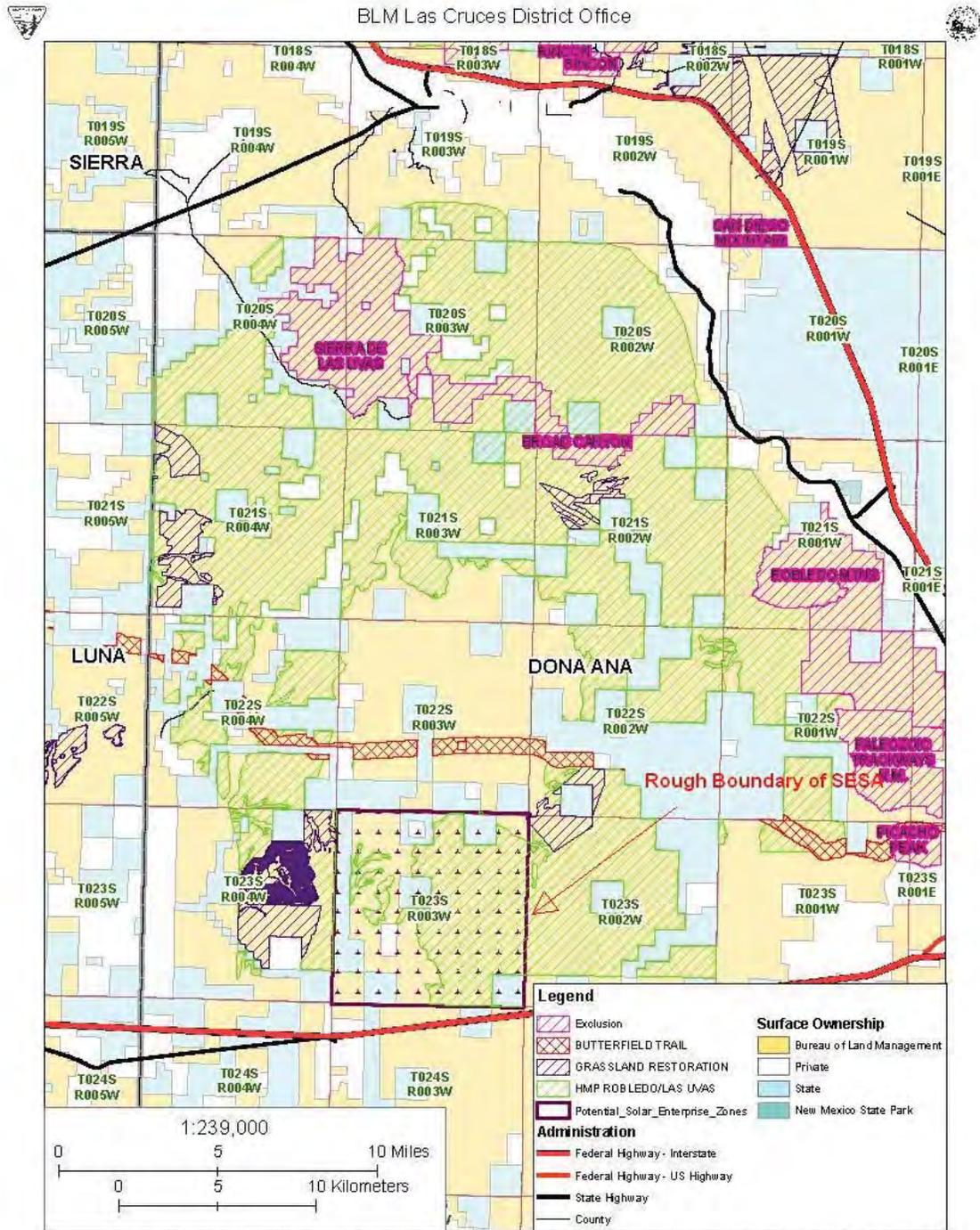


Figure 1. This map depicts overlap and conflict of the Mason Draw SESA with the New Mexico Wilderness Alliance's BLM Citizen's Wilderness Inventory Units.

Additional considerations:

- This SESA is located within a BLM Habitat Management Planning area for pronghorn and mule deer (see Figure 2). Industrial solar development is not consistent with maintaining and/or improving habitat for these two species, both of which are very sensitive to roads, traffic, human development and disturbance.
- The Nature Conservancy (TNC), in cooperation with the BLM and other entities, conducted a Rangeland Ecological Assessment (REA) for the southern half of New Mexico. In this assessment, there are two areas totaling approximately 1,000 acres in the west and south of the Mason Draw SESA mapped as "unresolved", that may contain some grassland reference condition elements².

² See p. 35 of the Rangeland Ecological Assessment http://nmconservation.org/projects/rangeland_ecological_assessment/



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data, or for purposes not intended by the BLM. Spatial information may not meet National Map Accuracy Standards. This information is subject to change without notification.

Figure 2. This map depicts overlap and conflict of the Mason Draw SESA with the BLM Habitat Management Planning Area for pronghorn and mule deer.

Recommendations: At the very least, BLM should revise the boundary of the Mason Draw SESA to exclude the overlap with the NMWA Citizens' Wilderness Inventory Units. Based on potential resource conflicts and issues raised by the BLM Las Cruces

District Office regarding overlap with the BLM Habitat Management Planning area for pronghorn and mule deer, as well as the additional issues raised above, BLM should carefully analyze this area and determine whether all or part of it is appropriate for inclusion as a SESA. If it is included, BLM should analyze the potential impacts of designating the SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

Red Sand

- TNC's Rangeland Ecological Assessment identifies a grassland area in the northwestern portion of this SESA that contains approximately 6,400 acres of reference condition-quality grasslands (See Figure 3). Reference condition Chihuahuan desert grasslands are very rare, and BLM should carefully consider whether they are appropriate for inclusion in the SESA.

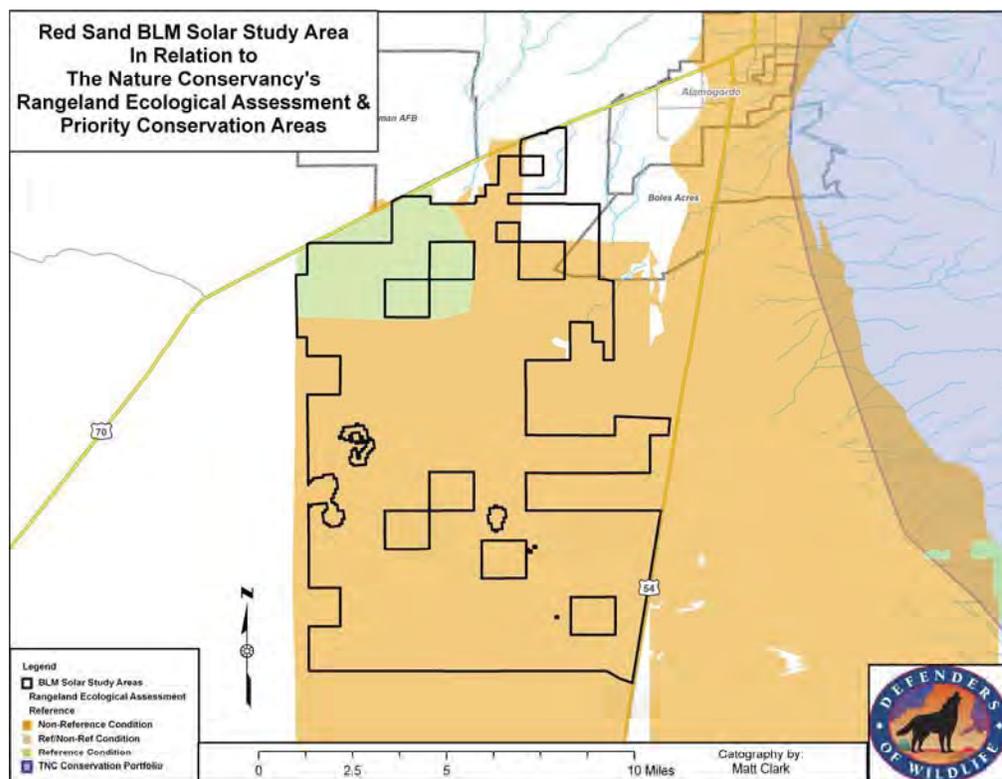
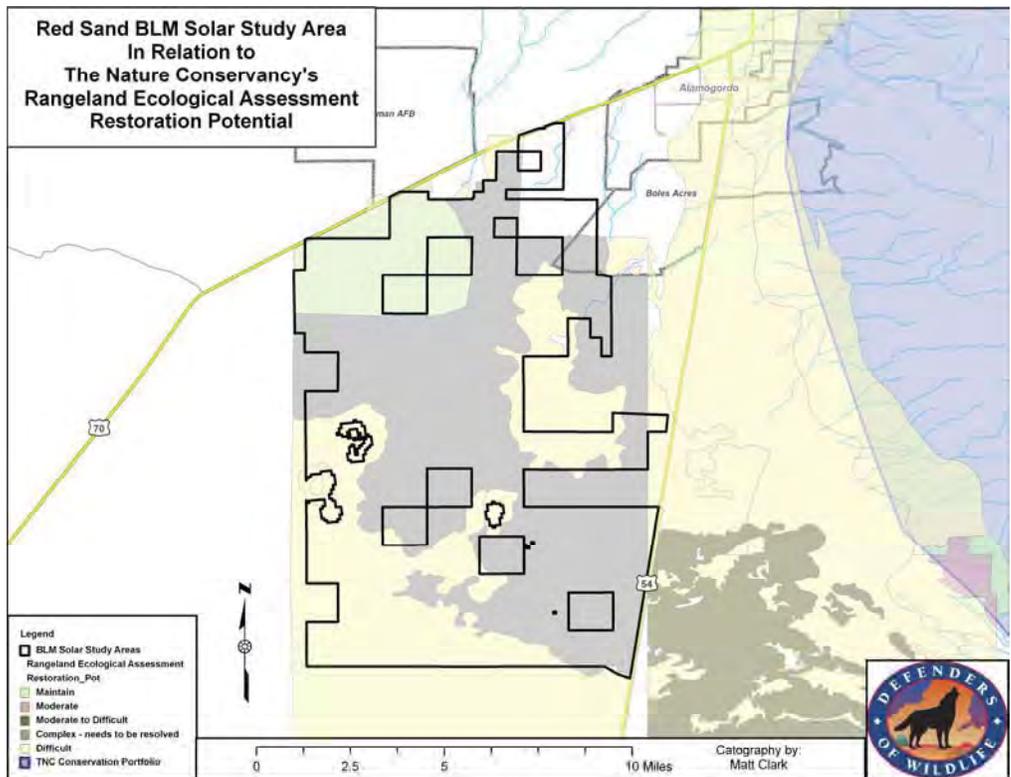


Figure 3. This map depicts the Red Sand Solar energy study area in relation to mapped units of TNC's Rangeland Ecological Assessment reference conditions.

- The BLM Renewable Resources division is currently developing habitat restoration projects in this SESA. To the extent that lands within this SESA are targeted by BLM and conservation organizations for grassland restoration, BLM should carefully consider whether these areas should be included in the SESA. Figure 4 shows TNC's REA mapped restoration potential.
- This SESA contains several playa lakes, which provide seasonally important habitat and water sources for migrating birds and other wildlife species (See Figure 5).

- According to the Las Cruces BLM Field Office³, this SESA contains extensive cultural resources that would potentially be disrupted by industrial-scale solar development.



○ Figure 4. This map depicts the Red Sand Solar energy study area in relation to TNC's Rangeland Ecological Assessment restoration potential.

³ Personal communication with BLM Las Cruces District Office staff.

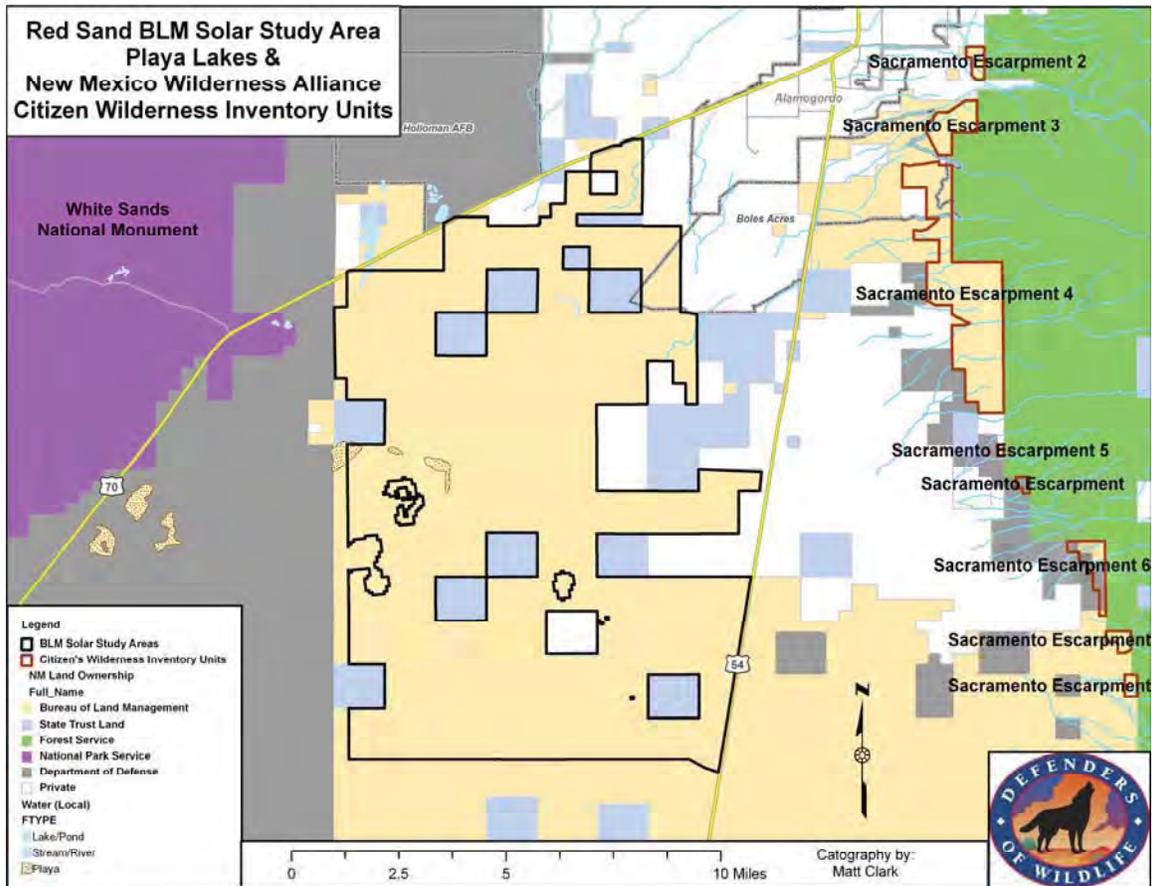


Figure 5. This map depicts the Red Sand SESA in relation to NMWA Citizens' Wilderness Inventory Units and playa lakes.

Recommendations: Based on conflicts identified by the BLM Las Cruces District Office and our own analysis, including the presence of playa lakes within the site, the extensive nature of the cultural resources, the development of habitat restoration projects underway in BLM's Renewable Resources division, and the presence of reference condition-quality grasslands as mapped by TNC, BLM should carefully consider whether or not to include all or some part of this area as a SESA. If the SESA is included, BLM should analyze the potential impacts of designating the SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

Afton

- Of the three SESAs in New Mexico, this unit appears to have the least conflict with sensitive natural resources. It is also close to existing infrastructure (Interstate 10 and an “existing designated corridor”) as well as a major metropolitan area (Las Cruces).
- According to USGS Southwest ReGAP terrestrial species predicted range modeling species richness composite, this SESA has high reptilian diversity in the eastern half (45 on a scale of 0-57) (See Figure 6).

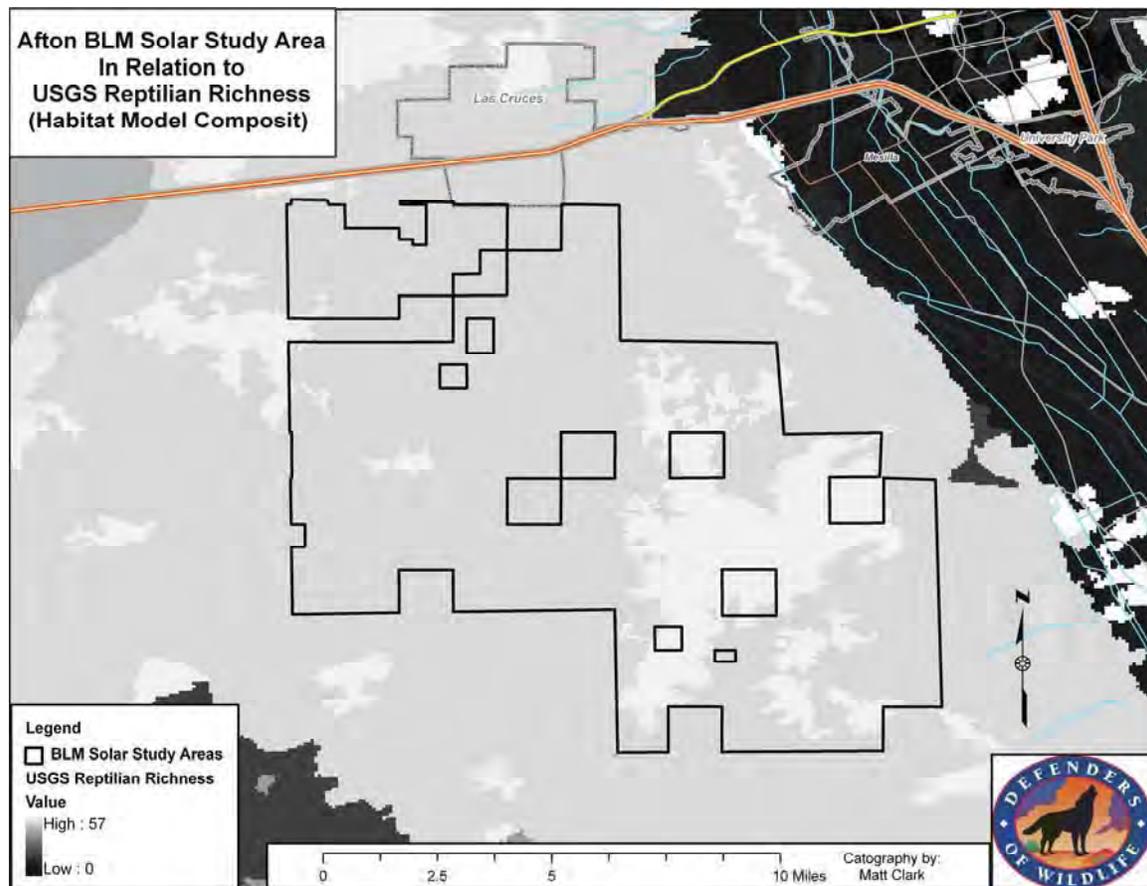


Figure 6. This map depicts the Afton Solar Energy Study Area in relation to the USGS Southwest ReGAP wildlife habitat modeling reptile richness composite. Note the area in the eastern portion of the study area that contains relatively high reptilian richness.

Recommendations: Because it represents the SESA with the least amount of conflict in New Mexico, BLM should study the Afton SESA in detail in the Draft PEIS to determine whether the area is appropriate for solar development. BLM should also closely analyze areas with high reptilian diversity in the eastern portion of the SESA, and if serious conflicts are found the agency should consider avoiding them for solar development. BLM Las Cruces District Office has indicated that there may be areas adjacent to the Afton SESA which might be appropriate for inclusion in the SESA⁴ – BLM should evaluate those areas to determine if they are appropriate for inclusion. BLM should

⁴ Teleconference held on August 24, 2009 by BLM officials with environmental advocates.

analyze the potential impacts of designating the SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated. BLM should also analyze the potential impacts of nearby industrial-scale solar development on the scenic and habitat values of the Aden Lava Flow ACEC (see Figure 7 for proximity).

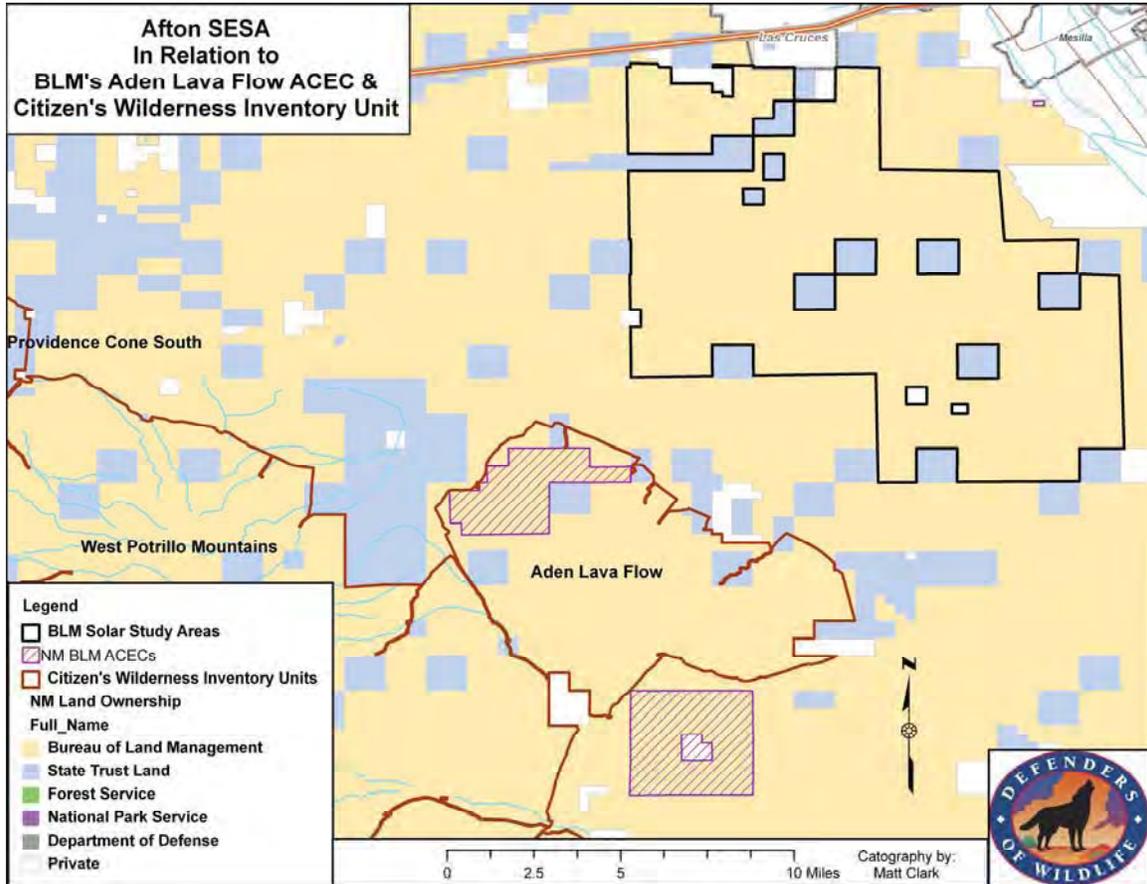


Figure 7. This map shows the close proximity of the Afton SESA to the Aden Lava Flow Area of Critical Environmental Concern.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
 The Wilderness Society
 1660 Wynkoop St. Suite 850
 Denver, CO 80202

Tom Darin, Staff Attorney, Energy Transmission

**Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302**

**Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101**

Exhibit 11: Site-specific Comments on Solar Energy Study Areas – Utah

These comments are a compilation of comments prepared by the Southern Utah Wilderness Alliance (SUWA) and the Wild Utah Project (WUP). The comments have been reorganized and edited by The Wilderness Society and are included with the permission of SUWA and WUP. SUWA provided much of the narrative comments. WUP performed a GIS analysis and provided the results of that analysis, as well as narrative descriptions and recommendations based on those results.

Please accept and fully consider these comments, submitted on behalf of the following groups: The Wilderness Society, Californians for Western Wilderness, Southern Utah Wilderness Alliance, Western Resource Advocates, and the Wild Utah Project.

I. Data sources reviewed for GIS analysis

The following data sets were reviewed by WUP in this process of analyzing the areas proposed by the Bureau of Land Management (BLM) as Solar Energy Study Areas (SESAs) in their Programmatic Environmental Impact Statement on solar energy development (PEIS).

1. USGS 1:24,000 scanned images of topographic maps. Data shown on these images cannot be found in other GIS data sets for most of Utah. Marshes, intermittent lakes, and other features can be reviewed on these maps. Georeferenced images from Utah's GIS Portal (AGRC) were downloaded for the quads that cover these sites.
2. Threatened and endangered species locations by quad sheet, Utah Heritage Program. The spatial data set for Utah and federal sensitive species is available on the web on the Utah Division of Wildlife Resources. (The file name used in this analysis is TES 20090608.)
3. Utah Division of Wildlife Resources habitat classifications for wildlife. Those species that UDWR have data for and are relevant to these sites include mule deer, pronghorn antelope, and sage grouse. These data sets were downloaded from UDWR's GIS web site.
4. Utah Division of Wildlife Resource watershed restoration initiative conservation focus areas. (WRI focus Areas 20080324.) This data set identified important sage grouse brooding habitat south of the Milford Flat site.
5. Utah Wilderness Coalition wilderness proposal. Wild Utah Project created and supports this GIS data set.
6. Utah Forest Network wilderness proposal for Utah National Forests. Wild Utah Project created and supports this GIS data set.
7. Spring data, AGRC GIS Portal. The statewide data set for springs was downloaded to identify surface springs and wetland areas that might be in this survey site. The spring data set does not have metadata and most of the points in the area of interest are wells and most of those abandoned. No data on wetlands was found and used in this analysis. The spring data was checked against the USGS quad image to see if on the quad sheet this is identified as wetland or surface springs. None were found in the proposed pilot areas.
8. One BLM RMP was reviewed for relevant information for these sites. The Cedar Beaver Garfield Antimony Resource Management Plan covers the Milford Flat site and the Escalante Valley proposed site. No existing RMP could be found that covers the Wah Wah Valley proposed site.

9. BLM wilderness study areas, areas of critical environmental concern, and designated natural areas. The three proposed areas do not include lands designated in these categories.

II. General results of GIS analysis

Generally speaking, the SESAs have been identified in areas with limited conflicts with wildlife habitat, recreation opportunities, areas identified by citizens and conservation groups as having wilderness qualities, wetlands and riparian areas, and other sensitivities. However, potential for conflict with particular species and values exist in all of the SESAs, and careful analysis through the development of the PEIS will be critical in continuing to refine the SESAs and guide development to the best places.

The Utah Division of Wildlife Resources maintains a list of sensitive species. By rule, wildlife species that are federally listed, candidates for federal listing, or for which a conservation agreement is in place automatically qualify for the *Utah Sensitive Species List*. Spatial data on the habitat where sensitive species are found is at the resolution of a 1:24,000 scale quad sheet. This means that inside the bounds and quad map (an area approximately 10X13 km in size) the listed species have been observed and their continued existence in this area requires action. The Division web site states “The additional species on the *Utah Sensitive Species List*, ‘wildlife species of concern,’ are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. It is anticipated that wildlife species of concern designations will identify species for which conservation actions are needed, and that timely and appropriate conservation actions implemented on their behalf will preclude the need to list these species under the provisions of the federal Endangered Species Act.”
<http://dwrcdc.nr.utah.gov/ucdc/ViewReports/sslist.htm>

For each proposed pilot sites, we have listed the sensitive species dependent on habitat in the quad sheet that includes these sites. This information is presented in a table, one for each of the three sites. The third and fourth column in each table has this global (G) and state (S) rank:

- 1= Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.
- 2= Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction or extirpation, typically with 6-20 occurrences.
- 3 = Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.
- 4 = Not rare and apparently secure, but with cause for long-term concern, usually with more than 100 occurrences.
- 5 = Demonstrably widespread, abundant, and secure.
- H = Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered.
- T = subspecies, variety or recognized race.
- X = Presumed extirpated or extinct.
- U = Unknown rank.
- NR = Not yet ranked.

Note that the results presented here come directly from the Division of Wildlife Resources data. Some of the results are not explained by the Division of Wildlife Resources (such as the “B” in S3B for *Athene cunicularia* and the “?” in S2? for *Microdipodops megacephalus*) metadata.

III. SESA-specific comments

a. Escalante Valley and Milford Flats South SESAs

i. Support for the inclusion of the Escalante Valley and Milford Flats South SESAs in the Draft PEIS

Though potential conflicts will need to be analyzed and addressed in the Draft PEIS, we support the inclusion of the Escalante Valley and the Milford Flats South proposed Solar Energy Study Areas (SESAs) in the Draft PEIS. These two proposed SESAs are located near existing infrastructure, including existing high-capacity transmission lines (see Wild Utah project map attached as Exhibit A). Locating large-scale renewable energy facilities near existing infrastructure is important because it reduces the necessity for substantial new surface disturbance. Reducing the extent of surface disturbance is important for all the reasons discussed above, including reducing the amount of dust generated.

In addition, construction of solar projects in these two proposed SESAs would benefit the local economies of Beaver, Iron, and Millard counties and provide local jobs. The Milford Flats South SESA is near the town of Milford, which is currently experiencing a boost to its economy from the ongoing construction of the Milford Wind farm, located approximately 10 miles north of Milford, and consisting of nearly 100 wind turbines. Construction of a solar energy facility south of Milford will continue to help the local economy, including the towns of Milford and Minersville. Construction of the Escalante Valley SESA would similarly provide a boost to Beaver and Iron County’s economy.

Recommendation: BLM should include the Escalante and Milford Flats South SESAs for detailed analysis in the Draft PEIS. BLM should prioritize analysis of the potential issues raised in sections III a. ii. and III a. iii., below.

ii. Site-specific results of GIS analysis for Escalante Valley SESA

The sensitive species found at the Escalante Valley proposed site include:

<i>Brachylagus idahoensis</i>	Pygmy Rabbit	G4	S2
<i>Athene cunicularia</i>	Burrowing Owl	G4	S3B
<i>Cynomys parvidens</i>	Utah Prairie-dog	G1	S1

Solar facilities should not be built on either occupied or historic prairie dog towns. BLM should avoid impacts to lands with past or currently active prairie dog towns by siting projects away from those areas.

Burrowing owl habitat involves owl dens in the brush community. Solar facilities should not be constructed where past or currently occupied owl dens are found.

Pygmy rabbit populations are strongly tied to sage steppe habitat. Occupied populations should be avoided for solar facility sites. Relocation of these species to other sites has not proven successful to date.

All these sites are in pronghorn habitat ranked as “high,” meaning this habitat is important for this species and management should consider meeting antelope needs in this area. Fences are one of the greatest threats to pronghorn. Unless necessary to protect pronghorn from machinery and infrastructure from solar energy development or other human activity, new and existing fences should be modified so that pronghorn can pass under the fence. A barbless lower wire set about 18 inches above ground usually is enough to allow pronghorn to pass through.

Recommendations: BLM should analyze potential impacts to wildlife habitat from designating the Escalante Valley SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

iii. Site-specific results of GIS analysis for Milford Flats South SESA

The sensitive species found at this site include:

Microdipodops megacephalus	Dark Kangaroo Mouse	G5	S2?
Centrocercus urophasianus	Greater Sage-grouse	G4	S2?
Asio flammeus	Short-eared Owl	G5	S2
Athene cunicularia	Burrowing Owl	G4	S3B
Buteo regalis	Ferruginous Hawk	G4	S2S3B,S2N

The State of Utah has a watershed restoration initiative that has given priority to certain habitat where management needs to change in order to improve important wildlife habitat. The southern part of the Milford Flats proposed site just overlaps the northern part of a focus area. Sage grouse are the key species in this priority habitat area. Leks and brood areas that are currently used by sage grouse should not be used for solar sites. Solar projects, transmission lines and associated infrastructure should be designed so that raptor predation does not increase because the raptors can perch on these facilities. There are a number of approaches to ensuring that power poles and buildings don’t create this problem.

In 1984, BLM developed a land use plan for the area including the Milford Flats and Escalante Desert proposed sites. This plan is identified as the Cedar Beaver Garfield Antimony Resource Management Plan. In this plan, a number of pieces of public lands are made available for disposal. This means that those sites may be sold out of the public estate and become private lands. This PEIS needs to modify that older RMP in order to retain in public ownership any lands included in SESAs.

The RMP for this locale lists special designations for off-road vehicle management. This plan identified seasonal closures for ORVs to protect golden eagle nests, broods, and perch sites. Any solar energy development should not include these nesting sites in the facility.

The comment made for the Escalante Valley SESA about pronghorn antelope also applies for this site.

Recommendations: BLM should analyze potential impacts to wildlife habitat from designating the Milford Flats South SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

b. Wah Wah Valley SESA

i. Recommendation that BLM include the Wah Wah Valley SESA in the Draft PEIS but deprioritize development there

We recommend that BLM include the Wah Wah Valley SESA in the Draft PEIS, but deprioritize development there. Unlike the Escalante Valley and the Milford Flats South SESAs, the Wah Wah Valley SESA does not lie near existing high-capacity transmission lines (although it does lie along a proposed Section 368 Energy Corridor). *See* West Wide Energy Corridor Final PEIS, available at <http://corridoreis.anl.gov/eis/fmap/sbm/index.cfm>.

Importantly, the Wah Wah Valley is surrounded on both the east and the west by areas proposed for wilderness designation in America's Red Rock Wilderness Act (*see* WUP map attached as Attachment A). Although the Wah Wah Valley SESA is not within an area proposed for wilderness in ARROWA, the Wah Wah Valley retains its wild and generally undisturbed character, as well as its impressive visual resources. Development in the Wah Wah Valley has the potential to impact the wilderness experience from the San Francisco Mountains east of the valley and the Wah Wah Mountains west of the valley, by limiting the naturalness and solitude of these wilderness-quality mountains, and affecting the experience of recreationists who visit the mountains on either side of the valley.

Unlike the Escalante Valley and the Milford Flats South SESAs, which are located on lands governed by the Cedar Beaver Garfield Antimony Resource Management Plan (CBGA RMP), the management guidance for the lands in the Wah Wah Valley comes from the Pinyon Management Framework Plan (MFP), which was completed 26 years ago, in 1983. MFPs are very different documents from RMPs. The primary distinction is that RMPs are considered major federal actions under the National Environmental Policy Act (NEPA), and necessitate the preparation of an Environmental Impact Statement (EIS). 43 C.F.R. 1601.0-6; *see* 40 C.F.R. § 1502. The completion of an MFP, however, does not necessitate the completion of an EIS, or even an Environmental Assessment (EA). *See* 40 C.F.R. § 1508.10; *Southern Utah Wilderness Alliance (SUWA), et al.*, 164 IBLA 118, 124 (2004).

According to regulations governing the BLM, 43 C.F.R. § 1610.8(a)(1), MFPs may serve as the basis for considering proposed actions, but only until superseded by RMPs. These regulations governing MFPs were published in 1979 and the drafters envisioned that MFPs would govern land management only for a “transition period” until RMPs could be completed. *See* 43 C.F.R. § 1610.8(b) (1979); *SUWA*, 164 IBLA at 124. Thirty years after these regulations were passed, the Pinyon MFP remains the governing management document for the Wah Wah Valley.

Because of the difference between MFPs and RMPs, and the corresponding lack of environmental analysis in the Pinyon MFP, different considerations apply to the Wah Wah Valley SESA than the other two SESAs. The Agencies must ensure that BLM completes any additional analysis required due to the lack of an EIS for the Wah Wah Valley.

Indeed, section 201 of the Federal Land Policy and Management Act (FLPMA) requires that BLM conduct periodic resource inventories and keep these inventories current. 43 U.S.C. § 1711. Under FLPMA, BLM “shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values . . . This inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values.” 43 U.S.C. § 1711(a). Thus, FLPMA requires BLM to identify any visual resources that exist by conducting visual resource inventories and repeating these inventories as necessary to keep them current. Therefore, BLM is required to consider whether, and to what extent, visual resource values are now present in the Wah Way Valley and, if the values are present, how development of the Wah Wah Valley SESA would protect these values. As far as *SUWA* knows, the last visual resources inventory of the Wah Wah Valley occurred with the preparation of the Pinyon MFP, prior to 1983. *See* Pinyon MFP at Appendix VR.

In addition, because the Wah Wah Valley SESA is located further from existing transmission lines and remains relatively undisturbed, solar development in the Wah Wah Valley would result in more surface disturbance and would create a concomitant increase in the amount of dust generated, which would have ecological and health impacts, as discussed above. *See, e.g.*, Attachment B (attached), photos taken in July 2009 in southwestern Utah’s Pine Valley, one valley west of the Wah Wah Valley, and one of the light blue areas on the SESA Map prepared June 5, 2009; Streater, Scott, *Climate Change, Water Shortages Conspire to Create 21st Century Dust Bowl*, THE NEW YORK TIMES, (May 14, 2009) (article mentions probable escalation of the dust problem due to renewable energy development) (attached as Attachment C); Nelson, Paul, *Health Experts Warn Utah Residents to Prepare for the Dust*, KSL NEWS, (July 8, 2009) (attached as Attachment D).

Recommendations: For the reasons listed above, we recommend that BLM include the Wah Wah Valley SESA in the Draft PEIS but prioritize the development of the Escalante Valley and Milford Flats SESAs and delay the development of the Wah Wah Valley SESA. BLM should prioritize analysis of the potential issues raised above and in the results of the GIS analysis in section III b. ii. below.

ii. Site-specific results of GIS analysis for Wah Wah Valley SESA

The sensitive species that depend on this habitat are listed below:

Microdipodops megacephalus	Dark Kangaroo Mouse	G5	S2?
Haliaeetus leucocephalus	Bald Eagle	G4	S1B,S3N
Buteo regalis	Ferruginous Hawk	G4	S2S3B,S2N
Athene cunicularia	Burrowing Owl	G4	S3B
Vulpes macrotis	Kit Fox	G4	S3?

Protection for golden eagle nests, broods, and perch sites should be carefully considered for this SESA. Any solar energy development should not include these types of avian use sites in the facility.

The issues concerning burrowing owls that were described earlier also apply to this site. Ferruginous hawks both nest on the ground and use similar habitat for foraging. They abandon nests near human activities. While a nest site in this location is unlikely, this should be verified and facilities should not be built within a half mile of any nests which are found. Ferruginous hawks often lose habitat to other raptors when additional perching structures are built. Power lines, buildings, and other facilities pose serious threats to continued availability of viable habitat for Ferruginous hawks. Other raptors, such as red-tailed hawks are more adapted to human activity and can displace other native raptors. The solution is that any structure added to the landscape be designed to prevent raptor perching.

Kit fox use of the site needs to be evaluated and management changed or individual project proposals modified to maintain this population at its full potential for this habitat. Similarly, the needs of the dark kangaroo mouse need to be evaluated relative to this SESA.

The comments made about pronghorn antelope and burrowing owls also apply for this SESA.

Recommendations: BLM should analyze potential impacts to wildlife habitat from designating the Wah Wah Valley SESA and the impacts of potential solar development in the SESA, identify opportunities to minimize and mitigate any potential impacts in the Draft PEIS, and require that impacts be minimized and mitigated.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
 1660 Wynkoop St. Suite 850
 Denver, CO 80202

Michael J. Painter, Coordinator
Californians for Western Wilderness

P.O. Box 210474
San Francisco, CA 94121-0474

Tiffany Bartz, Field Attorney
Southern Utah Wilderness Alliance
425 East 100 South
Salt Lake City, UT 84111

Tom Darin, Staff Attorney, Energy Transmission
Western Resource Advocates
2260 Baseline Rd., Suite 200
Boulder, CO 80302

Jim Catlin, Project Coordinator
Wild Utah Project
68 S. Main Street
Salt Lake City, UT 84101

Exhibit 12: Cultural Resources Comments on Solar Energy Study Areas

These comments are a subset of the comments written by the National Trust for Historic Preservation (The National Trust) and are included with their permission.

Please accept and fully consider these comments, submitted on behalf of The Wilderness Society.

I. BLM should evaluate whether to exclude additional cultural resources from SESAs and whether site-specific measures are necessary to avoid or mitigate adverse effects on cultural resources.

Potential impacts to all cultural resources—including prehistoric, historic and traditional sacred and cultural properties—located within SESAs and in proposed solar project areas outside SESAs should be considered in the NEPA and NHPA processes. In addition, we believe that BLM should evaluate whether the following cultural resources should be excluded from the SESAs in light of their significance and whether BLM should include site-specific measures in the PEIS in order to avoid or mitigate the potential adverse effects of solar energy development on those resources.

A. Arizona

The three SESAs in Arizona appear to have been well chosen in regard to archaeological sites, as they consist largely of previously disturbed lands. However, some Native American tribes have already expressed concern about impacts of the SESAs on sacred landscapes. Thus, BLM should thoroughly consult with concerned tribes to resolve potential conflicts now. In addition, many nationally and regionally significant historic trails cross the state and could be directly or indirectly impacted by solar energy development both within and outside the SESAs. Of particular concern are trails located in open areas of southwestern Arizona, including the Juan Bautista de Anza National Historic Trail (NHT), El Camino del Diablo, the Ehrenberg Road and the Phoenix Stage Roads. The latter two, in particular, appear to be located close to the Brenda and Gillespie SESAs. While the Federal Register notice states that BLM excluded national trails from the SESAs, BLM must still consider any visual and other types of indirect impacts, such as from increased public access during project construction, that solar energy development may have on the trails. To that end, BLM should develop stipulations for avoiding or mitigating indirect impacts to trails during solar energy development.

B. California

The National Trust is concerned specifically with potential adverse effects to cultural resources within the Riverside East SESA. This area partially overlaps with the boundaries of historic Camp Rice, part of the World War II (WWII) Desert Training Center/ California–Arizona Maneuver Area that has been recommended eligible for the National Register of Historic Places (National Register). Camp Rice is part of an interconnected landscape of similar WWII camp sites in southern California and Arizona and is highly significant both for its association with General Patton and for its

contribution to our understanding of how American soldiers were trained during WWII. Still visible at Camp Rice are roads and walkways lined with large pieces of basalt. BLM should modify the boundary of the Riverside East SESA to exclude Camp Rice and other sites within this important WWII cultural landscape.

C. Colorado

The National Trust is concerned about potential adverse effects to cultural resources located within the De Tilla Gulch and Fourmile East SESAs. Both contain rare Paleoindian archaeological sites whose eligibility for the National Register has generally not yet been determined. Because of Paleoindian sites' potential significance, BLM should develop specific mitigation measures to resolve adverse effects to them. Finally, the National Trust requests that BLM take a close look at the potential of the Fourmile East SESA to directly or indirectly affect the Old Spanish National Historic Trail.

D. Nevada

The National Trust is concerned about potential adverse effects to prehistoric cultural resources in the Delamar Valley SESA. Two significant and large rock art sites in this SESA are "The Gathering," located along the Alamo Road off Hwy. 93 and "Rattlesnake Road," located approximately 2.5 miles farther east on the Alamo Road. Because the sites are located adjacent to the road, increased construction traffic could lead to increased visitation and inadvertent or purposeful damage by visitors. In addition, the National Trust requests that BLM take a close look at the potential of the Dry Lake SESA to directly or indirectly affect the Old Spanish National Historic Trail.

E. New Mexico

The National Trust has no specific concerns about cultural resources located within or near the proposed SESAs in New Mexico.

F. Utah

The National Trust requests that BLM take a close look at the potential of the Escalante Valley, Milford Flats South and Wah Wah Valley SESAs to directly or indirectly impact the Old Spanish NHT.

Thank you for fully considering these comments. We look forward to continuing working with BLM in the development of the Solar PEIS.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society
1660 Wynkoop St. Suite 850
Denver, CO 80202

Thank you for your comment, Connie Simkins.

The comment tracking number that has been assigned to your comment is SolarM60248.

Comment Date: September 14, 2009 18:02:58PM
Solar Energy Development PEIS
Comment ID: SolarM60248

First Name: Connie
Middle Initial:
Last Name: Simkins
Organization:
Address: P.O. Box 333
Address 2:
Address 3:
City: Panaca
State: NV
Zip: 89042
Country: USA
Email: ninescattle@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Connie solar comments.doc

Comment Submitted:

Please see attached letter.
Connie Simkins contact phone numbers:
home 775-278-4682
cell 775-962-1333
office 775-726-3511
fax 775-726-3456 office

Connie Simkins
P.O. Box 333
Panaca, Nevada 89042
Monday, September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, IL 60439

Comments to PEIS to evaluate utility scale solar energy development

Gentlemen:

It is my lifelong privilege to live and work and recreate in Lincoln County, Nevada, a small rural lifestyle eastern Nevada county home to 4,000 people on 6.6 million acres, with 98.16 percent of this land managed by various federal agencies, primarily BLM. We agree that renewable energy is a valuable tool for the future of our energy independent goal for the United States. That is why we have personally been involved with Lincoln County leaders, BLM officials, impacted ranchers, and utility companies seeking to build these sustainable projects in our area. We see a bright future for a number of responsible uses of this renewable energy, including solar energy, wind turbines, and pinion-juniper biomass energy production.

We take this opportunity to comment on the PEIS for solar energy in three Lincoln County valleys: North Dry Lake, Delamar, and East Mormon Mountains. Many federal projects require taking a look at the customs and culture of the areas impacted. We understand there are slope limitations, proximity to existing and planned energy mainline corridors, and interconnection with other present and future power facilities and transmission lines. All of these items would have a major impact on all of the multiple uses of the public land in these three areas of our County.

To maintain the Renewable, Sustainable, and Responsible components of any future solar energy project, we suggest you make it a requirement that each area undergo a site specific analysis that incorporates input from the impacted ranching operations, local county leaders, and appropriate Ely District BLM personnel who help manage these lands. Any such solar project would certainly not be built or exist in a vacuum, or all by itself. Construction of any project will impact its neighbors, whether they be private land owners, public land users, or the diverse population of animals, wildlife, and vegetation that exist here today. You must analyze all of these impacts, not just perform the solar suitable reviews.

For instance, in your North Dry Lake Valley study area, there already exists a major transmission line that supplies Lincoln County citizens with power from Hoover Dam; plus plans for three additional major north-south transmission lines, planned by NV Energy, South West Intertie Project, and Southern Nevada Water Authority who plans a major water pipeline and major powerline to service that pipeline; plus there exists now an off road recreational vehicle trail (Silver State Trails); in addition to the occasional hunter, picnicker, sight seer, miner, camper, photographer, public use and accesses; all what we refer to casual uses in all these areas. All this adds up to major impacts that require advance planning and implementing of mitigation measures if the area is to survive in its current condition and beauty.

These same impacts and plans exist in the Delamar Valley area. Concerning the East Mormon Mountains Solar Study Area: this area is an active grazing area which in 2005 was the scene of a 600,000 acre fire that removed about 75 percent of the beneficial vegetation and this area is just now starting to rebuild itself into multiple use values once again; earlier this area of 95,000 acres was reduced by 39,000 acres to protect the desert tortoise while multiple uses have been eliminated; the area has a power corridor that contains a major transmission line serving the south west areas of Las Vegas and southern California; along with an underground natural gas pipeline; plus a proposal for a clean coal fired power plant by Sithe Global Energy.

We urge you to make No Net Loss of Grazing Units (Animal Unit Months or AUM's) your priority. This brings to the planning table the direct means to make things better before you would accept or approve any solar power plant applications. We want to be a part of the process that makes these advance plans and stand ready to cooperate and work with you to assure continued multiple uses in our valleys. This advance plan must contain forage manipulation to increase beneficial forage for all animals; noxious weed and non-beneficial plant controls; provide for emergency communication, fire and medical responses in this rural area; short and long term monitoring and a mechanism for appropriate adjustments to this mitigation plan. Livestock grazing is the environmentally responsible way to be careful with this renewable resource.

Another way to make solar energy successful in this County would be to assure that BLM require that every solar energy applicant fund an independent full time professional position, administered by the Lincoln County Commission, to work with the grazing operators, the solar plant contractor, the federal agencies, and Lincoln County officials to monitor the planning, engineering, permitting, impact mitigations in advance of construction, construction work, and operations of the subject solar plant.

We understand that some of your PEIS preparation staff made a tour of these areas in Lincoln County with the local BLM staff in the Caliente and Ely offices. Please accept our invitation to meet with local leaders and the ranchers involved in these areas on your next trip to Nevada. Feel free to contact me at any time we can assist with plans or information. We look forward to working with you to improve our electricity independent future.

Sincerely,

Mrs. Connie Simkins

cc:

Governor Jim Gibbons

Senator Harry Reid

Senator John Ensign

Congressman Dean Heller

Congresswoman Dina Titus

Congresswoman Shelley Berkley

Nev Legislative Committee on Public Lands, Dean Rhoads

Bob Abbey, National Director, BLM

(continued on Page 3)

Ron Wenker, Nevada State Director, BLM
Rosemary Thomas, Ely District Manager, BLM
Victoria Barr, Caliente FO Manager, BLM
Paul Mathews, Chairman L.C. Commission
Carl Pyatt, Chairman LC Regional Development Authority
Ron Cerri, Central committee, Nevada State Grazing Board
Meghan Brown, Nevada Cattlemen's Association
Jeff Fontaine, Nevada Association of Counties
Nevada Farm Bureau Federation
Assemblyman Ed Goedhart
Assemblyman Pete Goicoechea

Thank you for your comment, Miranda Gray.

The comment tracking number that has been assigned to your comment is SolarM60249.

Comment Date: September 14, 2009 18:04:22PM
Solar Energy Development PEIS
Comment ID: SolarM60249

First Name: Miranda
Middle Initial:
Last Name: Gray
Organization: New Mexico Wilderness Alliance
Address: 142 Truman St NE Suite B1
Address 2:
Address 3:
City: Albuquerque
State: NM
Zip: 87108
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar Energy PEIS_New Mexico Wilderness Alliance.pdf

Comment Submitted:

September 14th, 2009

Delivered via electronic mail (through the project website) and U.S. mail (with attachments)

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

New Mexico Wilderness Alliance Scoping Comments on the Solar Energy Study Areas for the Solar PEIS

(New Mexico Analysis)

Thank you for the opportunity to comment on the Solar Energy Study Area PEIS.

Accompanying these comments are two additional items. The first is a viewshed analysis performed for each of the three SESAs, to illustrate how solar development would impact the scenic value of wilderness quality lands. To assess the visibility from New Mexico Wilderness Alliance BLM Citizens' Inventory Units and WSAs, a grid of 16 equally spaced observation points was placed over the SESAs. Using GIS, the observation points were calculated as either visible or non-visible from the surrounding terrain. If 9 or more observation points (1/2 of the SSA) were visible from a given point, we considered the Solar Study Area "highly visible". The second item included is a portion of the NMWA BLM Citizens' Inventory document, to give an idea of the land that immediately surrounds the SESAs. These include the Robledo Mountains – Sierra de las Uvas Complex (immediately north of the Mason Draw unit), the Greater Potrillos Complex (southwest of the Afton unit), and the Sacramento Mountains Complex (East of the Red Sand Unit).

The New Mexico Wilderness Alliance strongly supports the comments submitted by our colleagues, Defenders of Wildlife, relative to this PEIS and request that our submission be considered an additional voice for those issues. We also endorse the Las Cruces field office recommendation to drop both the Mason Draw and Red Sand SESAs from consideration, to avoid conflicts with high quality Chihuahuan desert grassland, habitat management areas for pronghorn and mule deer, and cultural resources.

Additionally, we are concerned that activities of this type and scope have never been accommodated on the proposed areas and present a number of issues which should be addressed.

1. In developing any new facility there can be unintended consequences which only become evident during and/or after construction or operation occur. Accordingly, we recommend that a comprehensive monitoring protocol be established by BLM and monitored by an independent contractor paid for by the permittee and hired by the BLM. Monitoring reports should be published quarterly in the Federal Register and in public media within 100 miles of the monitored facility. This monitoring procedure should be financially supported by the permittee for the duration of the enterprise.

2. The installation of solar facilities will alter the ground level thermal environment and may adversely affect organisms which may be living at or near their thermal thresholds. Monitoring efforts should include an element addressing this concern.

3. The installation of solar facilities will alter the wind patterns on and adjacent to the sites and may adversely affect organisms which depend on the dynamics of wind. Monitoring efforts should include an element addressing this concern.

4. The size of the permit areas on which these projects are to occur should be limited to only what is necessary to provide the solar footprint for producing the energy cited in the proposal. An established set of guidelines for this purpose should be included in the PEIS which identifies solar insolation values per acre for a given area and recommends a permit area commensurate with the permittee proposal. We are concerned for example that Iberdrola Renewables has an application for 24,000 acres but, according to the company, would only require about half that area. (Reference www.elpasotimes.com/ci_13185212?source=email)

5. Where there are permit areas adjacent or proximate to existing wildernesses, WSAs or other significant public attractions, the PEIS must include an analysis and identification of the viewshed within these special area designations and require that solar projects allow no visual impairment to occur. As proposed, the Afton and Mason Draw are sandwiched between 559,021 acres of wilderness quality lands, including 227,946 acres of BLM WSAs. The accompanying map shows the visual impact to the wilderness quality lands if development were to occur in the Solar Study Areas. According to the BLM Scoping Report for the TriCounty Resource Management Plans and Environmental Impact Statement, Visual Resource Issues To Be Used in the Development and Analysis of EIS Alternatives will include:

- Establishing a clear management direction describing areas inventoried and possessing high scenic importance including:
 - Lands proposed for wilderness designation or with wilderness characteristics should be managed as VRM Class I to “preserve the existing character of the landscape.”
- Manage the following lands proposed for special designation for VRM Class I:

Robledo Mountains – Sierra de las Uvas

- Manage the following lands proposed for special designation for VRM Class II:

Greater West Potrillo Mountains Desert Plains
East Potrillo Mountain

According to ***Objectives for Visual Resource Classes (BLM Manual H-8410-1)***, under Class I “The level of change to the characteristic landscape should be very low and must not attract attention. It would be very difficult to get a new project approved in this class, unless it is completely shielded from view.” Under Class II “Management activities may be seen, but should not attract the attention of the casual observer. New projects can be approved if they blend in with the existing surroundings and don’t attract attention (i.e., small-scale picnic area or primitive campground in valley shielded from view that blends with natural appearance).”

The Afton Solar Study Area is highly visible from the Robledo Mountains, the East Potrillo Mountains, and the West Potrillo Mountains Desert Plains.

The Mason Draw Unit actually intersects 830 acres of land with wilderness characteristics, immediately surrounding the Sierra de las Uvas. This unit is highly visible from the southern portion of the Sierra de Las Uvas.

The Red Sand Unit is highly visible from the Sacramento Escarpment, which includes eight NMWA BLM Citizens’ inventory units.

6. The PEIS should require a schedule of water use per Kwh, identification of a state certified water source and an approved water recycling program.

7. A site restoration bond should be maintained by the permittee for the term of the permit guaranteeing restoration of the site in the event the project is terminated for any reason.

8. The PEIS should include a provision limiting the use of the project areas specifically to solar energy activities only. No commercial quarry, mining, or other enterprise should be allowed. We note that Jetstream Wind of Santa Fe proposes to start construction of a 10 megawatt hydrogen plant and solar panel project which would produce liquid and gaseous hydrogen as well as electricity. This portends a circumstance by which commercial enterprises could use this process to inexpensively gain use of federal property to conduct commercial business.

9. The PEIS should identify issues related to the development of solar sites such as subsequent development needed to support solar sites including new transmission

corridors, upgrades to existing transmission lines, road construction, water resource development, and other possible physical, biological and social cumulative impacts.

10. Because of the proximity of the Red Sand unit to an internationally known National Park Unit, White Sands National Monument, we recommend at minimum redrawing the northern boundary to where it is below the southern boundary of White Sands. If White Sands is to ever expand, this would allow for potential land exchange with the BLM and expansion of the Monument to the east.

11. Of the “BLM lands being analyzed for Solar Development in PEIS” we would like to address the western portion of Otero Mesa. Otero Mesa contains the largest remaining intact expanse of Chihuahuan desert grassland left on public land today. This area supports over 1,000 native wildlife species, including black-tailed prairie dogs, desert mule deer, mountain lions, golden and bald eagles, over 250 species of songbirds, and boasts the state’s healthiest and only genetically pure herd of pronghorn antelope. Furthermore, there is evidence that the Salt Basin aquifer, which originates in Otero Mesa and travels south into Texas, is the largest untapped fresh water resource remaining in New Mexico. We have identified more than 500,000 acres of wilderness suitable land on Otero Mesa. Industrial scale solar development would undoubtedly compromise the integrity of this grassland system, and we recommend these areas not be analyzed for Solar Development in the PEIS.

(See Attached Documents Below)

Thank you for your consideration of these comments.

Sincerely,

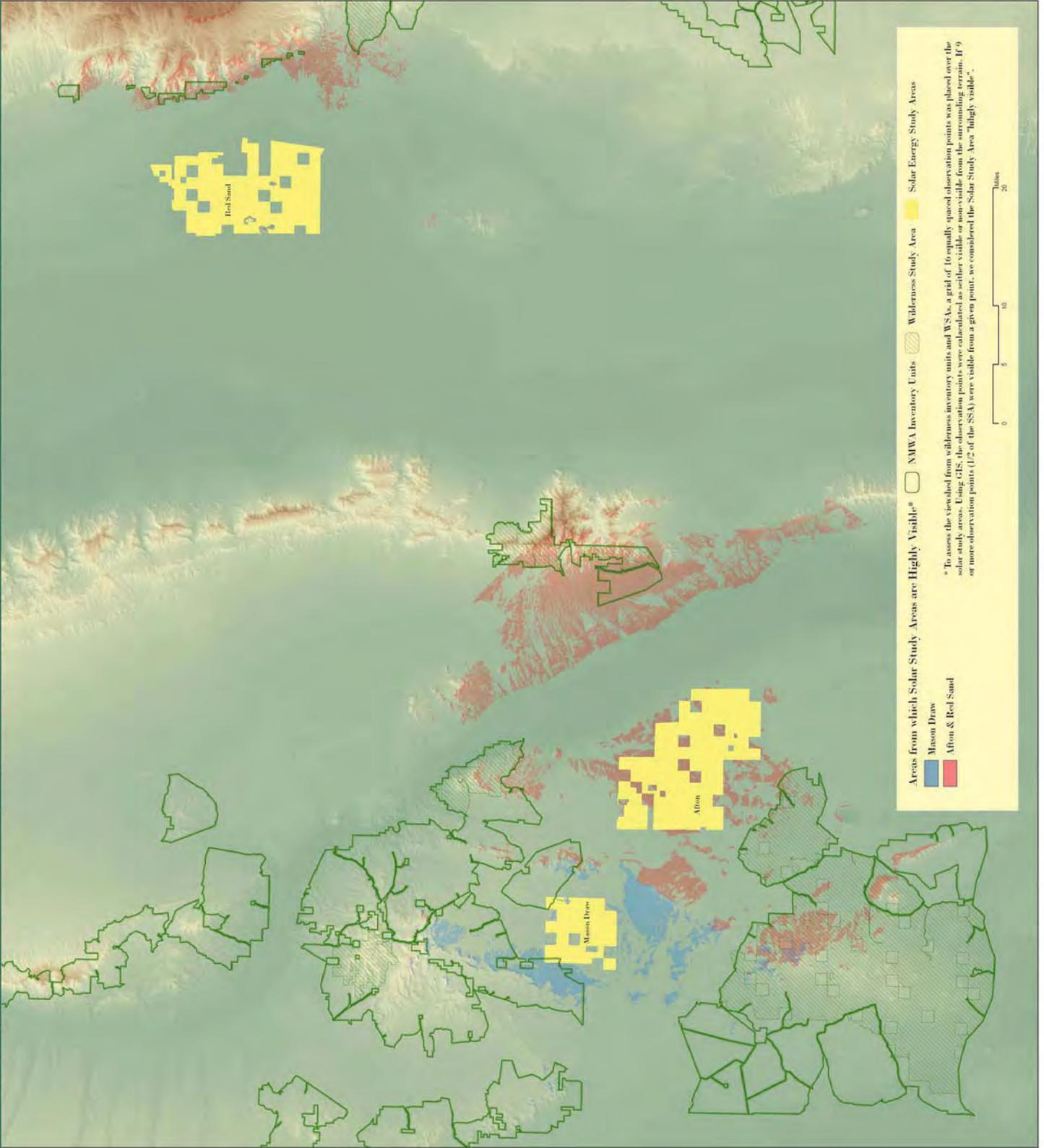
Miranda Gray

GIS Coordinator
New Mexico Wilderness Alliance
P.O. Box 25464
Albuquerque, NM 87125

Nathan Newcomer

Associate Director
New Mexico Wilderness Alliance
P.O. Box 25464
Albuquerque, NM 87125

BLM Solar Study Areas - Visibility from Wilderness Inventory Units and WSAs
 To accompany scoping comments on the Solar Energy Study Areas for the Solar PEIS, submitted by the New Mexico Wilderness Alliance, September 14, 2009



The Chihuahuan Desert Region

In New Mexico, the Chihuahuan Desert region is found throughout the south-central and southeastern part of the state, with finger-like extensions protruding north up the Rio Grande and Pecos River valleys into the central part of the state. New Mexico represents the northern portion of the Chihuahuan Desert, which extends south through west Texas and deep into Mexico. This desert is one of the most biologically rich and diverse ecoregions in the world (Olson and Dinerstein 1998).

The northern portion of the Chihuahuan Desert is a dry grassland ecosystem dominated by shrubs and native grasses. Yet the region contains a variety of other geographic and habitat



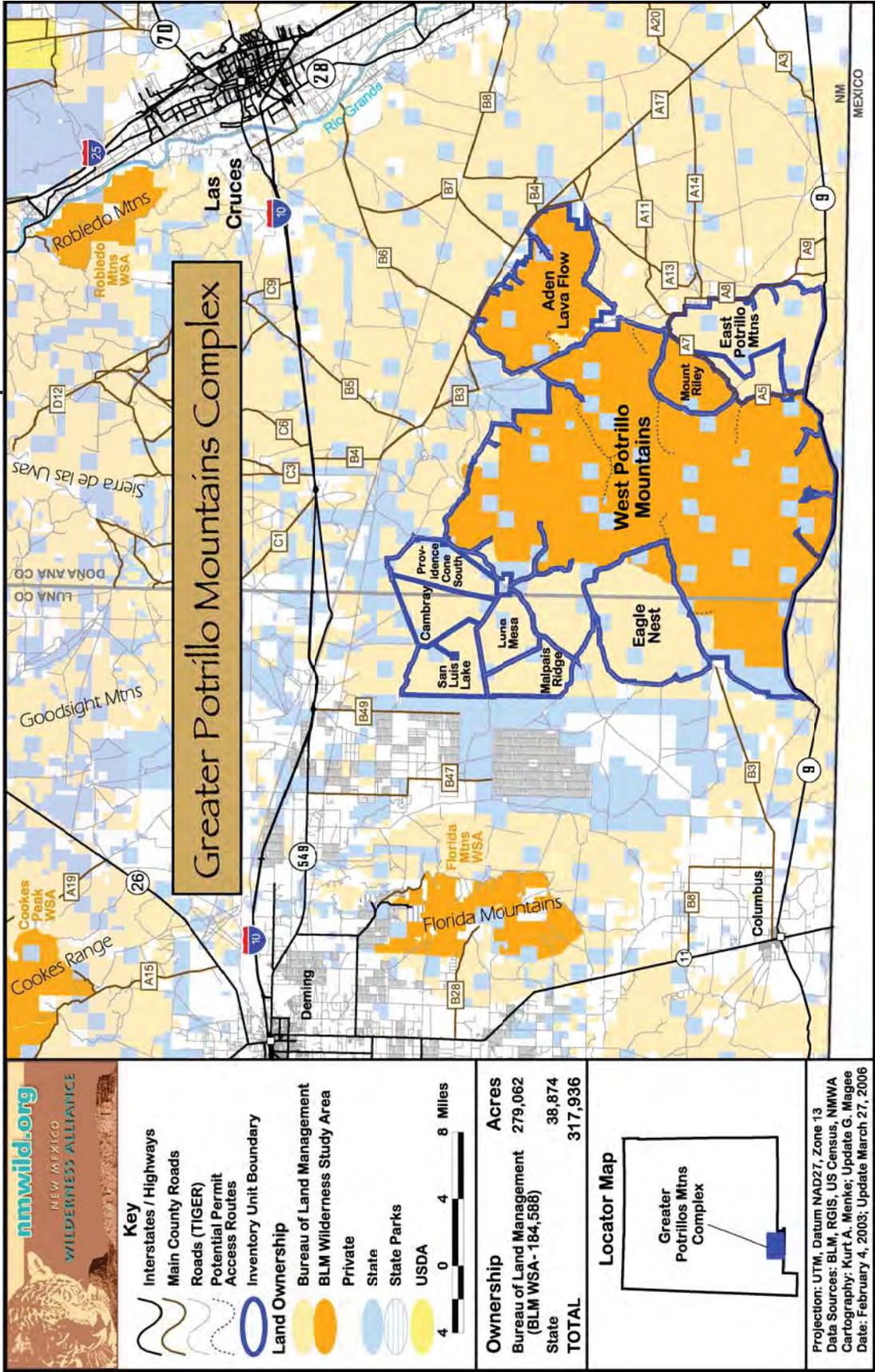
types. Several mountain ranges rise dramatically from the desert floor and act as 'sky islands' similar to the adjacent Sky Island region of southwestern New Mexico. This landscape diversity also includes unique low-elevation mountains, mesas, hills, and canyons; volcanic features such as lava flows, craters, and cinder cones; and freshwater environments such as playas, streams, and springs. The wild lands described here represent this mix of landscape types, encompassing shrub covered desert, vast grasslands, riparian areas, oak, juniper, and pinyon woodlands, and even sheltered Ponderosa Pine forests.

Cacti, yucca, and agave are common plants of the region. In fact, this desert is especially known for having high cacti diversity and endemism. Similarly, grasses, euphorbs, asters, and legumes also demonstrate this same trait. The plant diversity of this region in turn supports a high variety of invertebrate and reptile species. Mammals in the area include pronghorn, deer, javelina, bobcat, and coyotes, as well as some rare species such as desert bighorn sheep and prairie dogs. Numerous migrating and

resident birds use the region, including the rare Aplomado falcon. The freshwater biota of the ecoregion is considered some of the most unique in the world because of its complexity and high level of endemism.

In addition to their unique geographical and ecological characteristics, the wild lands described here also have all the characteristics of wilderness as outlined in the Wilderness Act. These areas also serve as buffers around existing conserved areas and as linkages with other wildlands in the region. Protection of these lands is crucial for maintaining diverse communities of plants and animals, watershed functions, wildlife habitat and travel corridors, and open spaces for human use. Wilderness designations will ensure that these lands maintain these important functions.

Greater Potrillo Mountains Complex



Greater Potrillo Mountains Complex



Area Description

The Greater Potrillo Mountains Complex is located approximately 30 miles southwest of Las Cruces adjacent to the border with Mexico. The West Potrillo Mountains are the focal point of this area, which is one of the largest relatively undisturbed stretches of Chihuahuan Desert landscape in New Mexico. The area also includes the Aden Lava Flow, Mount Riley, Cox Peak, Eagle Nest, Indian Basin, and the East Potrillo Mountains. This landscape is a broad volcanic field encompassing hundreds of

cinder cones, large craters, and the shield volcano of Aden Crater that produced extensive lava flows over 10,000 years ago. Mount Riley is the highest point in the region, rising abruptly over 1,700 feet above the surrounding desert plain to an elevation of nearly 6,000 feet. Ephemeral lakes are found in Indian Basin. In addition, the area is made up of isolated intrusive peaks like Eagle Nest, steep sedimentary mountains like the East Potrillo Mountains, sand dunes, and expansive, relatively level plains.



Ecological Values

Chihuahuan Desert

grassland and yucca, in association with a mosaic of other desert shrubs such as creosote, acacia, and mesquite, make up the majority of the plant cover in the area. Isolated clumps of netleaf hackberry and other desert trees are found in the lava flow where depressions or deeper pockets of soil hold extra water after rainfall. Occasional juniper trees are also found on mountain slopes and in larger drainages. The limestone substrate of the East Potrillo Mountains provides habitat for a wide diversity of cacti, and sandy areas likely contain populations of the State-endangered sand prickley pear, *Opuntia arenaria*, a BLM special status species. The late summer rains bring extensive stands of wildflowers in this area including white and yellow desert zinnias, desert



marigolds, blackfoot daisies, globe mallow, pepperweed, desert sunflowers, Chihuahuan flax, and summer poppy. In one of the large basins in the center of the West Potrillo Mountains, there is a unique 'cholla savannah' vegetation type with large 8 to 10 foot tall cholla trees evenly spaced amongst the grasses. Unusually large specimens of barrel cactus are also found in this area.

Protection of large natural areas is particularly important for long-term preservation of biological diversity. Each unit is an important component in the larger complex of wildlands in the greater Potrillo Mountains area. This area's proximity to northern Mexico adds to its ecological significance. Like the Peloncillo and Big Hatchet Mountains to the west, the Greater Potrillo Mountains Complex forms a biotic link between species in northern Mexico and those in the southwestern United States.

The area's naturalness and large size also contributes to its significance for wildlife. Raptors are common, especially during the winter. Golden eagles, great-horned owls, and Swainson's hawks nest here, and peregrine falcons have also been reported. Extensive grasslands in the



area provide important habitat for grassland birds that have declined in recent years. This includes potential habitat for Aplomado falcons. Other species that forage and live in the area include pronghorn, mule deer, quail, jackrabbits, and occasional migrating ducks on ephemeral ponds. A high diversity of bats are found in the complex, and melanistic forms of mammals and reptiles occur on the lava flows. The Great Plains narrow-mouth toad has been reported immediately to the south of the West Potrillos and can be expected to occur here. A rare mollusk is also found in the area.



Lava flows, craters, and cinder cones evoke a primeval, “moonscape” image for visitors. The shapes and forms of the lava rock are interesting, especially when juxtaposed to the varied forms of the desert vegetation found here. The Aden Lava Flow contains pressure ridges, lava tubes, and crevices up to 5 feet wide and 20-30 feet deep. In contrast, rounded, grass-covered hills in the complex add a hint of softness to the rugged landscape. These features provide excellent opportunities for photography and geological sightseeing.

Scenic and Recreational Qualities

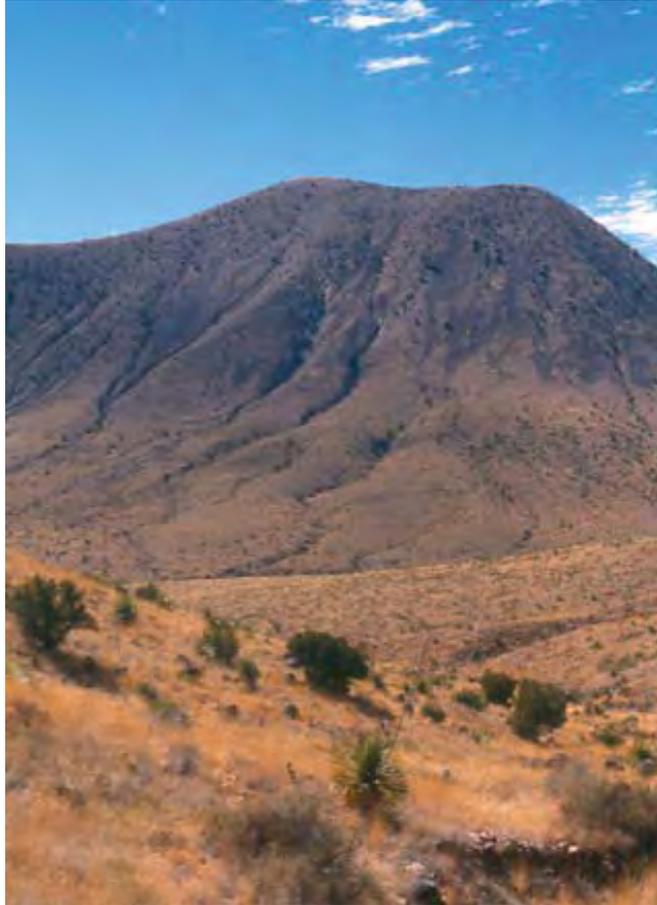
Although this complex is located near a bi-national metro-plex of more than 2.5 million residents, the Greater Potrillo Mountains area appears very natural, maintaining its wild beauty. Due to the rugged terrain and lack of water, many areas are inaccessible to cattle and largely ungrazed, adding to the scenic quality.



Although less than an hour’s drive from either Las Cruces or El Paso, most of the area receives little visitor use. This is an excellent area to explore if one desires to avoid contact with others. The area does not have any maintained trails, making cross-country travel for horseback riders, hikers, backpackers a very primitive experience. Isolated mountains, like Mount Riley and Cox Peak’s, rise abruptly from the desert floor and make excellent day hikes. These seldom traveled peaks remind the visitor of the true remoteness and isolation of the area.

As one gains elevation, range after range appears on the horizon, jutting up out of vast valleys in the distance. This gives not only a sense of immense space, but also a visual connection between the region's of southwest New Mexico and northern Mexico, which lies only a few short miles to the south. Additional recreational opportunities include botanical study in the East Potrillo Mountains and excellent quail hunting throughout the area.

As nearby urban populations rapidly expand, nearby wild areas assume an even greater importance. The Greater Potrillo Mountains Complex provides these urban dwellers with primitive recreational opportunities that, in many places in the southwest, no longer exist due to urban sprawl into once wild areas. The primeval nature of the complex provides visitors with a wilderness experience and primitive recreational opportunities of the highest order.





Special Management Areas

Three Wilderness Study Areas (WSAs) are located in this complex: Aden Lava Flow, Mount Riley, and West Potrillo Mountains. The West Potrillo Mountains is the largest BLM WSA in New Mexico. The Aden Lava Flow Research Natural Area (RNA) is also located here. The RNA was designated in 1978 to preserve the unique geological and biological phenomena associated with the Aden Lava Flow and to provide research and educational opportunities. A portion of the area also falls within the West Potrillos Habitat Management Plan Area managed to improve habitat for deer and upland game.

Cultural Values

Evidence of pre-Columbian Indian habitation exists in caves in the East

Potrillo Mountains. A Classic Mimbres Pueblo located in the region has the highest concentration of bird bones of any known Mimbres site. Several undisturbed El Paso Phase structures have also been found in the West Potrillo Mountains.

Access Information

The south part of the Greater Potrillo Mountains complex is easily reached by Highway 9 that goes from Santa Teresa to Columbus along the border with Mexico. From I-10 exit #8 in Texas, head west toward the border crossing on Highway 136. Just north of the border, about 9½ miles southwest of the interstate exit, turn west on Highway 9. In 16½ miles, CR A008 comes in on the north. This road forms the eastern boundary of the East Potrillo Mountains unit.



About 8 miles further west on Highway 9 from the intersection of CR A008, CR A005 comes in on the north side of the road.

Approximately 4½ miles north of Highway 9, CR A007 intersects CR A005 from the east. This road heads to the northeast and forms the eastern boundary of Mount Riley and eventually accesses the southern end of the Aden Lava Flow unit (consult a detailed map before attempting to drive this route). From the intersection of CR A007 and CR A005, CR A005 continues north in between the Mount Riley unit on the east and the West Potrillo Mountains on the west. The southwest part of the West Potrillo Mountains is reached by continuing west on Highway 9 from the intersection of CR A005.

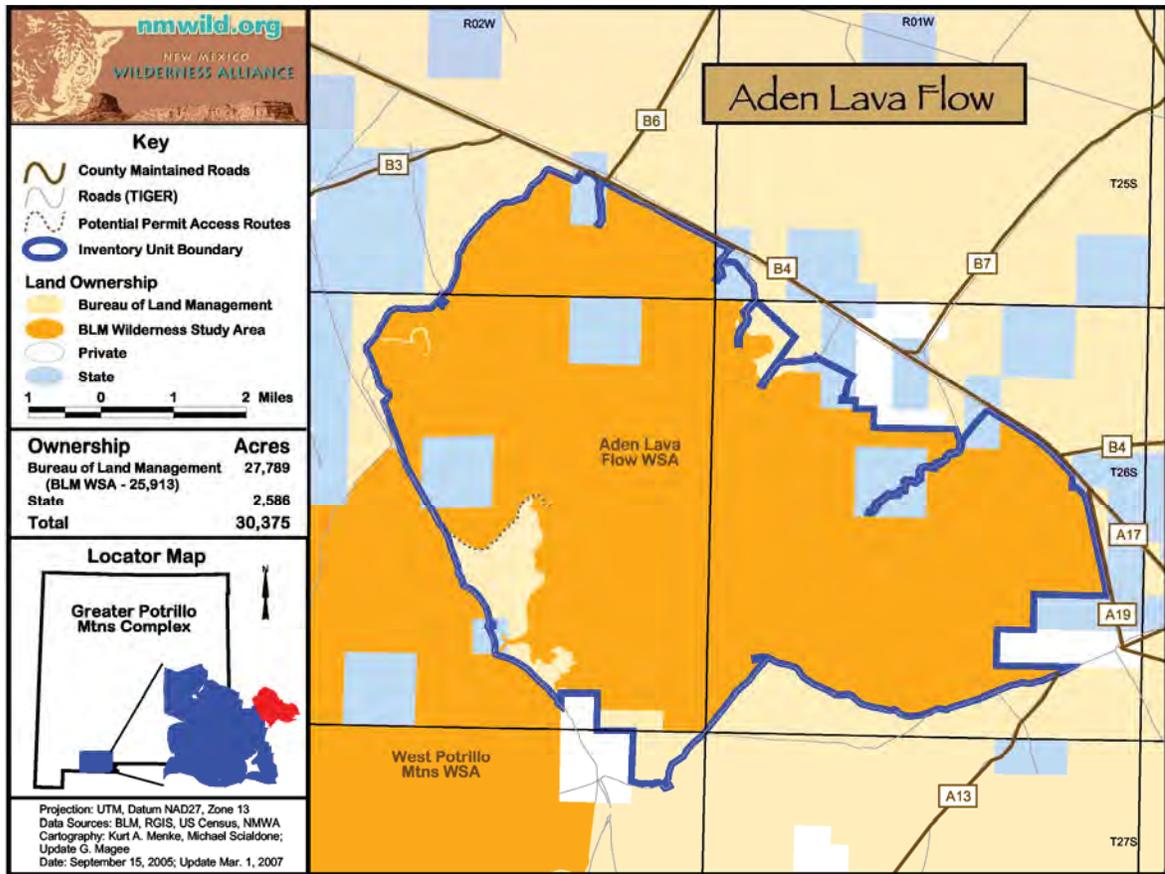
To get to the northeast part of the West Potrillo Mountains and the northwest part of Aden Lava Flow, take the Corralitos Ranch exit #127 off of I-10, about 15 miles west of Las Cruces. From the south side of the interstate, head west on CR B005, which also parallels the

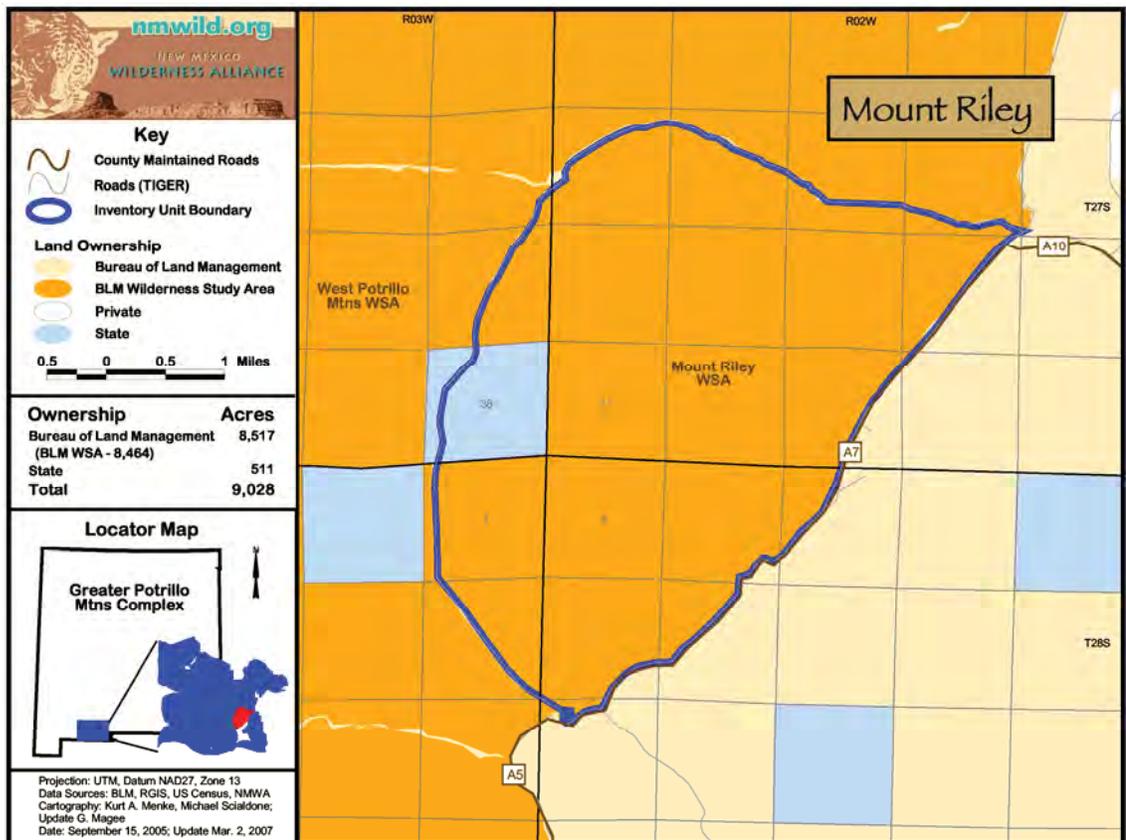
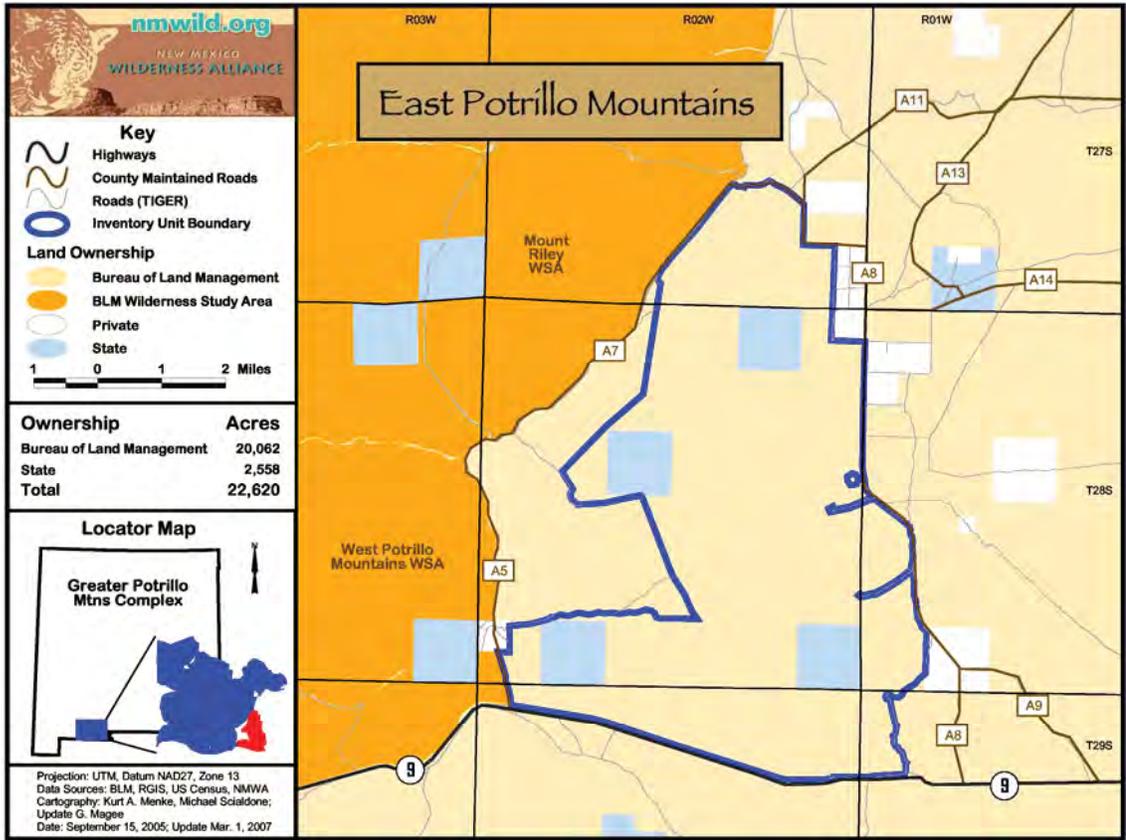


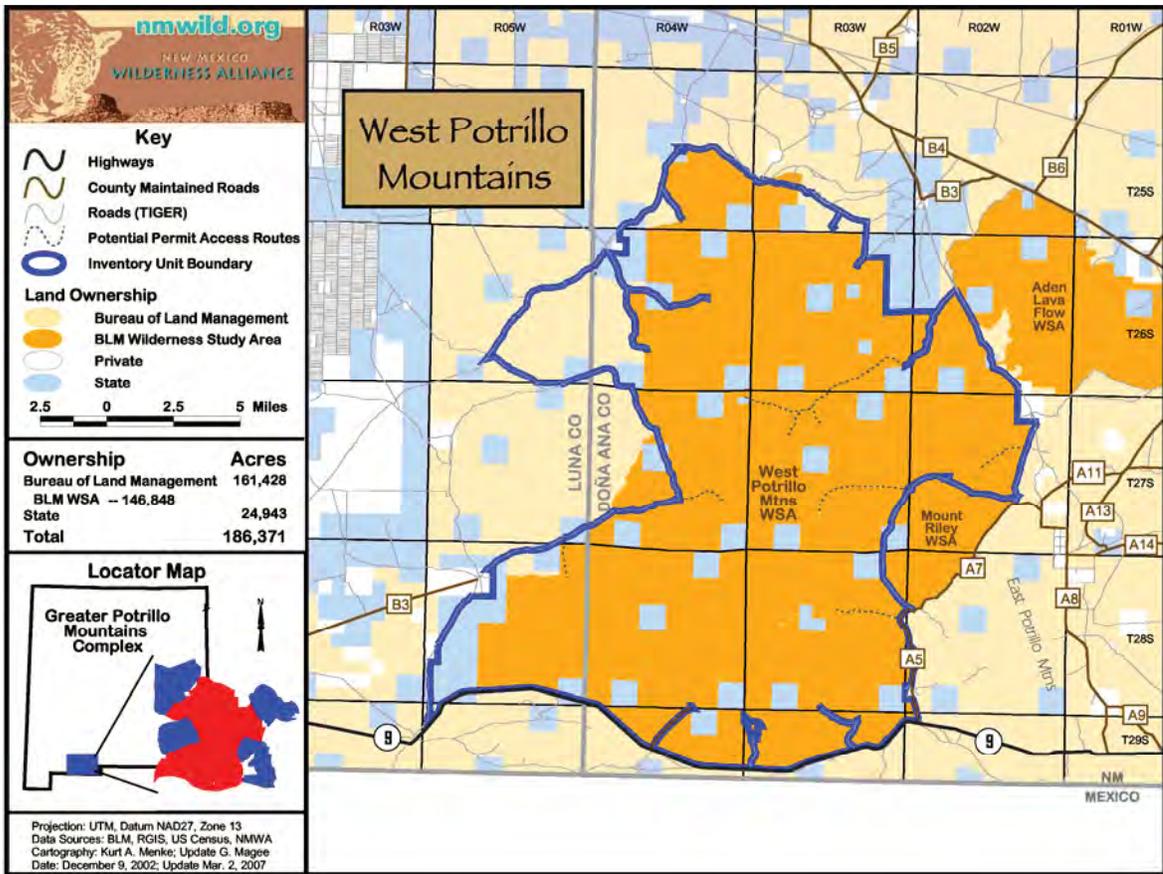
interstate. After about 2 miles, follow the gravel road as it curves away from the interstate. Continue on CR B005 from this point for about 8½ miles to the intersection of CR B004 at the railroad tracks. Cross over the railroad tracks here and turn left. Follow CR B004 and the RR tracks to the southeast for about 7 miles to the intersection of a road on the south. This route forms the western boundary of the Aden Lava Flow unit. The northeast part of the West Potrillo Mountains can be reached by following this side route southwest for about 7½ miles. The northern part of Aden Lava Flow can be explored by continuing southeast along the RR tracks and CR B004.

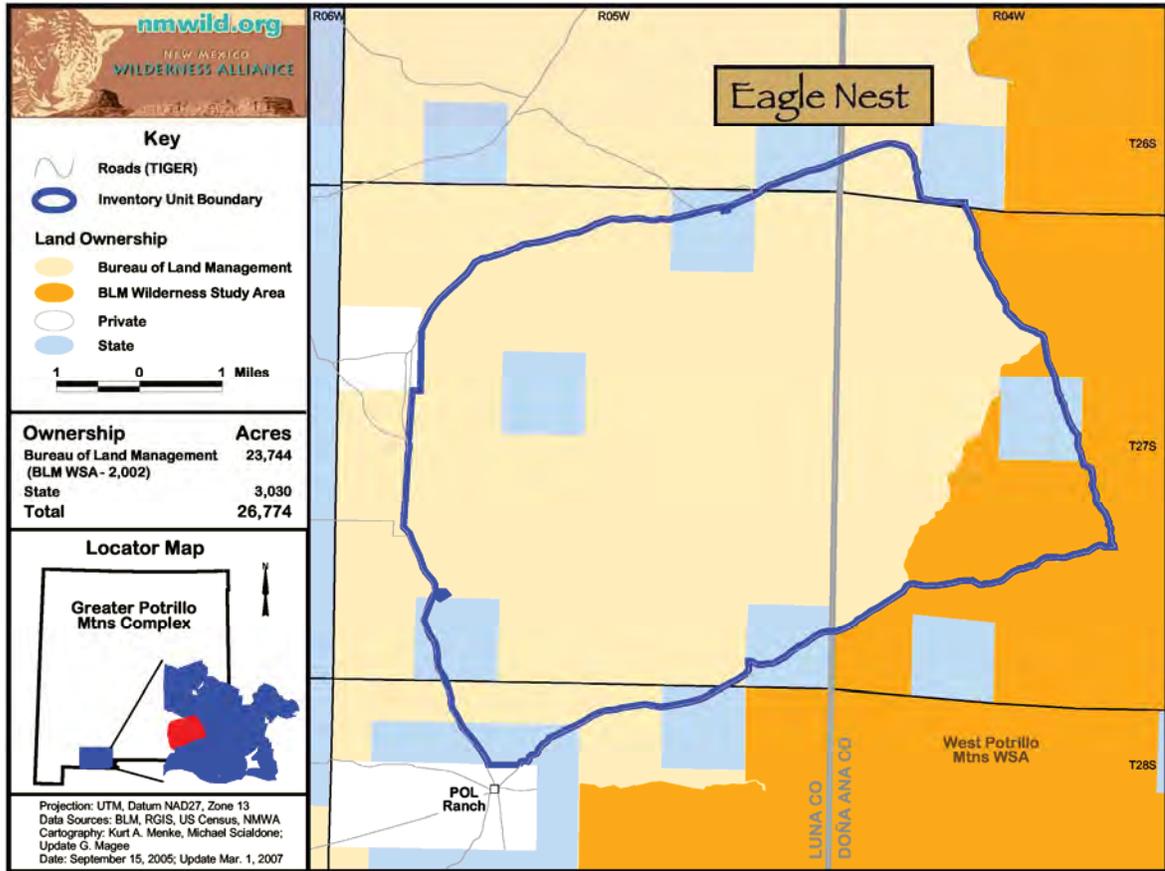


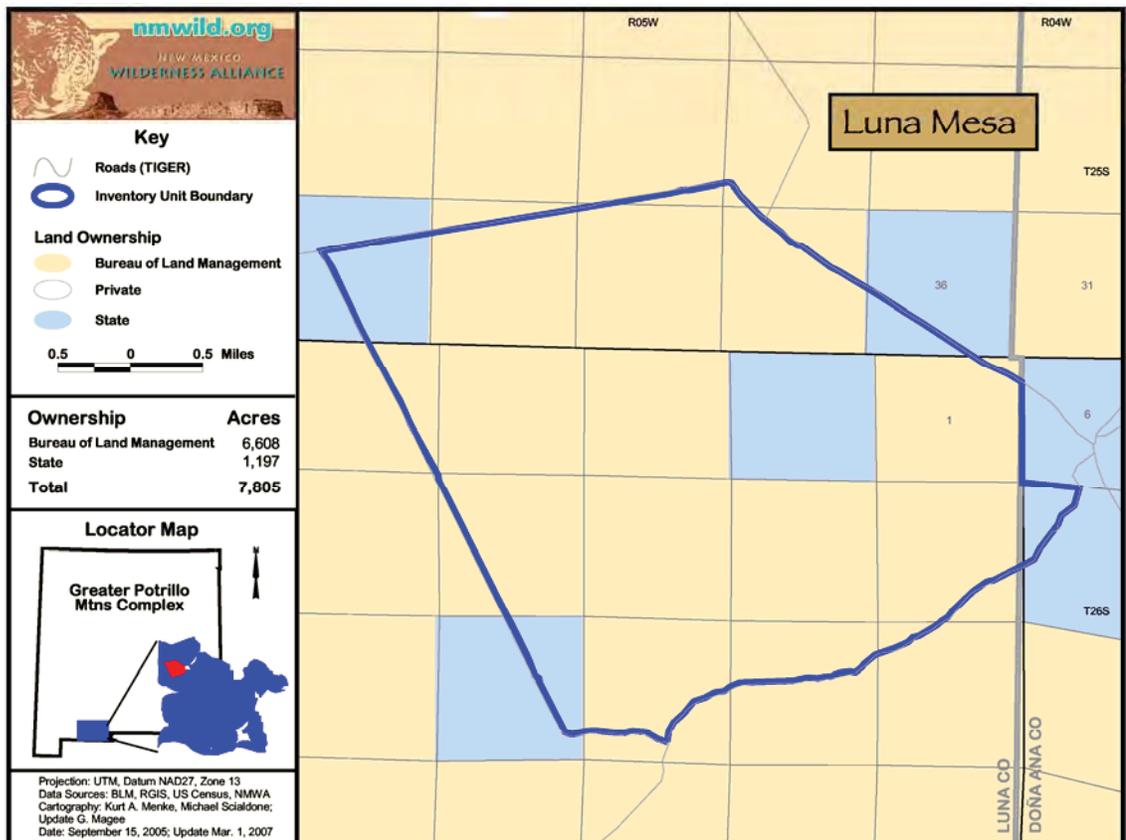
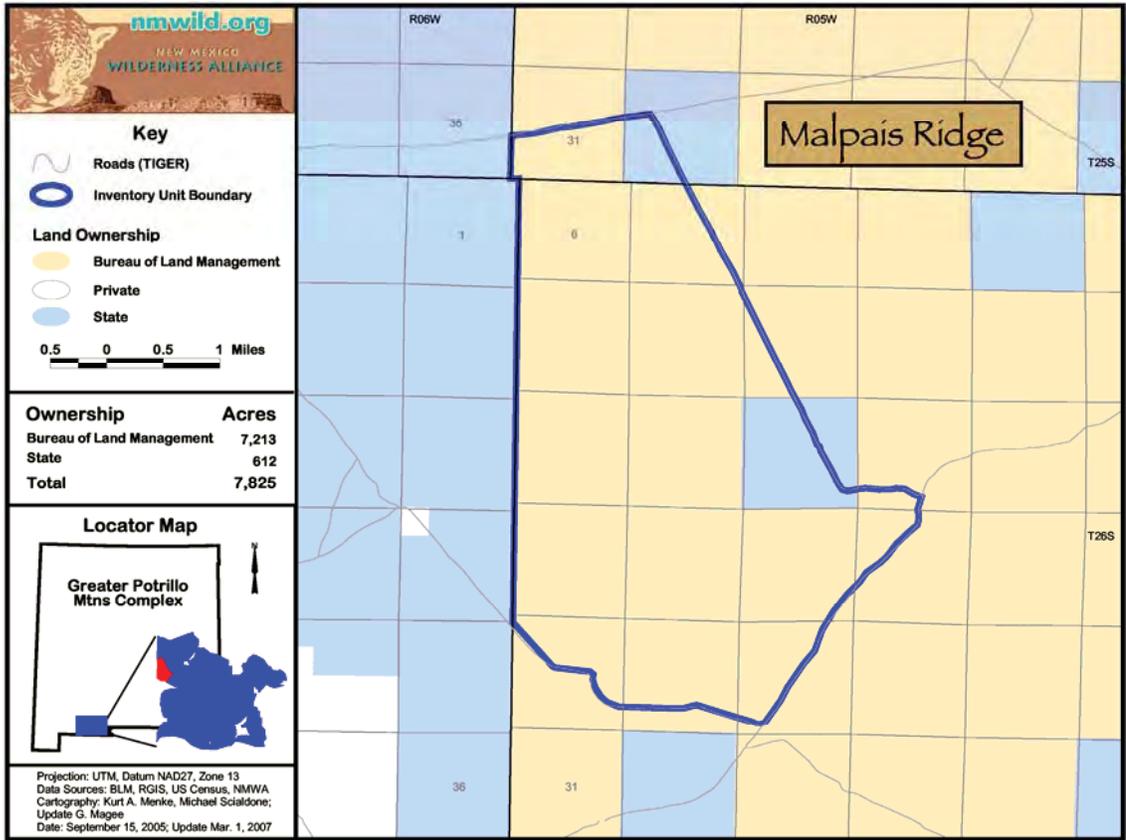
The USGS 7.5 minute maps that cover this complex are: Akela, Cambray, Mount Aden, Sibley Hole, X-7 Ranch, Mount Aden SW, Aden Crater, Afton, Mesquite Lake, POL Ranch, Potrillo Peak, Mount Riley, Kilbourne Hole, Coyote Hill, Camel Mountain, Guzmans Lookout Mountain, Mount Riley SE, and Potrillo.

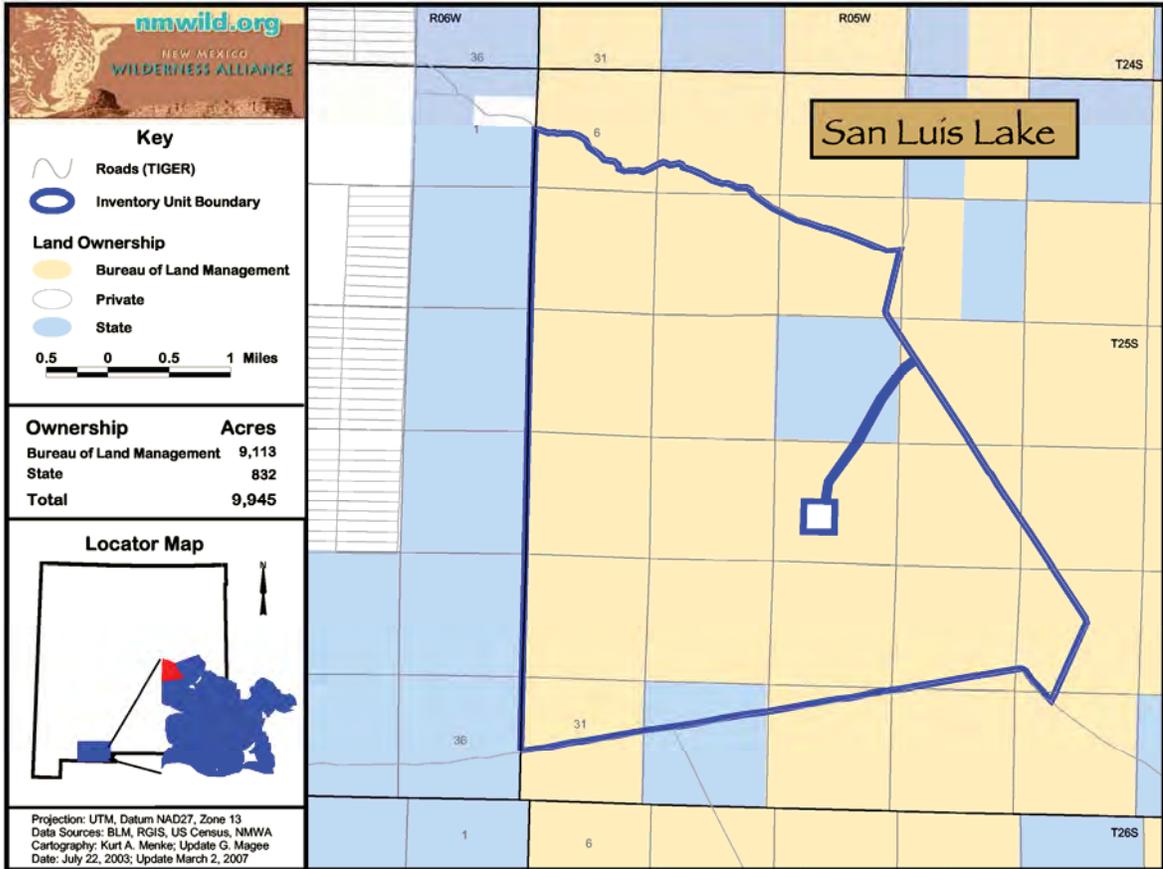


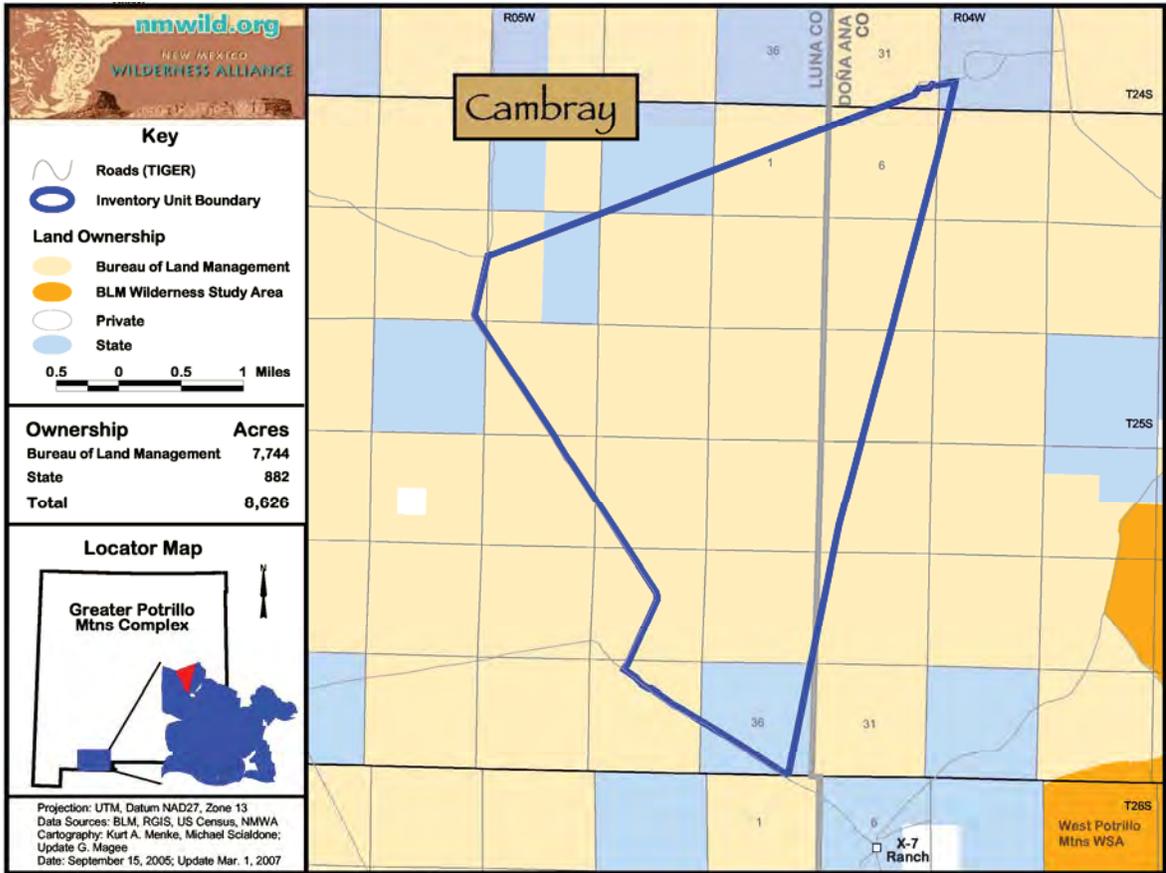


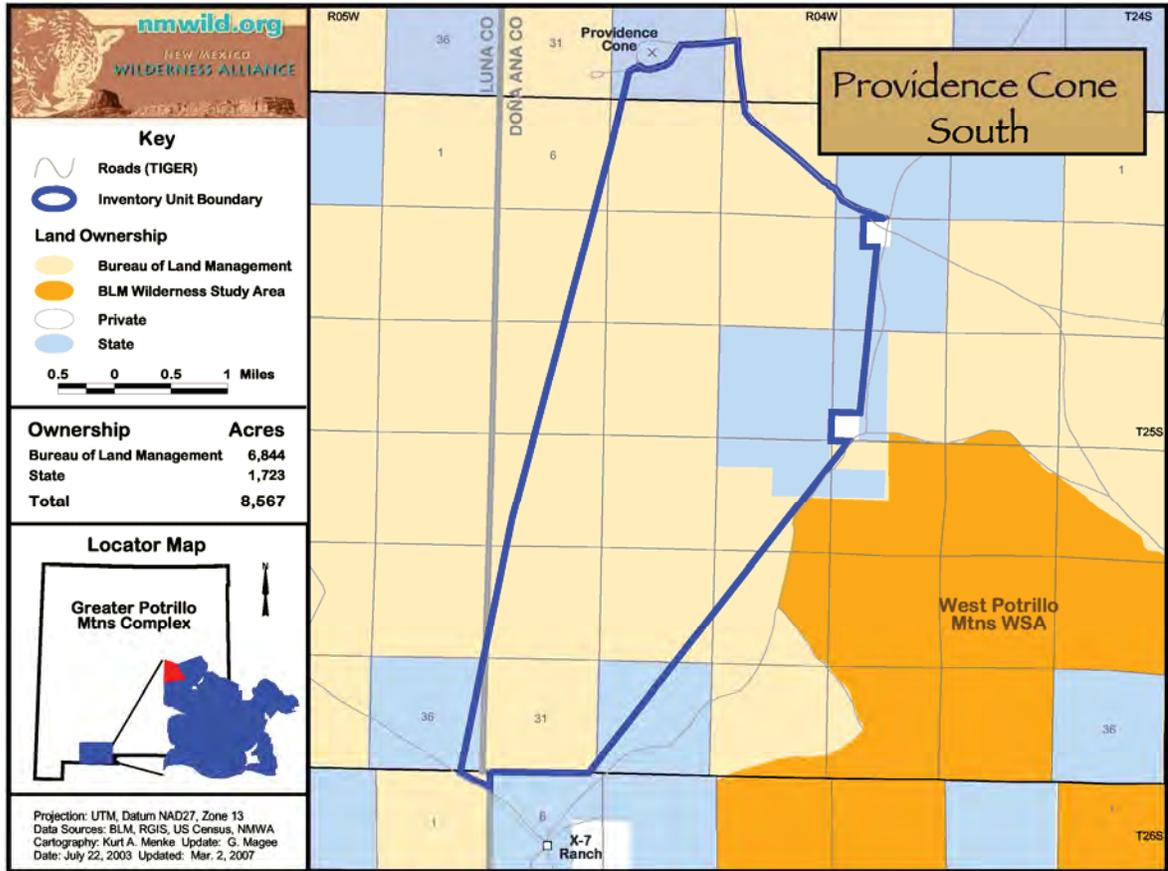




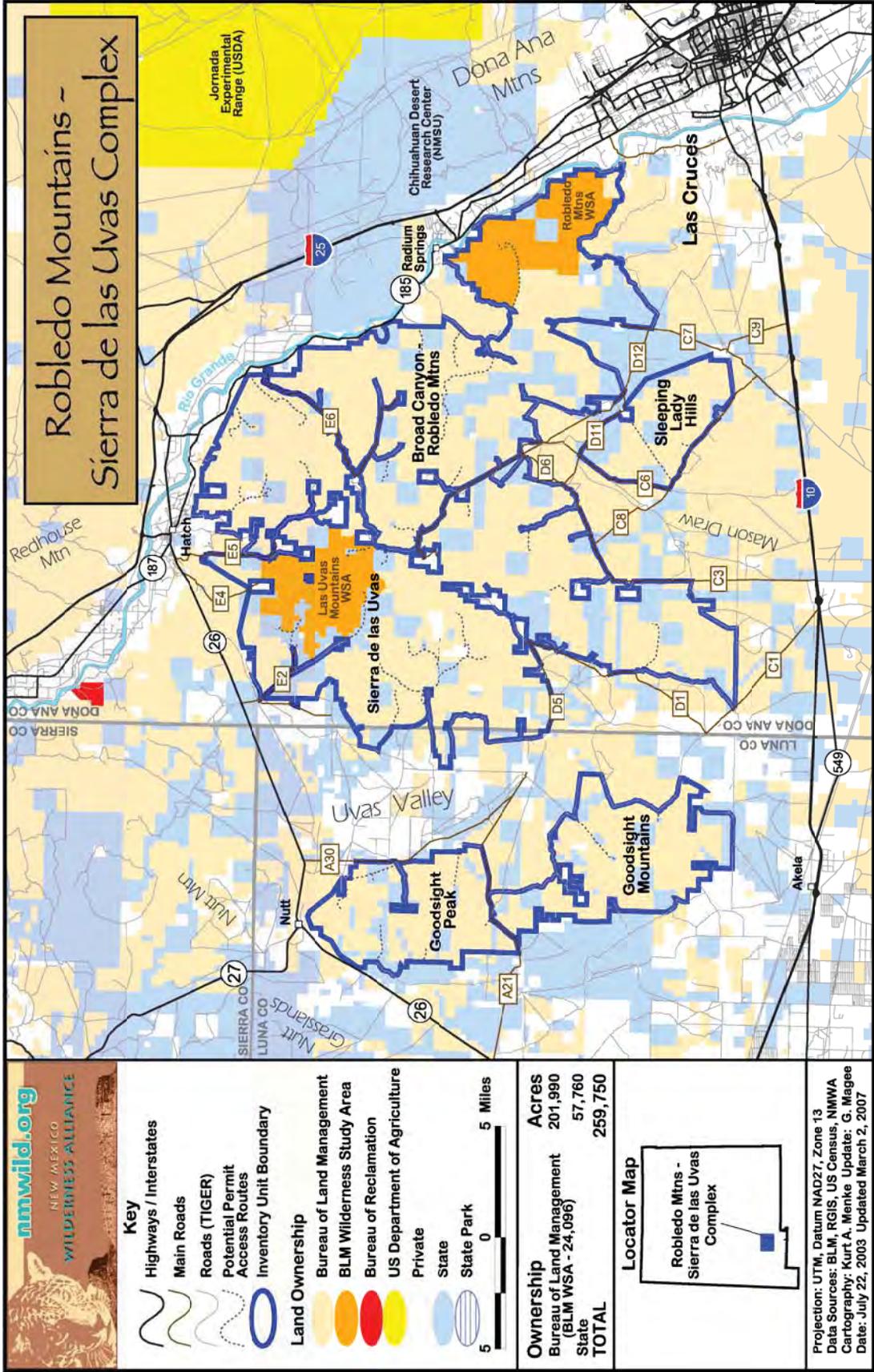








Robledo Mountains - Sierra de las Uvas Complex



Robledo Mtns – Sierra de las Uvas Complex



Area Description

The Robledo Mountains – Sierra de las Uvas Complex is located in northeastern Luna and northwestern Doña Ana Counties just northwest of Las Cruces. Highway 26 on the north and west, I-10 on the south, and the Rio Grande on the east roughly form the boundaries of the area. An incredibly diverse range of landscape forms and habitat types are found here: juniper-dotted volcanic mountains; dramatic limestone, igneous, and volcanic cliffs; remote grass-covered hills, mesas, and buttes; caves; deep and rugged ‘box’ canyons with riparian habitats; gentle alluvial fan slopes covered with grasses and shrubs; expansive desert

grassland swales; and creosote-dominated lowlands are all found in this exceptional wilderness complex. Elevations within the area range from a low of approximately 4,000 feet near the Rio Grande to over 6,000 feet on Magdalena Peak in the Sierra de las Uvas.



Ecological Values

The diversity of vegetation types found in this complex is exceptional. Juniper woodland, juniper savannah, and montane shrubs such as mountain mahogany, shrub live oak, and sumac are found in the higher elevations; desert shrub-cactus associations with plants like creosote, ocotillo, sotol, yucca, barrel cactus, penstemon, and lyreleaf greensages in the lower elevations; large areas of black grama grasslands on the mesas of the Sierra de las Uvas; expansive tobosa grass swales in some areas of the desert flats; arroyo riparian areas with plants like velvet ash, netleaf hackberry, soapberry, desert willow, wolfberry, sumac, and sacaton grass in the larger canyons of the area. The lush riparian zone along the Rio Grande is also adjacent to the complex. The Robledo Mountains support an unusually high diversity of cacti, including the State-endangered night-blooming cereus.

Pronghorn, mule deer, mountain lion, bobcat, coyote, bats, rock squirrels and other rodents, quail, and numerous other birds call this area home. The grasslands



found here are important to a declining grassland fauna and provide habitat for rare birds like the Aplomado falcon and Baird's sparrow. The abundance of cliffs in the mountains provides nesting and perching sites for many raptors, including bald and golden eagles, various hawks and owls, and the Federal-endangered peregrine falcon. Reptile diversity is also high; banded rock rattlers, Madrean alligator lizards, and Trans-Pecos rat snakes are all found here, as are other reptiles that reach the northern or western limits of their range.

The complex also contains important watershed values since canyons in the northern and eastern parts of the area direct rainfall to the Rio Grande. These canyons are also important corridors for the movement of animals from the desert areas to water sources along the river.



Scenic and Recreational Qualities

Scenic quality is exceptionally high within the Robledo Mountains - Sierra de las Uvas complex. Expansive vistas of the wild landscape are afforded from the mountaintops and ridges, while dramatic cliffs, 'box' canyons, and other impressive geologic features can be found throughout the complex. In addition, the Robledo Mountains are an important scenic view-shed for the people living in and traveling through the Rio Grande Valley to the east.

Though relatively close to Las Cruces, the nature and degree of human impacts in the Robledo Mountains – Sierra de las Uvas complex are quite minimal. Affected primarily by the forces of nature, the landscape here has retained its wild character and influence. Rugged terrain and large size also contribute to exceptional opportunities for visitors to enjoy a primitive wilderness experience. Recreational opportunities in the complex are numerous. The varied volcanic, igneous, and sedimentary

outcrops create outstanding opportunities for geological sight seeing as well as mountain and rock climbing, and day-hiking. Parts of the complex have open terrain leading to lonely mesas that provide excellent opportunities for backpacking and horseback riding. The varied features of the complex and the high quality of southern New Mexico sunlight, particularly at sunrise and sunset, provide outstanding opportunities for outdoor photography.

With the population of Las Cruces and El Paso projected to expand dramatically in the next several decades, protection of these remaining wildlands so close to these cities will safeguard a much-needed source of primitive recreation and quiet refuge for citizens of south-central New Mexico and west Texas.

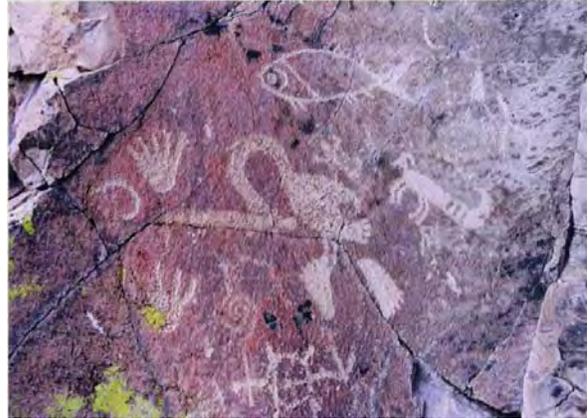


Special Management Areas

Two Wilderness Study Areas (WSAs) are encompassed within this complex: Robledo Mountains and Las Uvas Mountains. BLM has also declared two Areas of Critical Environmental Concern (ACECs), one in the Robledo Mountains and the other in the Uvas Valley adjacent to the Goodstight Mountains unit. The former was designated in recognition of the biological, scenic, and recreational values found there; and the latter for its excellent example of black grama grassland. In addition, the Butterfield Trail Special Management Area protects the route of the historic overland trail through the area.

Cultural Values

Archaeological and historic resources are also rich in the Greater Robledo Mountains – Sierra de las Uvas Complex. At least 20 historic and prehistoric sites are known to occur within or adjacent to the Robledo Mountains WSA, including some of the earliest known prehistoric habitation sites in southern New Mexico.



Also included are several undisturbed pothouse villages, two Lithic Indian sites in Horse Canyon, and at least two excellent petroglyph sites in the Sierra de las Uvas. More prehistoric sites likely exist, but no comprehensive survey has taken place. In terms of more recent historic resources, Lookout Peak in the Robledo Mountains was the site of a heliograph station during the early 1880's, used by explorers to communicate with similar stations elsewhere about Apache activities. The historic Butterfield Trail also runs through the area.



Access Information

The Robledo Mountains – Sierra de las Uvas unit is accessible by several county roads. To reach the southwest portion of the Sierra de las Uvas, take I-10 exit #116, 25 miles west of Las Cruces. Drive north on CR C001 northwest from the interstate for about 8 miles and turn right onto CR D001. Approximately 10 miles to the northeast, CR D001 intersects with CR D005, which runs to the west. The unit lies to the east of CR D001 and to the north of CR D005.

The south-central portion of the Sierra de las Uvas is accessed by CR D012. This is a paved road that leads to the towers on top of Magdalena Peak and creates a long cherry-stem in the inventory area. To get to CR D012, take the Airport exit #131 and travel west along the frontage road for 4 miles to Corralitos Ranch Road, CR C009, and turn right. Take CR C009 north for about 3 miles, then turn right onto CR C007 at the Corralitos Ranch Headquarters. Take CR C007 north for 3½ miles, then turn left on CR D012. In 3 miles to the west, CR D011 comes in on the left. The Sleeping Lady Hills unit is about a mile south from here and can be accessed by CR D011. The paved CR D012 goes on to the west through a pass in the Rough and Ready Hills, then curves to the northwest and continues about 8 miles to the base of the Sierra de las Uvas.

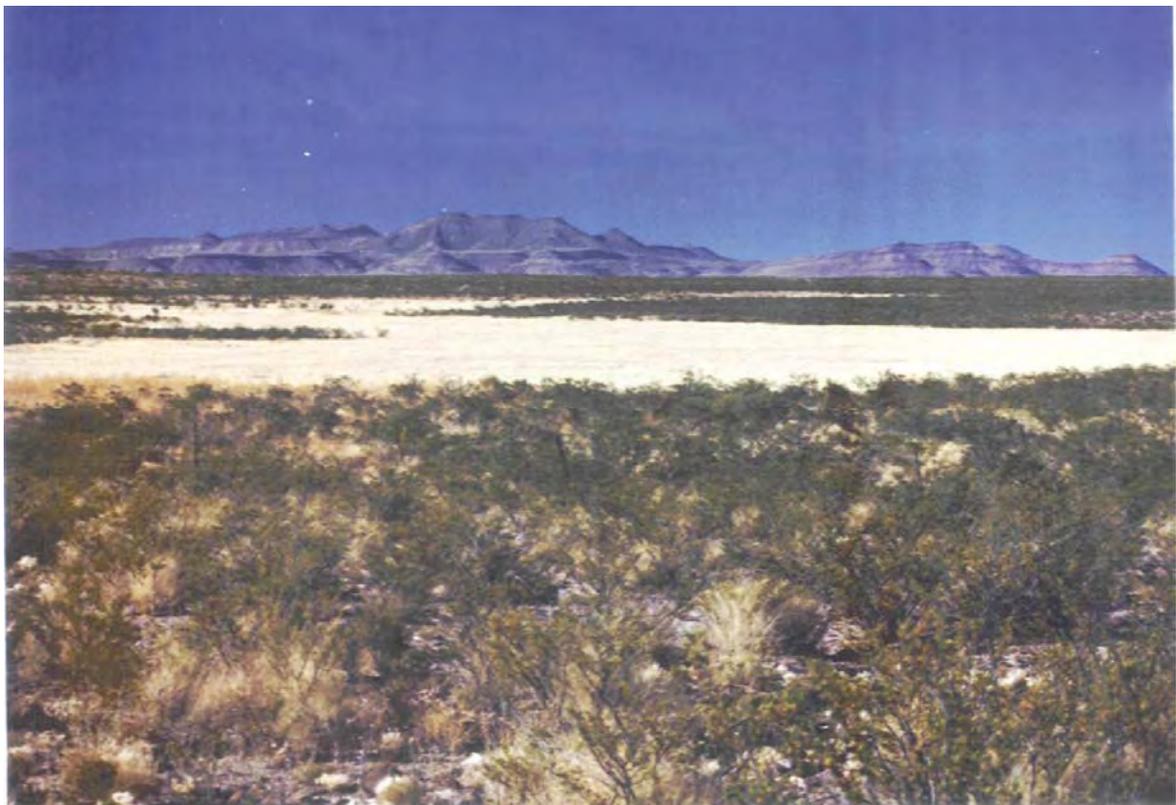
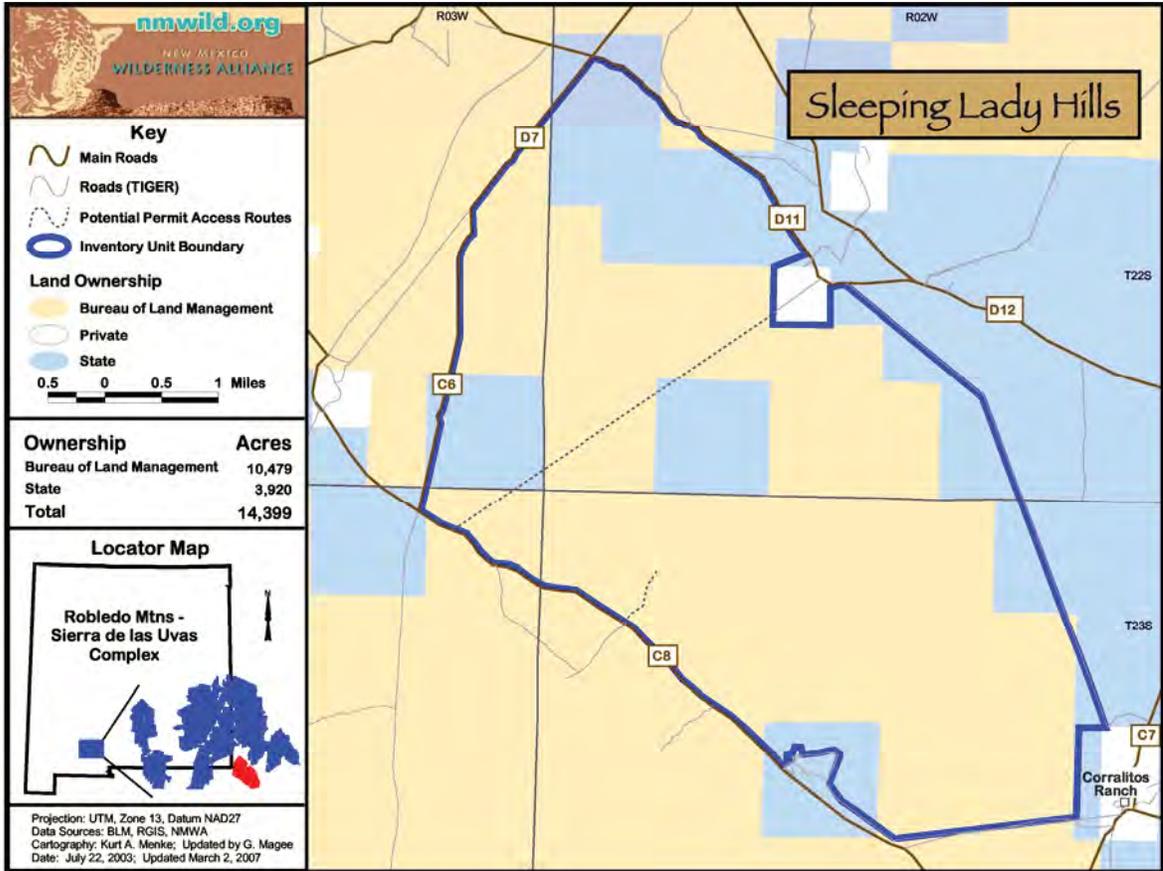
The northeast part of the Sierra de las Uvas is accessed by CR E006. To reach CR E006, take exit #19 off of I-25, about 14 miles north of Las Cruces. Go west on Highway 157 for 1½ miles to Highway 180. Turn right on 180 and go north along the river for about 12 miles, then turn left on CR E006, ¼ mile north of the Border Patrol Check Point.

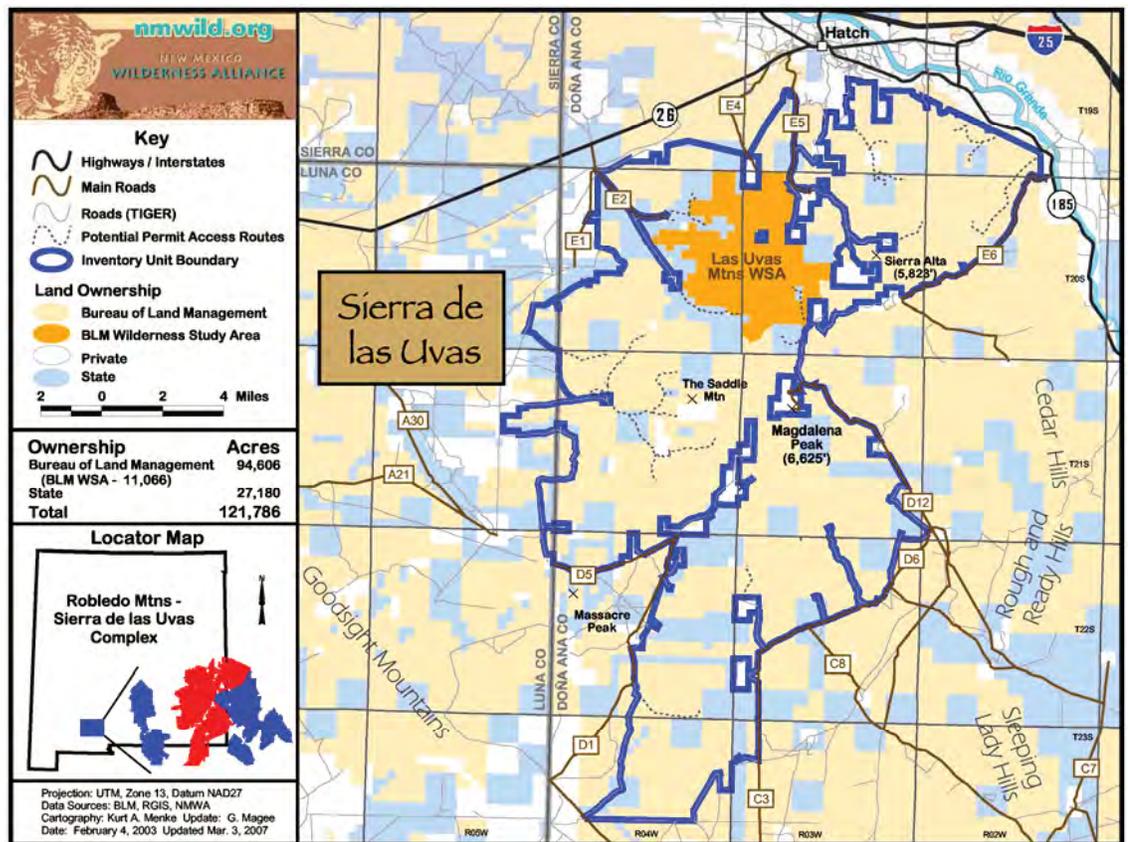
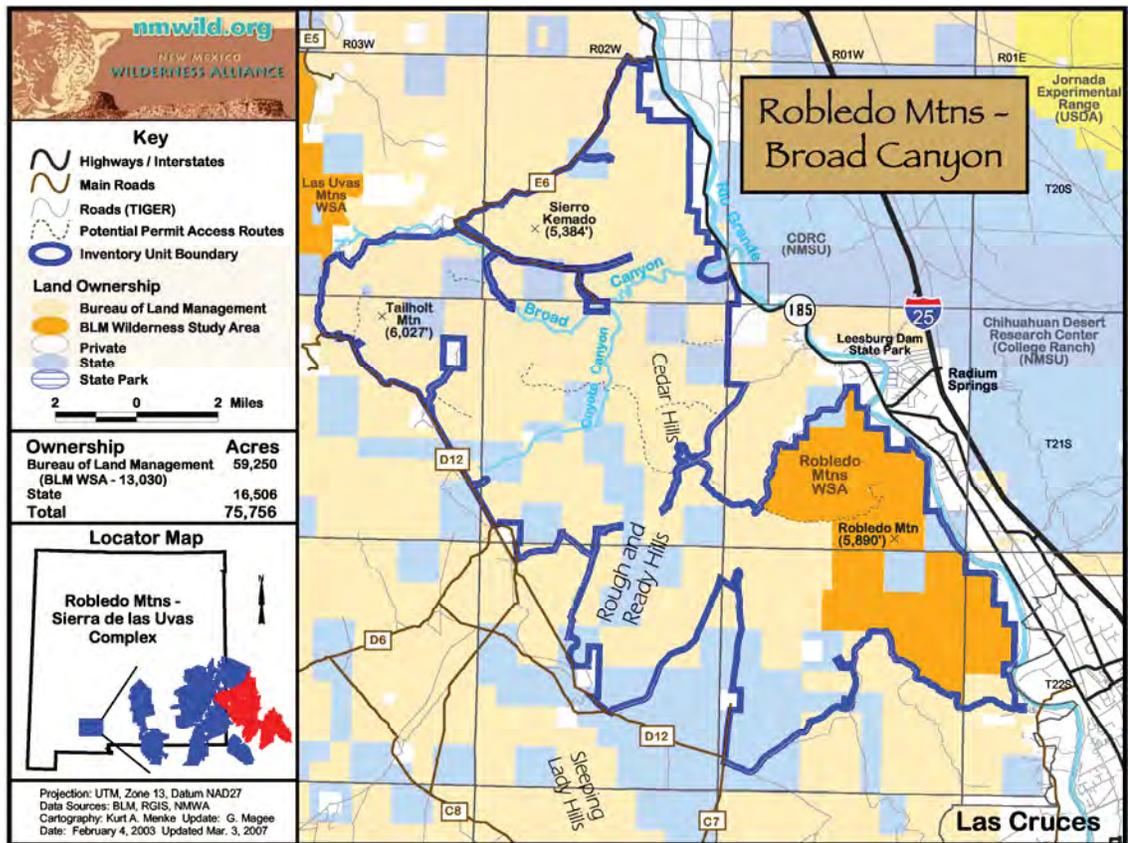
The north and northwest parts of the Sierra de las Uvas are accessed by CR E004 and CR E002. From Hatch, take Highway 26 southwest toward Deming. Both maintained gravel roads come in on the south side of the highway: CR E004 is approximately 2 miles southwest of Hatch, and CR E002 is about 8 miles southwest of Hatch.

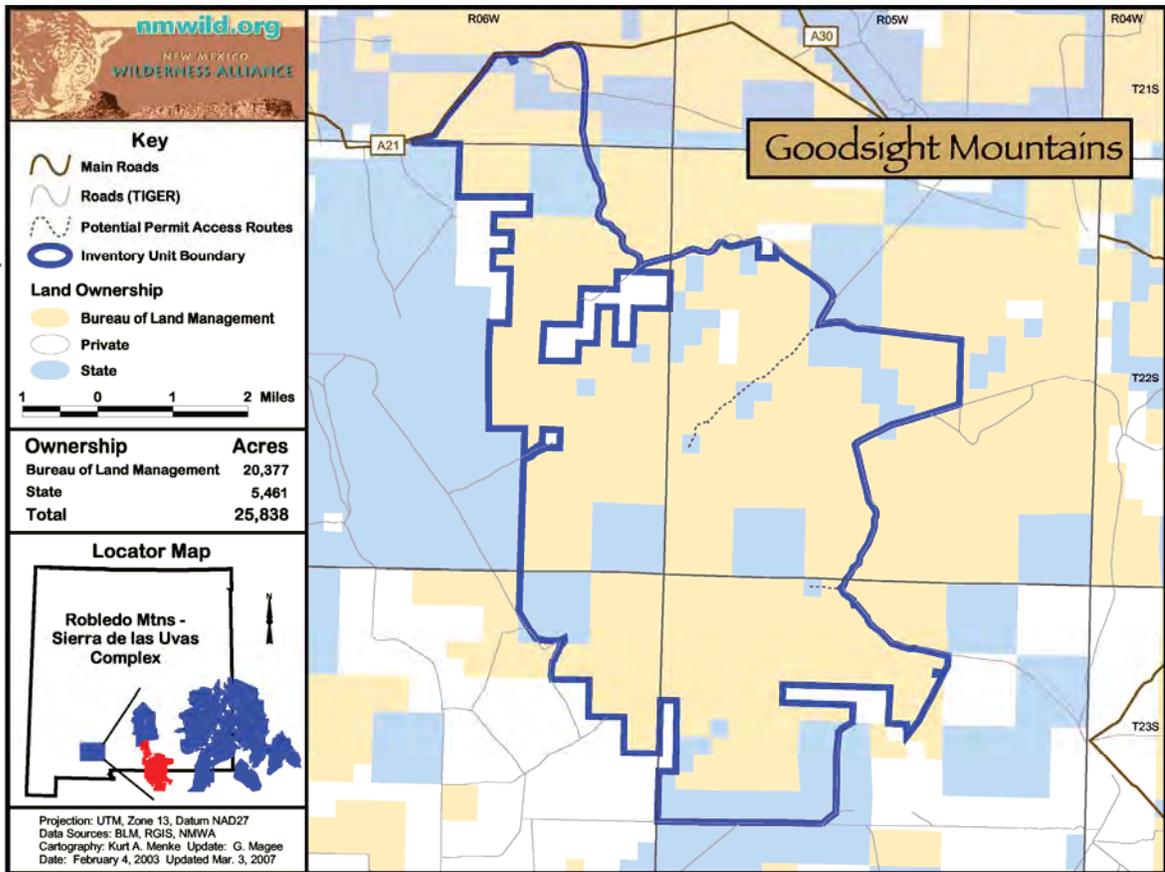
To get to the Good sight Peak and Good sight Mountains units, drive northeast from Deming on Highway 26 for 17 miles (or 10½ miles southwest from Nutt) and look for Barksdale Road, CR A021, on the east side of the highway. Drive east on CR A021 for about 8 miles where Good sight Peak is on the north side of the road, and Good sight Mountains are on the south. The Good sight Peak unit also lies a short distance south of Highway 26 at a point 29 miles northeast of Deming and 18 miles southwest of Hatch.

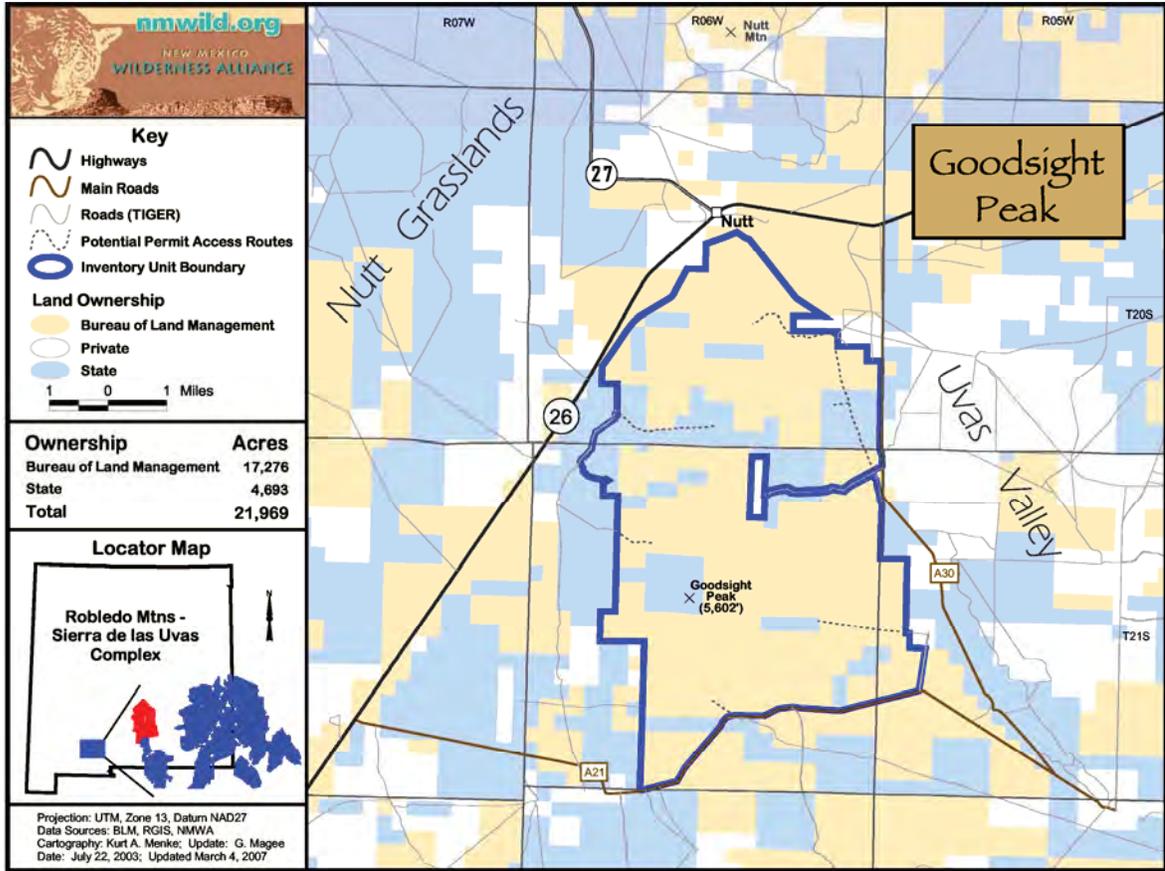
The USGS 7.5 minute maps that cover this complex are: Hatch, Rincon, Hockett, Souse Springs, Sierra Alta, Selden Canyon, Good sight Peak NE, Magdalena Peak, Rough and Ready Hills, Leasburg, Doña Ana, Lazy E Ranch, Magdalena Gap, Sleeping Lady Hills, Picacho Mountain, and Las Cruces.











Sacramento Mountains Complex



Key

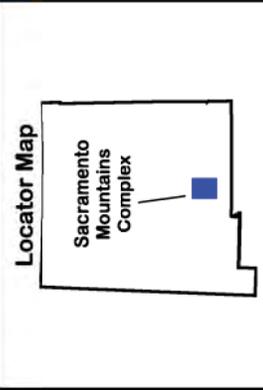
- Highways
- Roads (TIGER)
- Inventory Unit Boundary
- Adjacent Forest Service Inventory Unit Boundary

Land Ownership

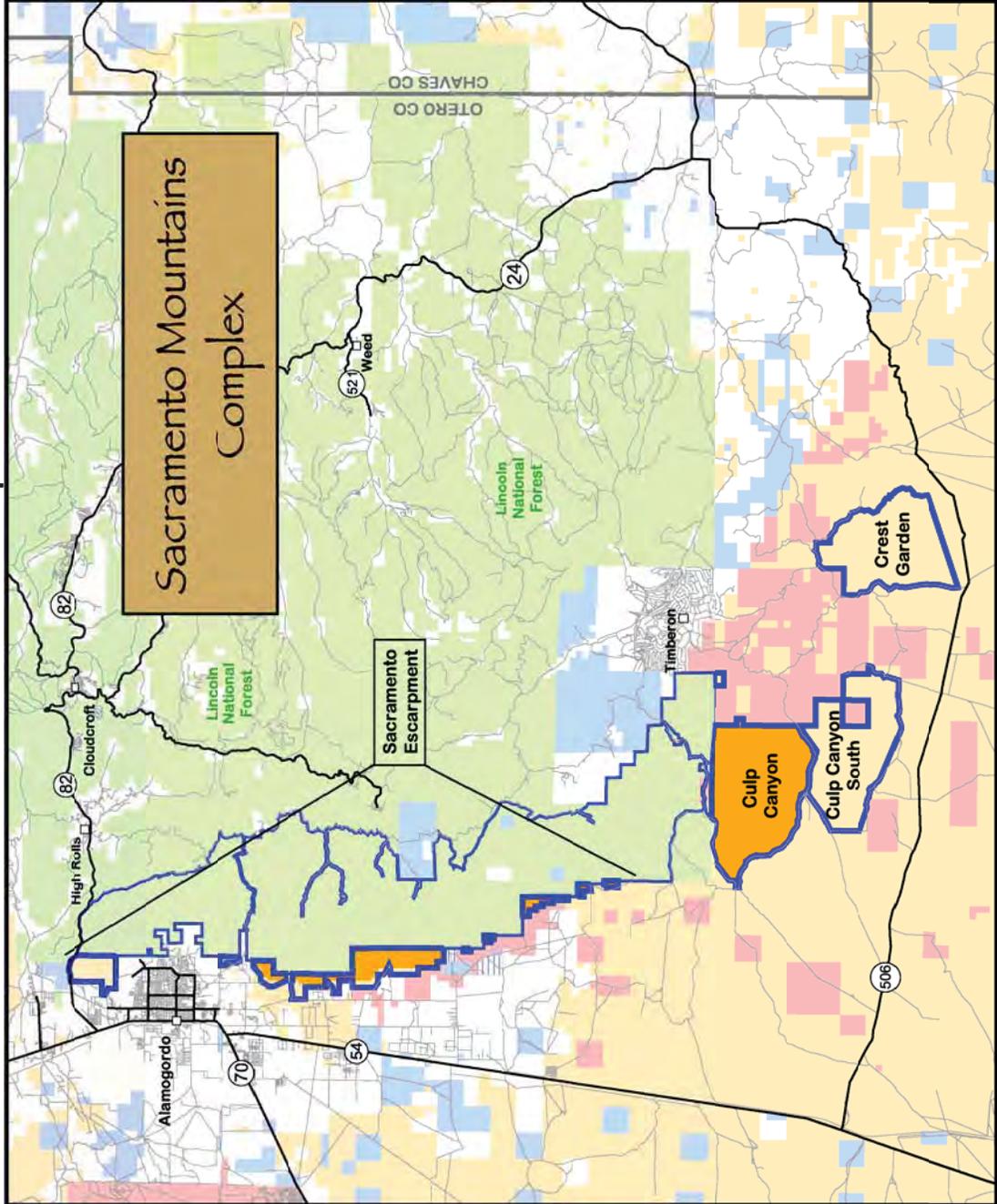
- Bureau of Land Management
- BLM Wilderness Study Area
- Forest Service
- Department of Defense
- Private
- State

Scale: 0, 3, 6 Miles

Owncership	Acres
Bureau of Land Management (BLM WSA- 14,516)	34,928
TOTAL	34,928



Projection: UTM, Datum NAD27, Zone 13
 Data Sources: BLM, RGIS, US Census, NMWA
 Cartography: Kurt A. Menke, Update G. Magee
 Date: May 5, 2003; Updated Apr. 3, 2007



Sacramento Mountains Complex



Area Description

The Sacramento Mountains are located in Otero County just to the east and southeast of Alamogordo. The highest elevations in the area are managed by the US Forest Service. The southern part of the complex is part of McGregor Range, a military reservation that is jointly managed by BLM and the US Army. The Sacramento Escarpment, which rises over 4,000 feet above the Tularosa Valley to an elevation of 8,100 feet, is one of the more spectacular topographic features in the state. Composed of deep, rugged canyons and high, remote spires, cliffs, and ridges made of sedimentary rock, primarily limestone, it is widely known for its scenic beauty. Perennial springs and streams are found in many of the canyons in the Escarpment. To the south, on McGregor Range, the mountains encompass lower elevation terrain, with gently rolling hills to

steep, rounded mountains. Broad canyons and arroyos that flow only after heavy rainfall drain this area into the closed drainage basin of the Tularosa Valley.



Ecological Values

The Sacramento Mountains are truly a 'sky island' and biotic diversity is high due to the differences in elevation, slope, temperature, and precipitation. The presence of permanent water in some of the canyons adds to the area's ecological value.

Chihuahuan desert shrubs and grasslands dominate the lower elevations, while mountain shrubs, pinyon - juniper woodland, and ponderosa pine can be found at higher elevations. There are at least 18 rare plant species located in or near the Sacramento Escarpment unit according to the New Mexico State Heritage Program (1984). Some of these include Sacramento prickly poppy, Alamo penstemon, button cactus, and Villard's pincushion cactus. Larger



drainages and canyons contain relatively dense arroyo-riparian vegetation with Fremont cottonwood, Arizona ash, netleaf hackberry, and desert willow.

The southern extension of the Sacramentos provides a critical wildlife corridor, or biotic linkage, between the Sacramento Mountains to the north and the Guadalupe Mountains and greater Otero Mesa area to the south and southeast. These mountains are home to black bear, elk, mountain lion, bobcat, turkey, and many other animal species. There is a particularly large and healthy deer herd here and cliffs provide suitable habitat for desert bighorn sheep and nesting raptors such as the peregrine falcon. The gray vireo may also occur in the area. Pronghorn are present in the grasslands in the southern portion of the area, and Black-tailed prairie dogs are likely present. These grasslands also provide habitat for Aplomado falcons.





Scenic and Recreational Qualities

Scenic quality in the Sacramento Mountains is excellent. The cliffs and spires along the Escarpment itself are spectacular, while the vegetation, perennial water, color, and desert scenery only add to the area's uniqueness. The BLM Sacramento Escarpment ACEC was designated in part to protect the scenic values of the Sacramento Escarpment. In the southern part of the area, the rolling hills and mountains are more subtle. Yet there is a unique appeal to their curved and rounded shapes, their blonde, grass-covered color, and truly rugged and wild character. From atop ridges and peaks in the area, one gains awe-inspiring views in all directions. This gives not only a sense of immense space, but also a visual connection between the Sacramento Mountains and the greater Otero Mesa landscape to the south.

Recreational opportunities include hunting, photography,

hiking, rock climbing, backpacking, horseback riding, botanizing, rock hounding, and archaeological sightseeing. As the nearby city of Alamogordo continues to expand at a rapid pace, the Sacramento Mountains complex provides urban dwellers with primitive recreational opportunities that, in many places in the southwest, no longer exist due to urbanization into once wild areas. Although only a short drive from Alamogordo, the primeval nature of the Sacramento Mountains complex provides visitors with a wilderness experience and primitive recreational opportunities of the highest order.



Special Management Areas

Two Wilderness Study Areas (WSAs) are located in this complex: Culp Canyon and Sacramento Escarpment. They are both contiguous with USFS RARE II lands, resulting in larger, more diverse roadless units. The Sacramento Escarpment has also been designated an Area of Critical Environmental Concern (ACEC) for their scenic quality and the presence of special-status species. McGregor Range is unique in that it is jointly managed by the BLM and the US Army.



Cultural Values

There are cultural remains in the Culp Canyon unit that span at least 12,000 years. The 22 known sites, which are primarily lithic scatters, hearths, and middens, include structures and artifacts from the Paleo-Indian, Archaic, Jornada Mogollon, Apache, and Anglo-American periods. Ten of the sites may be eligible

for National Register status. Other archeological sites are known to exist in the complex, but have not been cataloged.



Access Information

The lower elevations of the Sacramento Escarpment unit can be reached from Highway 54 south of Alamogordo. From the junction of Highway 70, drive south on 54 for about 5 miles to the intersection of Taylor Road, CR A019, on the east. Turn left on to CR A019 and head southeast for about 2 miles to where Taylor Road makes a sharp turn to the south. Several un-maintained dirt roads head east from this main north-south road and reach the western boundary of the unit. Oliver Lee State Park is another great way to access the western boundary of the Sacramento Escarpment unit. Head south on Highway 54 from the junction of Highway 70 for about 9 miles, then turn left on Dog Canyon Road, CR A016, and drive 4 miles east to the state park.

The eastern boundary of the Sacramento Escarpment unit is accessed from the West Side Road, CR A061. This road intersects Highway 82 at High Rolls, which is about 9 miles east of Highway 54/70. CR A061 turns into Forest Road #90 as it heads south from Highway 82 and crosses mostly higher elevation Forest Service land.

The southern part of the Sacramento Mountains complex is accessed off of State Route 506. NOTE: The Culp Canyon, Culp Canyon South, and Crest Garden units are located on McGregor Range. To reach these units, visitors are required to obtain a "Recreational Pass" from Fort Bliss. Areas to the south of 506 are off-limits to visitors, while the entire Range, including State Route 506, is subject to closure from time to time for military operations. Passes are usually available at the Las Cruces BLM office (505-525-4300). Call ahead for

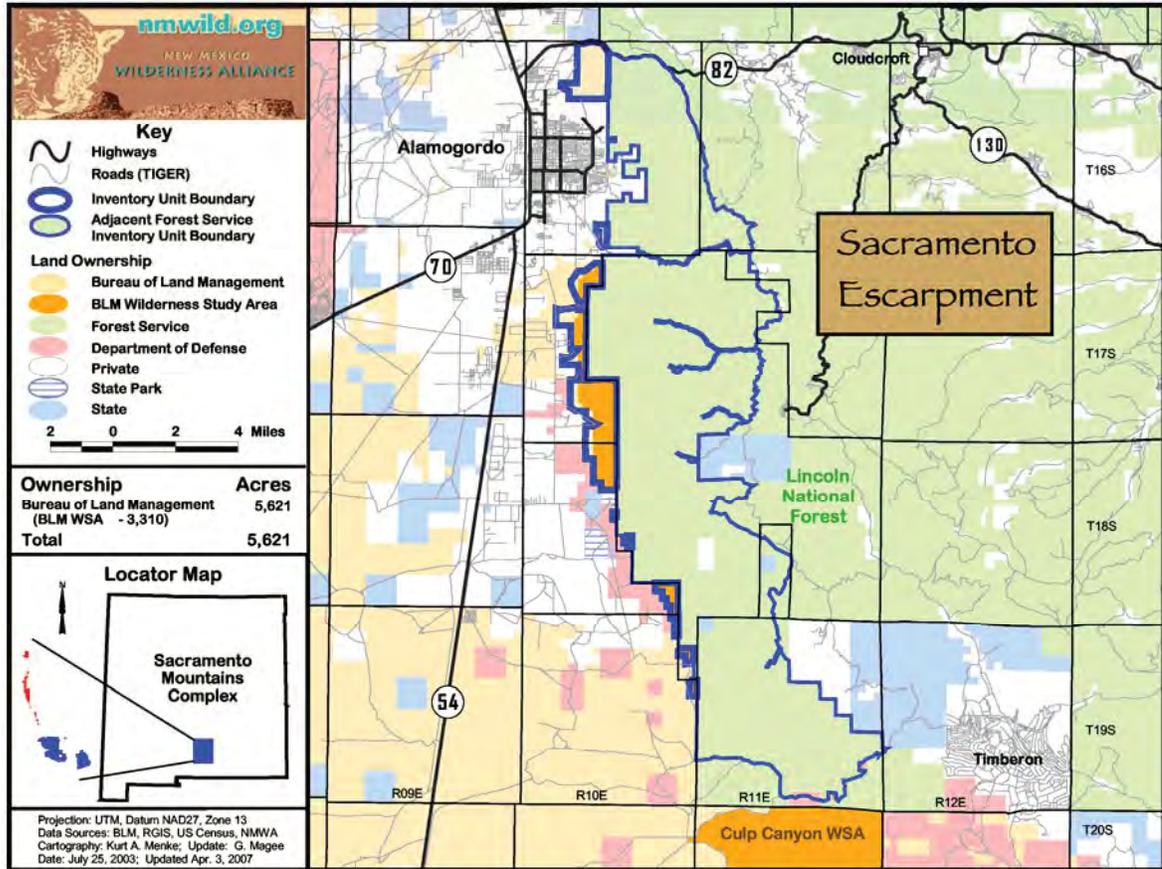
information before attempting to access McGregor Range.

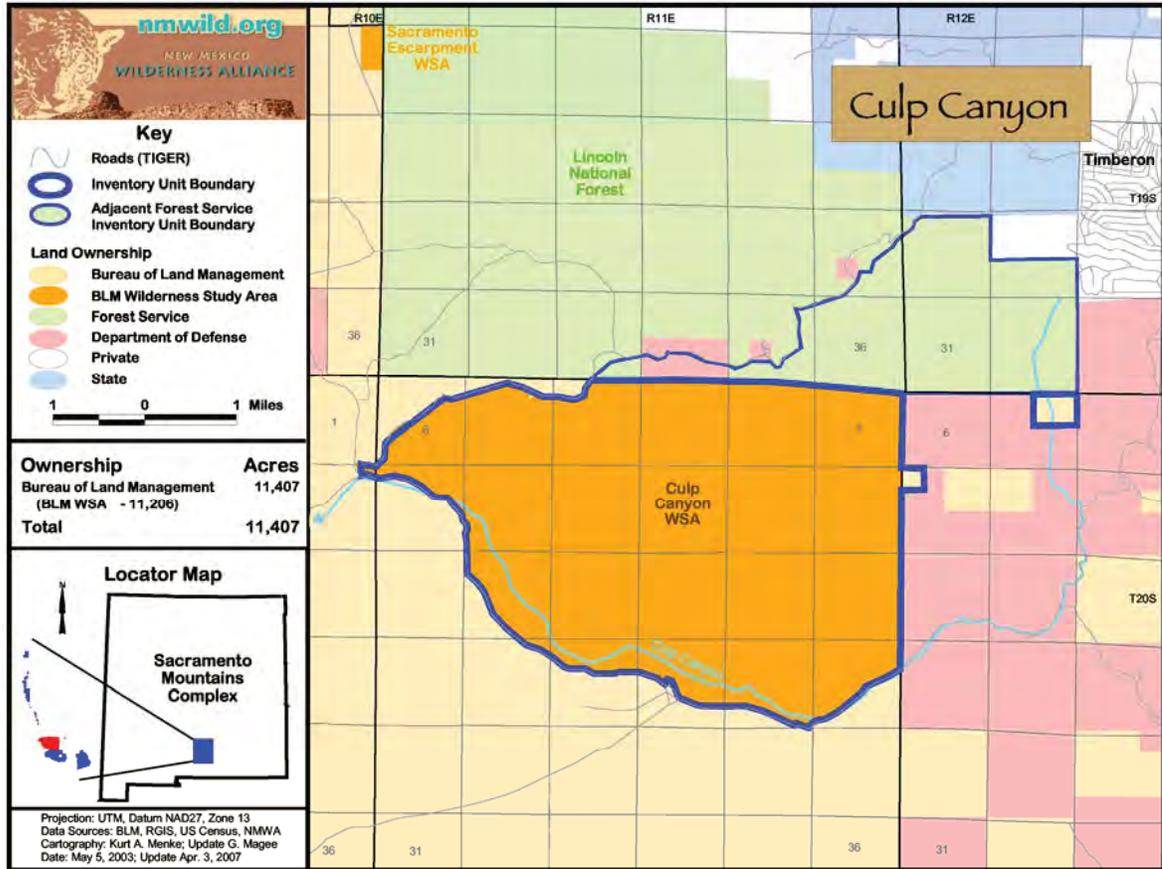
Turn east off of Highway 54 at the intersection of State Route 506, which is about 25 miles south of Alamogordo and 60 miles north of El Paso. Drive on 506 east for a little over 6 miles to the intersection of a dirt road on the left. This road heads to the northeast and reaches another road junction in about 7½ miles. The Culp Canyon South unit is to the south and east of this junction; the Culp Canyon unit is to the north.

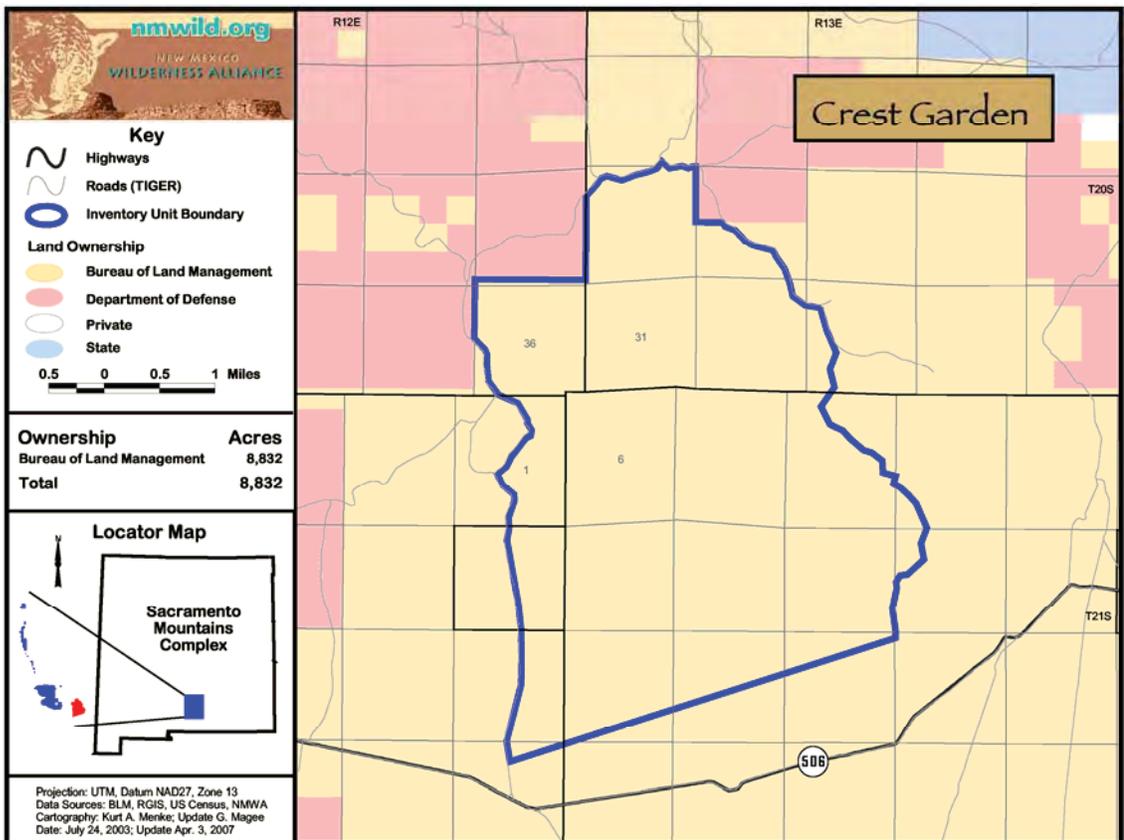
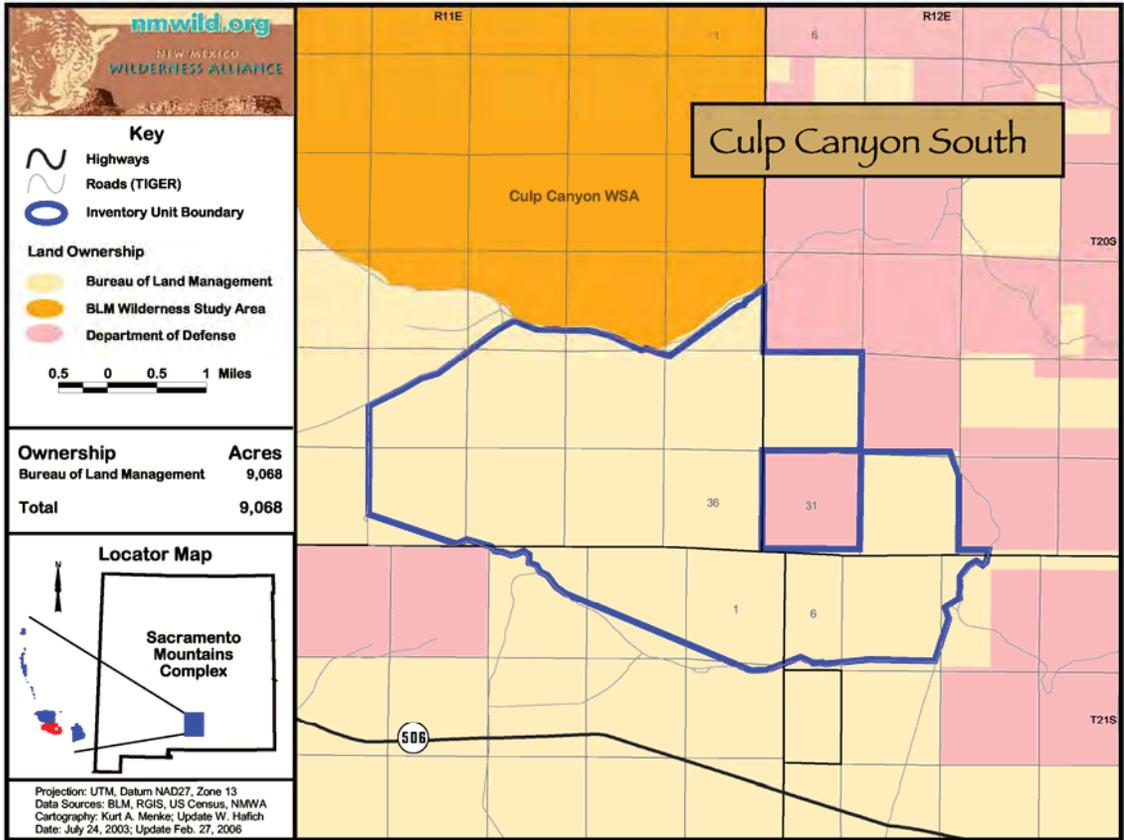
Approximately 21½ miles east of Highway 54, another dirt road intersects State Route 506 from the north. This road forms the western boundary of the Crest Garden unit.

The USGS 7.5 minute maps that cover this complex are: Alamogordo North, High Rolls, Alamogordo South, Sacramento Peak, Deadman Canyon, Bus Scuffle Canyon, Rogers Ruins, Culp Canyon, El Paso Canyon, Surveyors Canyon, El Paso Draw, and Sixteen Canyon.









Thank you for your comment, Mignon Marks.

The comment tracking number that has been assigned to your comment is SolarM60250.

Comment Date: September 14, 2009 18:19:45PM

Solar Energy Development PEIS

Comment ID: SolarM60250

First Name: Mignon

Middle Initial:

Last Name: Marks

Organization: California Energy Commission

Address: and California Department of Fish and Game

Address 2:

Address 3:

City:

State: CA

Zip: 95814

Country: USA

Email:

Privacy Preference: Don't withhold name or address from public record

Attachment: FINAL CEC DFG Comments on BLM Solar PEIS September 2009.pdf

Comment Submitted:

The California Energy Commission and California Department of Fish and Game are providing comments on the solar energy study areas proposed in California. Please see our comments, including maps.

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street
Sacramento, California 95814

Main website: www.energy.ca.gov

**DEPARTMENT OF FISH AND GAME**

1416 Ninth Street
Sacramento, California 95814

Main website: www.dfg.ca.gov



September 14, 2009

Ms. Linda Resseguie, Project Manager, BLM
Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue – EVS/900
Argonne, Illinois 60439

Dear Ms. Resseguie:

The California Energy Commission (Energy Commission) and the California Department of Fish and Game (Fish and Game) appreciate this opportunity to comment on the solar energy study areas announced in the June 30, 2009 *Federal Register* Notice of Availability. In the solar programmatic environmental impact statement (Solar PEIS), these study areas will be analyzed in depth for significant environmental impacts and economic viability. The results of this analysis will then be used to designate solar energy zones in which large-scale solar energy generating facilities would receive priority for accelerated siting and permit processing.

California has also initiated planning efforts to accelerate the permitting and development of new renewable energy projects, while protecting sensitive wildlife habitat. We offer these comments to improve the synergies between state and federal efforts.

In November 2008, Governor Schwarzenegger issued a renewable energy executive order¹ directing the California Natural Resources Agency to lead state-agency efforts to facilitate environmental permitting of Renewable Portfolio Standard-eligible energy projects located in the Mojave and Colorado Desert regions of California. The Energy Commission and Fish and Game have been working closely with the Bureau of Land Management (BLM) California Office and U.S. Fish and Wildlife Service (USFWS) Region 8 to implement this executive order.

¹ Executive Order S-14-08, See <http://gov.ca.gov/executive-order/11072/>.

One implementation activity will be to prepare a Desert Renewable Energy Conservation Plan (DRECP), which will identify areas where renewable energy development should be directed and where habitat conservation would occur to offset the environmental impacts from development of utility-scale renewable energy generating facilities. A program-level Environmental Impact Report will be prepared to comply with the California Environmental Quality Act (CEQA) and which will accompany the DRECP as it undergoes final public review and moves toward formal adoption. Similar to Secretary of Interior Salazar's Order² to identify and prioritize acceptable sites for renewable energy development on BLM-managed lands, the Governor's Executive Order is focused on renewable energy development in California's desert regions.

All four solar energy study areas were proposed within the geographic boundaries of the DRECP. As shown in the list below and enclosed maps, the proposed study areas in California have been co-located with selected competitive renewable energy zones (CREZs) from the Renewable Energy Transmission Initiative (RETI):³

- Imperial East Solar Energy Study Area: CREZ 30, Imperial South
- Iron Mountain Solar Energy Study Area: CREZ 37, Iron Mountain
- Pisgah Solar Energy Study Area: CREZ 43, Pisgah and CREZ 45, Barstow
- Riverside East Solar Energy Study Area: CREZ 36, Riverside East

We appreciate BLM's inclusion of these CREZs in the solar energy study areas and the linkage this creates between our state and federal efforts. Differences between a CREZ area and the solar energy study area are due, in part, to land ownership/management responsibility; only BLM-managed lands were included in the proposed solar energy study areas. As a result, blocks of land within a solar energy study area have been excluded because they are privately owned or managed by the California State Lands Commission. We believe this fact will reduce the effectiveness of the Solar PEIS in facilitating renewable energy development in California since projects located on adjoining private land may not be able to tier-off the document to assist with CEQA compliance. We also believe that limiting the scope of the review solely to federal land raises issues regarding the usefulness of the cumulative impacts analysis. In addition, the CREZ conceptual transmission line routes, which are necessary to move power from generation facilities to the load centers, may have been excluded.

² Order 3285, See http://www.doi.gov/news/09_News_Releases/SOenergy.pdf.

³ <http://www.energy.ca.gov/2009publications/RETI-1000-2009-001/RETI-1000-2009-001-F-REV.PDF>

Comments

Pursuant to the Governor's Executive Order, California currently has a goal of obtaining 33 percent of its electricity from renewable generation by 2020. To meet this ambitious RPS goal will require extensive development of solar, wind, geothermal and other renewable resources. Limiting the Solar PEIS in California to four study areas, and excluding private land, results in a project scope that is overly narrow and which will not facilitate the most economic and environmentally preferred development outcome. For example, none of the solar study areas are located in the western Mojave Desert which is more developed than other California desert areas, is closer to existing transmission infrastructure and load centers, and has more previously disturbed land that can be developed without the magnitude of environmental impacts that can occur when undisturbed land is developed.

The Renewable Energy Action Team (REAT) agencies will soon be working with a comprehensive group of stakeholders to create a DRECP that will identify areas for renewable development and areas to conserve, and will ultimately result in a California Endangered Species Act (CESA) permit for renewable energy projects within the DRECP planning area. The DRECP will also likely provide the basis for one or more large-scale Habitat Conservation Plans (HCPs) pursuant to Section 10 of the Federal Endangered Species Act (FESA). We believe that expanding the number of solar study areas in the Solar PEIS will serve to better coordinate the work of the Solar PEIS with the DRECP and lead to improved development and conservation plans for the Mojave and Colorado Deserts in California. We request that the California solar energy study areas be expanded to include the following as study areas, with the following caveats. First, we recognize that further study may determine that some of the areas we are proposing for review may not be appropriate for development for a variety of reasons, e.g., potential impact to biological resources – the suitability of these areas will be further evaluated through the DRECP planning process. Second, in recommending these areas for further study we have not had the benefit of input from the broad range of stakeholders who will be participating in the DRECP's development. Based upon this additional analysis and input, we may reach a conclusion that some of the areas we are asking to be studied should be removed from further consideration, and we may also determine that areas not identified would be good candidates for development.

Regardless, we believe it is important to perform a more robust analysis in the Solar PEIS and as a consequence, recommend the following be added to the current solar study areas.

The individual areas that we are requesting be examined in the Solar PEIS possess some or all of the following attributes, which indicate they could be suitable for

development: 1) have been previously identified in the RETI process as possessing significant renewable resource development potential; 2) have proximity to existing transmission line infrastructure; 3) have proximity to load centers; and 4) are located in areas that have been more heavily impacted by development and possess greater amounts of previously disturbed land.

These areas are numbered and shown on the enclosed maps. The boundaries shown are approximate but correspond closely to the general area the Energy Commission and Fish and Game believe warrants further joint study by BLM and the State.

1. Pisgah Expansion -- We recommend that the BLM extend the boundary of the Pisgah solar study area to the west and to the north. This expanded area would encompass private land immediately to the west and adjacent to the Pisgah CREZ; some of this land is highly disturbed due to former agricultural activities. The area is crossed by Interstate 15 and several high voltage transmission lines. The area north of Interstate 15 includes a mixture of BLM and private land with minimal slope that could accommodate a large amount of generating capacity and is adjacent to the Barstow CREZ.
2. Searles Valley -- We recommend that BLM add the area south of Searles Lake and State Highway 178 within the Searles Valley to the solar energy study areas. This area would be located to the north, west, and east of the Trona Pinnacles National Natural Landmark Area of Critical Environmental Concern (ACEC) so an appropriate buffer area would have to be established. The Searles Valley is one of the most highly impacted and industrialized areas of the Mojave Desert. There is a power plant in the community of Trona with an existing transmission line that runs to the west. The area is bounded on three sides by the China Lake Naval Air Weapons Station. The area recommended for further study is almost entirely managed by BLM. It is also located close to the Inyokern CREZ and a proposed solar thermal project, solar photovoltaic, and wind lease applications on BLM land, and RETI solar proxy projects.

3. Harper Lake Area Expansion -- The area shown on the map significantly expands the area around Harper Dry Lake but would exclude any ACECs. It is part of the area covered by the Kramer CREZ. We recognize there may be issues regarding significant impacts to Mojave ground squirrel, including connectivity issues between core population areas. Consequently, after further study, parts of the recommended study area could be determined to be inappropriate for development. However, given the current and proposed solar development adjacent to Harper Lake and the proximity of existing transmission lines, this area warrants further study. BLM is the majority land owner in the area and the region is served by two major highways. There is some previously disturbed land and the slope aspect of much of the land appears suitable for solar development.
4. Imperial South – For this proposed BLM solar energy study area, we recommend expanding the area to be studied to the northwest which would effectively double its size. BLM manages more than 90 percent of the land in this northwest expansion area. This area is being recommended, because it has been identified as having low biological resource potential, and the area has excellent access to existing transmission line infrastructure.
5. Eastern Shore of the Salton Sea -- This area is a mixture of BLM, private, and State-managed land with BLM and private land predominating. It borders the southeastern shore of the Salton Sea and extends south toward the Imperial Sand Dunes, which is a protected area. It is recommended for study, because it has been identified as having low biological resource value. This is also an area that has the potential for geothermal resource development. If it can be determined that solar development would not inhibit geothermal development in this area, this area merits review in the Solar PEIS.
6. Southwestern Shore of the Salton Sea -- This is part of the Imperial North CREZ. State Highway 86 bisects the area. The land is predominantly privately owned with several BLM parcels, and it appears to be highly disturbed. There is good transmission access, and as with the Eastern Shore of the Salton Sea, if this area can be developed without inhibiting geothermal development it appears to warrant further review.

7. Western Mojave (areas not yet mapped) -- The State is evaluating large areas of the Western Mojave for its suitability for renewable energy development. The proposed areas are not shown on the enclosed maps. The areas under consideration overlap several CREZs including the Fairmont, Tehachapi, Kramer, and Victorville CREZs. Obviously, there are areas within the Western Mojave that should be excluded from development due to factors such as zoning incompatibility and significant impacts to biological resources. However, this area possesses several distinct advantages for potential solar projects such as high solar insolation, proximity to load centers and transmission infrastructure, large tracts of previously disturbed land, and greater general development. Much of this area is also privately owned, which results in BLM being reluctant to include it for study, but which also means less public land is used for development if projects are located on private land. If private land ownership is problematic for BLM regarding including this large region as a solar study area, then BLM should consider including a smaller portion of the region, specifically the area where BLM ownership is significant, specifically the area north and west of Kramer Junction, bounded on the south by State Highway 58 and on the east by US Highway 395. If it is found that this area does not support high value habitat for the State Threatened Mojave ground squirrel, or that it is not critical for maintaining connectivity between Mojave ground squirrel core population areas, it would be an area where development could take advantage of proximity to existing transmission line infrastructure. The State proposes to work jointly with the BLM to designate additional solar study areas within the Western Mojave.

General comments

- Solar energy projects which straddle both BLM-managed and private/state-managed land have been proposed by several developers. By excluding non-BLM-managed lands, BLM will not be able to accelerate permitting of these projects, because state and local agencies would not be able to tier-off of the Solar PEIS for their environmental analyses, nor would BLM be able to use the Solar PEIS for projects on which BLM would be providing a Section 7 Federal Endangered Species Act nexus for the entirety of a project with mixed land ownership, a common scenario in the California desert. Instead, local lead agencies will need to prepare their own CEQA analysis and environmental document, and BLM would have to prepare a focused NEPA document that could not tier-off of the Solar PEIS. Similarly, state and local agencies would need to prepare their own environmental studies of solar energy projects that are inside a solar energy study area, but

located on private or State Lands Commission-managed land. If the California portion of the Solar PEIS was developed as a CEQA-equivalent document, all solar energy projects within the final, designated solar energy zones could benefit from accelerated approvals and permit processing. In areas where the Energy Commission and Fish and Game have proposed incorporating significant amounts of private lands into the proposed BLM solar study areas, the State will participate in the joint environmental analyses of these areas through the DRECP planning process, as a cooperating agency on the Solar PEIS effort, and as lead for the purposes of achieving CEQA equivalence.

- Riverside East Study Area – The Riverside East Study Area includes McCoy Wash in Eastern Riverside County. Although not identified in the BLM Northern and Eastern Colorado Desert Plan as an area of high biological diversity, this area contains an exceptional example of Desert Dry Wash Woodland. Desert Dry Wash Woodland provides habitat for numerous resident and migratory sensitive bird species, such as southwestern willow flycatcher, summer tanager, LeConte's thrasher, and gila woodpecker. In addition, it provides habitat for desert mule deer, and mountain lions. We are not recommending that this area be removed from the study area but that the analysis and any ranking of areas that occurs in the Solar PEIS should recognize the importance of focusing development in preferred areas that have already been impacted and avoiding, whenever possible, undisturbed areas and areas of high biological value.
- Iron Mountain -- The Energy Commission staff provided comments in November 2008 on the proposed RETI CREZs, including Iron Mountain. In those comments the staff expressed concern over the development of this and other CREZs based upon their remote location in the eastern Mojave. In these comments staff indicated a preference for development to occur in the Western Mojave, to the extent feasible, where there has been more development and which is located closer to load centers, and often in closer proximity to transmission line infrastructure. We agree that it is desirable to avoid development in pristine areas. While we do not recommend that Iron Mountain be eliminated as a solar energy study area, the analysis and any ranking of areas that occurs in the Solar PEIS should recognize the importance of focusing development in preferred areas that have already been impacted and avoiding, whenever possible, undisturbed and remote areas.

Ms. Linda Resseguie, Project Manager, BLM

September 14, 2009

Page 8

We would like to thank you for the opportunity to provide comments on the Solar PEIS and look forward to working together collaboratively as your work continues. The Energy Commission and Fish and Game have appreciated the close and productive working relationship that has developed between our agencies, the BLM (California Office), and the USFWS (Region 8) on the solar power plant applications and the work of the REAT on the DRECP. We look forward to working with BLM on all aspects of renewable energy development in California in the future. Questions on these comments can be directed to Terrence O'Brien, Deputy Director of Siting, Transmission and Environmental Protection at the Energy Commission at (916) 654-3933 or tobrien@energy.state.ca.us or Kevin Hunting, Deputy Director at the California Department of Fish and Game at (916) 653-1070 or khunting@dfg.ca.gov.

Sincerely,



KAREN DOUGLAS
Chairman,
California Energy Commission



For
KEVIN W. HUNTING
Deputy Director
California Department of Fish and Game

cc: Jim Abbott, CA BLM
Darrin Thome, USFWS

Enclosures

Legend for Maps Recommending Additional Solar Energy Study Areas in Southern California

Renewable Energy Transmission Initiative (RETI)

-  Draft Conceptual RETI Wind Projects
-  Draft Conceptual RETI Solar Projects
-  BLM Wind Lease Application
-  BLM Solar Lease Application
-  BLM Solar Energy Study Areas
-  Draft Conceptual RETI Transmission Trunk Lines to connect a Competitive Renewable Energy Zone to the Transmission Grid
-  Draft Conceptual RETI Substation to collect energy from projects in a Competitive Renewable Energy Zone

Renewable Project Data Sources

Bureau of Land Management solar and wind right of way applications at http://www.blm.gov/pgdata/content/ca/en/fo/cdd/alternative_energy/SolarEnergy.html

Renewable Energy Transmission Initiative Phase 1b Final Report at <http://http://www.energy.ca.gov/reti/documents/index.html>

Prohibited, Restricted & Limited Lands

-  Category I Lands - Energy Development Prohibited or Restricted by Policy including National Park Service (NPS), and Bureau of Land Management and US Forest Service Wilderness Areas.

Other Features

-  Community
-  Road
-  Historic Route 66
-  County Boundary
-  Water Body
-  Dry Lake Bed
-  The Wildlands Conservancy (Catellus)
-  Area of Critical Environmental Concern
-  Draft Conceptual RETI Competitive Renewable Energy Zone Boundary
-  CEC/DFG Proposed Study Area Expansion

Substations

-  Imperial Irrigation District
-  Los Angeles Dept. of Water & Power (LADWP)
-  Southern California Edison (SCE)
-  Western Area Power Administration
-  Metropolitan Water District
-  All Others

Land Ownership

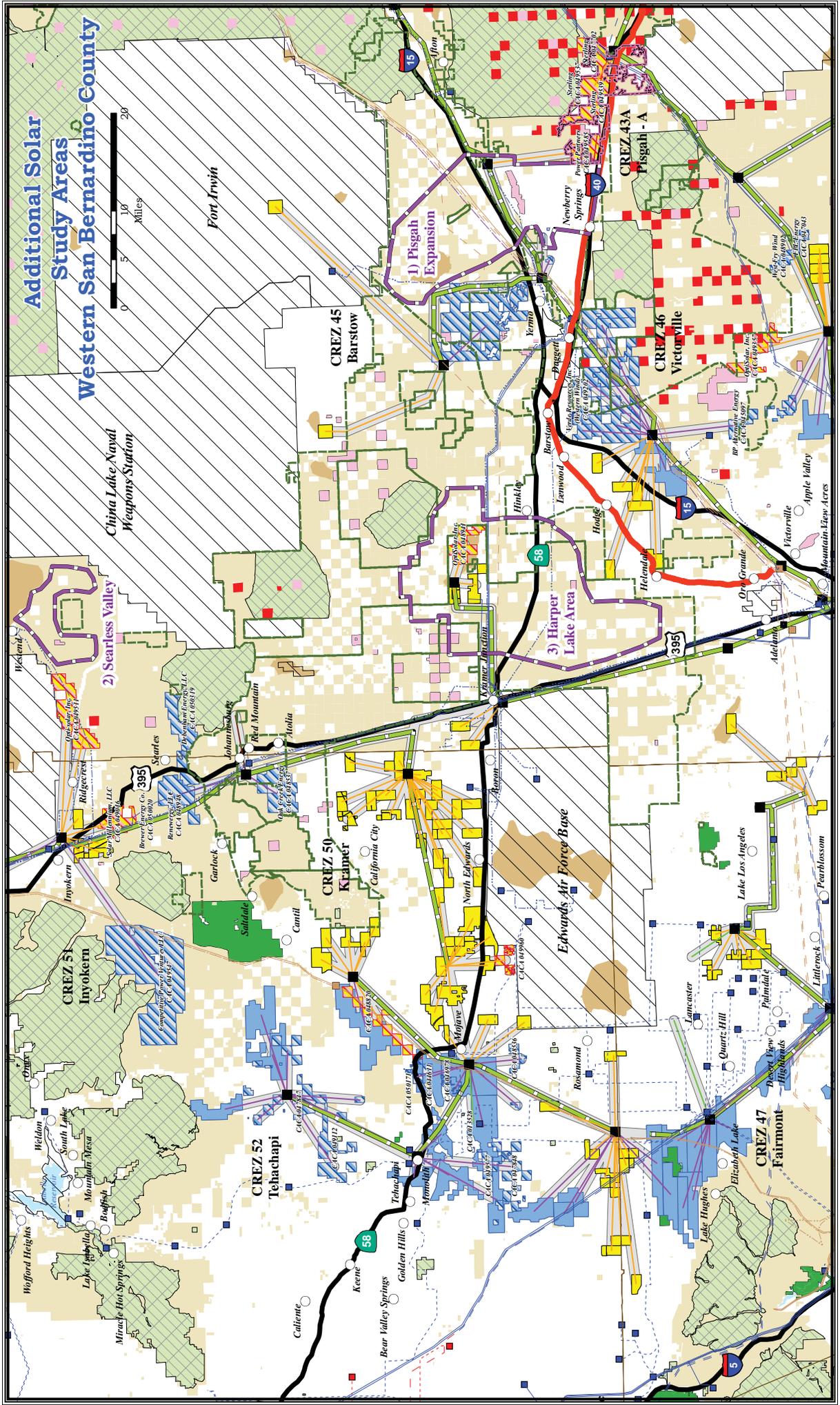
-  State Owned Lands
-  Bureau of Indian Affairs (BIA)
-  Bureau of Land Management (BLM) and US Forest Service (USFS)
-  Bureau of Reclamation (BOR)
-  Department of Defense (DOD)
-  US Fish and Wildlife Service
-  CA State Parks
-  Private Land

Transmission Lines

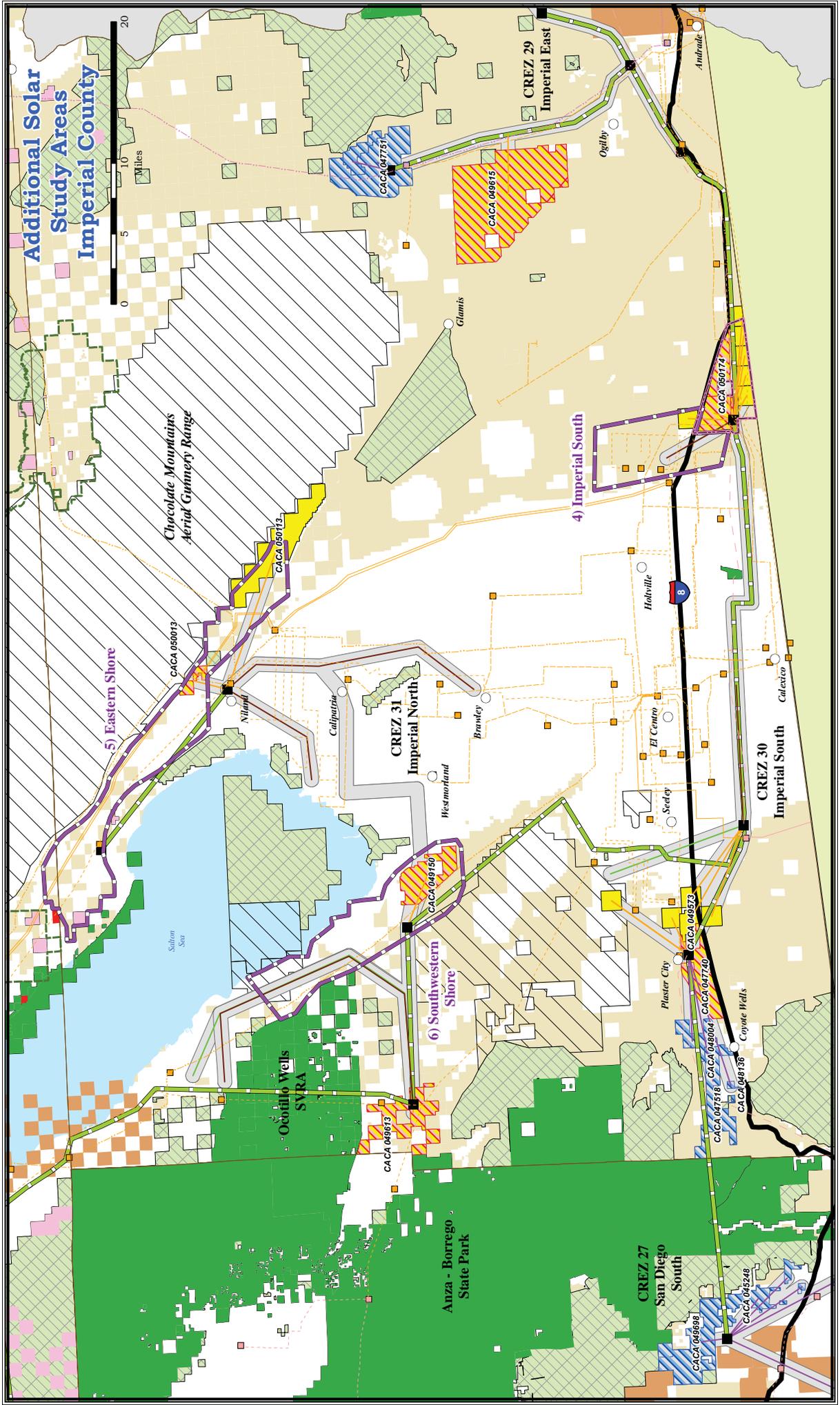
(Colorized according to Utility Ownership)

-  12 kV - 59 kV
-  60 kV - 92 kV
-  110 kV - 161 kV
-  220 kV - 287 kV
-  345 kV - 500 kV
-  345 kV - 500 kV DC

Additional Solar Study Areas Western San Bernardino County



Additional Solar Study Areas Imperial County



5) Eastern Shore

6) Southwestern Shore

4) Imperial South

Salton Sea

Ocotillo Wells SVRA

Anza - Borrego State Park

CREZ 27 San Diego South

CREZ 30 Imperial South

CREZ 31 Imperial North

CREZ 29 Imperial East

Chocolate Mountains Aerial Gunnery Range



Thank you for your comment, Kurt Russo.

The comment tracking number that has been assigned to your comment is SolarM60251.

Comment Date: September 14, 2009 18:33:57PM
Solar Energy Development PEIS
Comment ID: SolarM60251

First Name: Kurt
Middle Initial:
Last Name: Russo
Organization: Native American Land Conservancy
Address: P.O. Box 3074
Address 2:
Address 3:
City: Indio
State: CA
Zip: 92202
Country: USA
Email: frkvalues@aol.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Response_EIS (Autosaved).doc

Comment Submitted:

September 11, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue--EVS/900
Argonne, IL 60439

Re: Solar Energy Study Area

To Whom It May Concern:

I am writing on behalf of the Native American Land Conservancy (NALC) regarding the designation of solar energy zones in the Mojave and Sonoran Deserts.

The NALC is an intertribal organization, with project affiliations with tribal communities in San Diego, Riverside, San Bernardino, and Imperial counties, as well as with tribal communities in Arizona, Nevada, and Utah. The NALC is a 501c(3) organization established in 1998 to promote the protective management of Native American cultural sites, areas, and resources throughout the traditional aboriginal territories of our member-tribes. The NALC also works to promote understanding and cooperation between our member-tribes and state, federal, and private sector groups, organizations, and agencies. We would like to take this opportunity to offer our comments regarding the potential impact solar development will have on culturally-significant landscapes in the region of interest.

We would first like to commend you both for the diligence and detail represented in the information provided about the solar energy zones. We would also like to make clear our support for the development of appropriate alternative energy resources. At the same time, we have grave concerns about the impacts the development of solar energy will have on culturally significant landscapes. Our concerns, discussed below, include: (1) the nature of the consultation process, (2) the impact of solar development on cultural landscapes, and (3) recommended action steps

The Consultation Process

If an area is destroyed, marred, or polluted, my people say, the spirits will leave the area. If pollution continues not only animals, birds, and plant life will disappear, but the spirits will also leave. This is one of the greatest concerns of Indian people.ⁱ

Our first concern with the consultation process is the manner in which tribal communities with a concern for impacts in their aboriginal territories were brought into the process. Native American governments and organizations have long made the point that it is vitally important to engage them in the front-end of the process. In this case it would include, but not be limited to, engaging the tribes in the initial analysis that sets forth the guidelines for identifying solar energy study areas. Unlike other groups or organizations, tribal communities have a conception of the

landscape that includes a unique evaluative framework based on historically-based understandings of the value and meaning of these sites, areas, and resources. The tribes also enjoy a government-to-government relationship with the United States that underscores the importance of early and frequent engagement of the tribes in a process of this magnitude.

It is crucial that this evaluative framework and these relations be represented in the initial, conceptual stages of development, particularly where a project will have a deleterious impact on the place-based identity of Native American communities. Instead, tribal communities are faced with a situation where they must respond to and select from—and thereby legitimate—alternatives and their embedded evaluative assumptions, principles, and guidelines that marginalize cultural values placed at-risk by the proposed solar projects. Broadly speaking, the effect is to impose a specific definition of reality on the tribal community and to structure the situation so as to limit their cultural and political autonomy. While it can be debated whether engaging the tribes at this level in the initial stages of development is, in the strictest sense, required by state or federal law, failure to do so will, at the very least, compromise the ethical and intellectual integrity and legitimacy of the consultation process.

This process of marginalization leads to our second, and related, concern for the consultation process. Embedded in the consultation is a predisposition to a scientific framework of evaluation grounded in an ontology that relies on a mechanical, push-pull conception of causation. Landscapes understood against this ontic background are conceived as de-totalized, utilitarian, rationalized, and economically useful, and often are characterized in terms of desanctified surface or volume set apart from people, myth, and history; that is, something of instrumental value to be controlled and used.

This hierarchized, formal scientific discourse and its dream of *mathesis universalis* is understandable, and is the typical evaluative framework deployed by land management agencies. However, this has the effect of altogether marginalizing the indigenous conception of the landscape that is sanctified and animistic, ritualized, mythic, totalized, symbolic, and historical, that engages a multilayered, supersensible, as well as serial causation common to indigenous cultures such as the Chemehuevi Indians. The remarks of Dr. Richard Stoffle, working with the Southern Paiute people of the Grand Canyon portion of the Colorado River, are germane this issue in the solar energy study zone. Dr. Stoffle discusses the “great variety of storiscapes that crisscross the landscape of American Indian holy lands,” including the Mojave and Sonoran Deserts. Many of these storiscapes involve a “time before today’s humans existed, what some would call a mythic time.” He emphasizes that the term “mythic” implies only another time before the present time but “it certainly does not imply that either that time or the stories were fictitious.”ⁱⁱ

While objective in its own terms, the scientific mode of inquiry at best marginalizes, subordinates, or provincializes the indigenous lifeworld and, at worst, altogether excludes the indigenous concept of landscapes and the impacts development on them. Facts—whether we speaking of the physical world of nature or the mental world of belief—are socially constructed. What matters is how the various, relative are truths are understood and treated in relation to each other. Each way of knowledge is relative to how it accords to a theoretical correspondence

which, in turn, is based on presuppositions that trace to deeply-held cultural beliefs, what the Native American writer posed as the metaphysical backdrop of truth. While this may seem to be an abstruse philosophical argument, it is very real in terms of the potential impact on traditional cultural sites, areas, resources, and landscapes—and the aboriginal lifeworld—in the region of interest. More generally, the consultation process—in its structure, process, and content—ignores any of these concerns as outside the limits of the law and beyond the borders of scientific mode of inquiry. More specifically, the impact on the StoryScape of the Salt Song trail and other cultural properties in the study area, the subject of our second concern with the proposed projects.

Impact of Solar Development on Cultural Landscapes

This is what makes the Salt Song—gives it its power—because it goes from station to station to station drawing the power of the land and bringing it back.
(Larry Eddy, Chemehuevi elder and Salt Song leader)

The significance of storied-landscapes of *Tiwiinyarivipi* includes Salt Song trail sites in the solar study area, and documented in tribal oral histories and by historians and anthropologists including Robert Manners, Isabel T. Kelly, and Carobeth Laird. These landscapes and Salt Song trails are associated with the healing agency of power-giving dreams, shamanic animal-familiars, as well as songs that describe the personal and the natural and supernatural landscape in a multi-dimensional reality that Salt Song singers say enable them to fly from place to place.

The Salt Songs remain an important part of the cosmology of these indigenous cultures. Vivienne Jake, a Kaibab Paiute elder, described how the songs talk about the upper world. The Mohave Indian elder Llewellyn Barrackman said these creation songs came from Spirit Mountain and serve as a map of their sacred territory. Matthew Leivas, a Chemehuevi traditionalist and tribal elder and Board Member of the Native American Land Conservancy, stated that the Salt Songs tell about the different sacred sites on the thousand-mile journey and explain the whole history of his people and the connections they have with the elements. Mr. Leivas has also spoken about how the Salt Songs have volition and a life all their own and live in certain caves along the Salt Song trail, as well as traveling throughout Chemehuevi territory.

One of the issues that remains to be addressed is the nature, extent, and consequences of solar energy development on these Salt Song trail sites. This is not only a question of mapping the sites but, as discussed in the previous section, how the sites and the trail are signified by way of scientific versus a discursive field that legitimates, rather than marginalizing, indigenous beliefs. It is difficult to imagine how a public agency, charged with assessing the impacts of development on Salt Song trail sites would respond to the following comments of Chemehuevi elder Larry Eddy:

The Indian doctor, he has, as a spirit, he has an animal friend. And nobody sees that animal but him. He calls to that animal through his Songs. He can do this, sing and sing, and when that animal arrives, he knows that he's going to save that person. Until that animal gets there, he doesn't really put on his power. That's hard to express or understand or hard to....He'd sing and sing until the red hawk eagle got there or whatever....They called and they called and that helper wherever he was he heard that Song he could hear it for miles and he heads in direction to that doctor. When he gets there, then the doctor knows, well, I'm going to save this guy....

It was all done in his Songs. He sang his Songs and his Songs were a beckoning to his familiar, whatever it may have been or whatever it was, and [his familiar] could come out from the mountain or from the valley or wherever he was at, he would come down to this doctor singing there and play around there. He'd play around the sick person and do this and do that and that may have been the healing process he's playing around there, playing around, and every now and then he'd jump towards or come towards the doctor and the doctor would sit there and watch him like he's nothing, like he's not paying attention. But as soon as he got close enough the doctor would grab him. And once he had his familiar in his hand or by him and captured him this is when that healing power would be transferred to him, to the doctor, to the patient. That's how they healed. They healed their sick person or ailing person. That's how they did it.

The issue takes another form in the potential impacts on traditional cultural sites such as those associated with Iron Mountain and the Chocolate Mountains. The archaeological importance of these sites has been well-documented by Catherine Fowler, among others. What is less well understood is the marginalizing effect the conventional concept of "mapping" has on the cultural legitimacy and meaning of this information. It is fair to describe the meaning of these locations as found in both the sites, themselves, and in the relationship between different sites in a give cultural ethnoscape. It is certainly important to protect the values inherent in these sites, but it is also important to understand—and to act on the understanding—that there is an important, sacred relationship between the sites that also gives them their sanctified meaning. Once again, the difficulty is in part how the situation is conceived and the pre-assumptions that go into this conception. With this in mind, we would like to recommend a number of steps we believe must be taken to take up and address the issues raised in this letter.

Recommended Action Steps

It is in the balancing of human values that we make healthy communities, that we find justice. Perhaps if [the United States] can begin making justice here in your nation sitting upon our many nations, you may also begin to envision how to honor others' values, make peace and see unity in the world....You have our earnest prayers.ⁱⁱⁱ (Mary Clearing-Sky)

Given the dimensions and multilayered complexity of the issue of the impacts of solar energy on the Native American sacred sites, areas, resources, and landscapes, we would like to recommend the following steps be taken before the EIS is finalized:

1. The agencies involved in the development of the solar energy study area re-convene a meeting with the affected tribes to assess and review through a series of Listening Sessions, the framework for assessing the impacts on cultural sites, areas, resources, and landscapes.
2. The agencies involved participate in a series of meetings with leaders of the Salt Song tradition to reach a better understanding of the values placed at-risk by the development of solar farms in the Salt Song trail ethnoscape.

We believe these two straightforward action steps would provide a major contribution not only for the this issue, but for other matters that might impact the Native communities in the eastern Mojave Desert. The Native American Land Conservancy is prepared to help in any appropriate way to bring together a better understanding on this matter in the hopes of coming to a solution that is fair to the values and beliefs of all the parties involved.

Respectfully yours,

Kurt W. Russo, Ph.D.
Executive Director
Native American Land Conservancy

K, Tilley illustrated the “major differences between a ‘scientific’ or abstract As Thomas Greider and Lorraine Garkovich put it, “meaning is not inherent in the nature of things.”^{iv} Instead, the meaning of the landscape is produced and reproduced through the process of negotiation and symbolic interactionism in a cultural context.

Conclusion Mary Clearing Sky

Tiwiinyarivipi

Mapping the land

ⁱ (Chief) John Snow, *These Mountains Are Our Sacred Places* (Toronto: Samuel-Stevens, 1977), 145.

ⁱⁱ Richard W. Stoffle, David B. Halmo, Diane E. Austin, “Cultural landscapes and traditional cultural properties: A Southern Paiute view of the Grand Canyon and Colorado River,” *American Indian Quarterly* Vol. 21, Iss.2 (Spring 1997), 232.

ⁱⁱⁱ Mary Clearing Sky, “Tallying up for Reparations: Asking for New Promises?” In *Reparations: Repairing the Psychological Harm* (Washington, DC: Office of Ethnic Minority Affairs, 2005), xii-xiv.

^{iv} Thomas Greider and Lorraine Garkovich, “Landscapes: The Social Construction of Nature and the Environment,” *Rural Sociology* Vol. 59, No. 1 (1994), 2.

Thank you for your comment, Doug Busselman.

The comment tracking number that has been assigned to your comment is SolarM60252.

Comment Date: September 14, 2009 18:37:05PM
Solar Energy Development PEIS
Comment ID: SolarM60252

First Name: Doug
Middle Initial:
Last Name: Busselman
Organization: Nevada Farm Bureau Federation
Address: 2165 Green Vista Dr. Suite 205
Address 2:
Address 3:
City: Sparks
State: NV
Zip: 89431
Country: USA
Email: dbuss@nvfb.org
Privacy Preference: Don't withhold name or address from public record
Attachment: NevadaFarmBureauCommentsOnSolarEnergyProjectSept14.doc

Comment Submitted:

September 14, 2009

Nevada Farm Bureau wishes to present our comments regarding the proposed programmatic process that is being considered for solar power generation and the placement of those facilities on lands managed by the federal government. We are strong advocates of multiple use of federal managed lands and especially are concerned with the perceived ramification that livestock grazing operations may be displaced because of the placements of a solar energy facility. We wish to have some level of explanation presented on the nature of how locations of solar power generation facilities impact other multiple uses on specific pieces of lands. Does the placement of a solar power generation facility on a particular piece of property restrict or limit the other uses which rely on that property?

If this placement is linked to exclusion of all other uses, please identify the mitigation or other actions which provide compensation or offsets for the loss.

We would hope that there would be further details provided on the specifics of how much property is required, as well as additional site specific ramifications associated with citing a facility on a determined location. This needs to include the criteria used in determining the exact location, relative to a different site that might be located in the same general location. Are there specific considerations which determine putting the facility on one side of a line or another?

How do existing land use management plans fit into the context of this programmatic consideration and process? Are there decisions to be made in the context of this Environmental Impact Statement process which would override other decisions on the specific merits of alternative locations? Does this programmatic process drive future decisions in manner which supersedes alternatives?

How will the evaluation process from a programmatic point of view, deal with site-specific considerations such as unique plant communities, resource conditions or other multiple uses? What is the size or land area requirements associated with locating a solar generation facility?

Please also include us on your list of involved participants, providing us with the ability to participate in the on-going process of the programmatic EIS as well as any and all specific location processes.

Sincerely,

Doug Busselman,
Executive Vice President



Nevada Farm Bureau Federation

2165 Green Vista Dr., Suite 205, Sparks, NV 89431

Phone: (775) 674-4000 or Toll-Free (800) 992-1106

September 14, 2009

Nevada Farm Bureau wishes to present our comments regarding the proposed programmatic process that is being considered for solar power generation and the placement of those facilities on lands managed by the federal government. We are strong advocates of multiple use of federal managed lands and especially are concerned with the perceived ramification that livestock grazing operations may be displaced because of the placements of a solar energy facility. We wish to have some level of explanation presented on the nature of how locations of solar power generation facilities impact other multiple uses on specific pieces of lands. Does the placement of a solar power generation facility on a particular piece of property restrict or limit the other uses which rely on that property?

If this placement is linked to exclusion of all other uses, please identify the mitigation or other actions which provide compensation or offsets for the loss.

We would hope that there would be further details provided on the specifics of how much property is required, as well as additional site specific ramifications associated with citing a facility on a determined location. This needs to include the criteria used in determining the exact location, relative to a different site that might be located in the same general location. Are there specific considerations which determine putting the facility on one side of a line or another?

How do existing land use management plans fit into the context of this programmatic consideration and process? Are there decisions to be made in the context of this Environmental Impact Statement process which would override other decisions on the specific merits of alternative locations? Does this programmatic process drive future decisions in manner which supersedes alternatives?

How will the evaluation process from a programmatic point of view, deal with site-specific considerations such as unique plant communities, resource conditions or other multiple uses? What is the size or land area requirements associated with locating a solar generation facility?

Please also include us on your list of involved participants, providing us with the ability to participate in the on-going process of the programmatic EIS as well as any and all specific location processes.

Sincerely,

Doug Busselman,
Executive Vice President

Thank you for your comment, Donna Lamm.

The comment tracking number that has been assigned to your comment is SolarM60253.

Comment Date: September 14, 2009 18:45:28PM
Solar Energy Development PEIS
Comment ID: SolarM60253

First Name: Donna
Middle Initial:
Last Name: Lamm
Organization: Amargosa Conservancy
Address: PO Box 63
Address 2:
Address 3:
City: Shoshone
State: CA
Zip: 92384
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: PEIS Scoping Comments.doc

Comment Submitted:



To protect the land, water, and beauty of the Amargosa

September 14, 2009

Mr. Bob Abbey, Director
Bureau of Land Management
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Submitted by hard copy and email

The Amargosa Conservancy Comments on the BLM/DOE Solar Energy Programmatic Environmental Impact Statement (PEIS)

The Amargosa Conservancy (AC) previously submitted PEIS scoping comments (July 15, 2008—ID Solar S50549) expressing views generally supporting increasing solar electricity generation, but urging the agencies to carefully analyze the effects of vast desert acreages newly devoted to solar generation, and to impose siting limitations to preserve desert biodiversity, water resources, scenic values, and existing human communities.

Among other things, AC specifically urged that this PEIS establish uniform criteria for solar plant water use, siting, and mitigation. AC also argued that BLM should halt permitting on existing applications until completion of this PEIS, since otherwise the PEIS would be essentially a meaningless exercise. AC renews those arguments here, adding several more specific points directed at the rationale for and content of the scoping period extension.

The Purpose of this PEIS.

BLM extended the scoping comment period based on a new proposal for the analysis of 24 solar energy study areas (SESA) in 6 states. These areas do not include the vast tracts of public land (and these areas are, in most cases, the best sites) for which BLM has already accepted applications—applications that the agency is now processing simultaneously with the development of the PEIS. This bifurcated structure seems to violate the purpose and whole reason for development of the PEIS, since the extensive analysis that BLM and DOE are devoting to all aspects of solar energy development will not apply to these plants (with the possible exception of applicants whose projects have not been

“approved” prior to issuance of the PEIS record of decision (ROD), although even that is unclear). Each (NEPA-CEQA) environmental review of an early site application will have to contain an independent analysis of alternatives, mitigation requirements, cumulative effects—the whole broad range of inquiry that this PEIS might in large part efficiently conduct and resolve for all project applicants. This method of proceeding is a waste of public resources, and violates the spirit of how programmatic impact statements are to be constructed and used. It truly puts the cart before the horse. The appropriate course for BLM to follow is to halt processing of all project applications pending the issuance of the PEIS ROD, subjecting all projects to the conclusions and recommendations of the PEIS.

Water

AC’s previous comments recommended that the agencies analyze all aspects of water use by solar facilities, cautioning that desert water supplies are of critical importance to both human and natural communities, and inappropriate solar facility use of groundwater could have devastating effects. Based on the receipt of further information, AC now strongly advocates that the BLM preclude the use of wet cooling in any concentrating solar plant on public land in the southwestern deserts—especially the Mojave Desert. We understand that the California Energy Commission has adopted this requirement for solar facilities in that state, and many natural gas fired plants in arid locations use dry cooling as well. Although there appears to be a modest cost and energy penalty associated with the current dry cooling technology, that economic differential does not compare to the harm that excessive groundwater withdrawals will cause to sensitive desert ecosystems and human communities dependent on groundwater.

This is a particularly important issue in the Amargosa Valley in Nevada, where an initial solar project applicant intends to rely on wet cooling, and where the agencies have proposed creation of a large solar energy study area. The groundwater basin from which that plant and undoubtedly others would draw water is overallocated (that is, there are many more established rights to groundwater than the basin can sustainably support), and existing usage in the region has already produced a large and spreading cone of depression that will eventually be likely to significantly diminish flows in regional creeks, springs, seeps, and wells. The well-known problem of associating specific water withdrawals with effects in other locations, some distant, especially in areas with complex subsurface geology, warrants adoption of a uniform requirement that no desert solar plant use wet cooling. Indeed, any proposed use of water by a solar facility in an overappropriated basin should occasion a mitigation requirement that that plant acquire and retire a multiple number of water rights above and beyond that which it proposes to use in operating its facility.

The PEIS should be the vehicle in which restrictions on water use should be discussed and resolved for all desert concentrating solar projects. It is clear that deciding this issue on a case-by-case basis risks wildly different results, which will lead to certain challenges and litigation risking long delays in the implementation of projects.

Mitigation

One important element of the PEIS should be to establish the nature and range of mitigation requirements applicable to desert solar projects. The function of mitigation is to preserve ecosystem integrity across the area affected by the proposed projects. The scope of solar renewables projects and associated transmission facilities is enormous, without precedent, potentially dedicating more than a million acres of desert public lands entirely to a single use incompatible with the preservation of habitat or any other use.

Given this, the PEIS must be the vehicle in which the agencies assess the cumulative impacts of this new commitment of public resources and the mitigation required to maintain the integrity and functional capacity of natural and human communities in the face of the renewables commitment. The unprecedented size and scope of land use changes occasioned by the expansion of solar generation requires that the PEIS assess habitat needs in each desert region, setting limits on the size of land areas that can be accommodated compatibly with the health of species and their habitat needs. Further, mitigation requirements must establish ongoing funding with dedicated staffing to ensure that initial assessments about ecosystem integrity are accurate and of lasting value, subject to adaptive changes if circumstances require new commitments. Clearly, the requirement of a one time mitigation fee or even a one time purchase of alternative land to replace that occupied by solar mirrors will not be sufficient to ensure that mitigation requirements are met.

There are early indications from the agency's processing of the first solar plant applications that mitigation requirements will not be adequate, nor congruent across state lines. Much greater attention must be devoted to creating and funding a reasonable and broadly applicable, adaptive management scheme for offsetting the inevitable harm that the creation and operation of these facilities will cause to desert species and their habitats. The PEIS is the only appropriate place to analyze and set mitigation policy and requirements with the participation of, and concurrence from, the federal and state wildlife and environmental agencies. Without broad agreement on how mitigation will be carried out, the agencies will be particularly susceptible to single project pleading, leading to litigation and other challenges that will delay project implementation. This points out in stark relief the need to bring all projects—those within or outside the solar

energy studies area, and irrespective of when the application was filed or the status of project processing—within the purview of PEIS-modeled mitigation requirements.

In closing, the Amargosa Conservancy commends the BLM and DOE for doing the difficult work of collecting and analyzing the impacts of solar electrical generation in the desert southwest. However, we are concerned that the PEIS will be of very limited utility and force if the agencies proceed to approve projects during the time the PEIS is being written and before a ROD is issued. If those approvals are to proceed in the interim, it is most important to require that thorough individual NEPA/CEQA reviews be done, and that sufficiently stringent and uniform project requirements be set to avoid degrading those that the PEIS will require. Certainly, one of those requirements should be the elimination of any wet cooling for desert concentrating solar plants. BLM will have one chance to make this new, huge commitment of public lands compatible with desert natural communities—if it fails, the consequences will be permanent and devastating.

Respectfully Submitted,

Donna Lamm
Executive Director
Amargosa Conservancy

Thank you for your comment, Helen OShea.

The comment tracking number that has been assigned to your comment is SolarM60254.

Comment Date: September 14, 2009 18:46:52PM
Solar Energy Development PEIS
Comment ID: SolarM60254

First Name: Helen
Middle Initial:
Last Name: OShea
Organization: California Desert and Solar Working Group
Address: c/o Resources Legacy Fund, 555 Capitol Mall,
Address 2:
Address 3:
City: Sacramento
State: CA
Zip: 95814
Country: USA
Email: hoshea@nrdc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: California Desert and Solar Working Group PEIS Comments.pdf

Comment Submitted:

California Desert and Solar Working Group

c/o Resources Legacy Fund
555 Capitol Mall, Suite 675
Sacramento, CA 95814

September 14, 2009

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Please accept and fully consider these comments on behalf of the California Desert and Solar Working Group. We are an informal working group formed earlier this year to examine ways to balance the need for timely development of utility-scale solar energy sources with the need to protect desert ecosystems, landscapes and species. Our group, which is currently focused on desert ecosystems and potential solar energy projects in California, includes representatives of solar energy companies, the electric utility sector, desert conservation groups, environmental groups and philanthropies. On a number of previous occasions, we have told the Administration, including officials at the Department of the Interior (DOI), that we are very supportive of the Bureau of Land Management's focus on potential study zones for the solar programmatic environmental impact statement (PEIS). We appreciate the opportunity now, as part of this process, to identify solutions to renewable energy siting issues that can meet the Administration's climate goals while safeguarding the nation's valuable natural and cultural resources. In particular, we appreciate this opportunity to work together and with the Administration to produce a plan that promotes environmentally-responsible renewable energy development and transmission.

In our view, this PEIS should lead to the establishment of a comprehensive program for managing solar development on federal public lands (i.e., lands managed by the Department of Defense (DOD) and Bureau of Reclamation (BuRec) as well as the Department of Energy (DOE) and the Bureau of Land Management (BLM)) that includes designation of appropriate lands for solar development in the short term and a process for identifying lands for such development in the long term, based on environmental and technical analyses (including insolation levels) as well as transmission and other infrastructure considerations. The PEIS and the resulting program should also serve as the basis upon which others, including the State of California, can come together with DOI and other federal land managers to formulate a comprehensive program that addresses development of renewables, i.e., wind and geothermal as well as solar, across multiple jurisdictions, private and public alike, in California.

According to the BLM, this PEIS is "one of several on-going DOI initiatives in support of the President's New Energy for America Plan that sets a target of ensuring that 10 percent of U.S. electricity is generated from renewable sources by 2010, rising to 25 percent by 2025."¹ In addition to examining the "environmental effects of all solar energy technologies that are ready for deployment at utility-scale," the PEIS will study in-depth 24 tracts of land, referred to as Solar Energy Study Areas (SESAs), in six western states.² The draft version of the PEIS is not

¹ BLM, Qs & As: BLM Solar Programmatic Environmental Impact Statement (PEIS), June 29, 2009, p.1.

² Id.

expected to be made public before late fall 2009.³ Accordingly the likely completion date will not be before spring 2010.

At the same time that the BLM and DOE are preparing the PEIS,⁴ the Bureau will also “continue to process all existing applications”⁵ – which total 225⁶ – beginning with the so-called “fast track” projects.

Clearly, a great deal is being asked of BLM staff in connection with the overall effort – which we support – to get more renewable energy generated and on line to consumers. Equally clearly, these related responsibilities will strain the agency’s existing staff. Given the staffing needs involved in both processing the fast track applications and preparing the PEIS including analyzing the SESAs, we urge the Bureau to ensure that it has sufficient staff to ensure that both of these efforts can move forward in a timely and efficient manner with adequate resources to ensure robust environmental review.

The remainder of our comments is organized in five sections. The first section consists of comments on the SESAs, the criteria that were used for their selection and the need for the PEIS to consider alternative areas. The second section focuses on the Solar Energy Zones (SEZs). The third section addresses the need for federal-state cooperation and coordination while the fourth section discusses other topics that need to be addressed in the PEIS including the need to provide a clear process for going forward to identify more or enlarged study areas and zones as well as coordination with other ongoing related process. The final section discusses longer term planning for renewables development on the public lands.

Comments on the SESAs

The process used to select the SESAs needs to be clarified. The BLM’s success in generating public support for its new solar program and the designated SEZs depends in large measure on the degree to which the PEIS reflects a commitment to transparency. To date, the approach to the SESAs has been anything but transparent.

In its “Qs and As” document, the BLM purported to identify the criteria that were used to identify and select SESAs.⁷ A number of these criteria are vague or hard to document. These include “areas where the BLM has made a commitment to take certain actions with respect to sensitive species habitat” and “areas designated ... for right of way avoidance or exclusion.”⁸ As a result, it is difficult to understand how they were applied. Equally importantly, the list provided is incomplete.

Different states used different criteria as was made clear in connection with a teleconference held on August 24, 2009 by BLM officials with environmental advocates. For example, California included lands in SESAs that had solar applications filed on them while other states excluded all lands with applications from SESAs. The actual criteria that were used by the

³ Id., p. 2.

⁴ Id., p. 1.

⁵ Id., p. 9.

⁶ Id., p. 8. Of these, about 158 are considered ‘active’ applications. Id.

⁷ *Qs & As: BLM Solar Programmatic Environmental Impact Statement (PEIS)*, available on-line at: http://www.doi.gov/news/09_News_Releases/SolarEnergyQA.pdf

⁸ Id., p. 3.

states/field offices have not been made available to the general public.⁹ No explanation has been provided for these differences, let alone why a single uniform list of criteria was not used by all.

We recognize that there may be important regional differences, such that one single set of criteria might not be sufficient for all states identifying SESAs. Nonetheless, there must be a single, core set of criteria used in each state and that set must be provided to the public along with an explanation of why each of those criteria was included. These core criteria should include at least the following: 1) proximity to existing transmission infrastructure¹⁰ or BLM-designated corridors; 2) high quality of solar insolation; 3) slope appropriate to different technologies; 4) preference for disturbed lands; 4) low probability of conflicts involving adjacent land uses and 5) no known significant resource conflicts.

To reflect a commitment to transparency, the PEIS needs to clarify the SESA selection process. Specifically, the PEIS needs to document for each state what criteria were used and how they were applied to the SESAs that have been proposed, including maps and links to GIS data.¹¹ In addition, explanations for inclusion of any other state-specific criteria must be supplied. Documentation of the actual application of the criteria in the Draft PEIS is essential because, as it stands now, it appears that some lands were included in SESAs even though they do not meet the criteria set out in the Qs and As while others that did meet the criteria were excluded. For example, while Arizona excluded areas with wildlife corridors per the published criteria, California did not.

The PEIS must consider additional SESAs. To comply with the National Environmental Policy Act (NEPA) and specifically its alternatives requirement,¹² the PEIS must consider additional SESAs. In addition, alternative SESAs should be considered in order to address the possibility that not all lands within the SESAs identified to date will be suitable as well as the likelihood that some SESAs will be dropped.

Because one of the goals of NEPA's alternatives analysis is to identify more environmentally benign options, the additional SESA options that BLM should consider include smaller areas that would accommodate solar development – no other state has SESAs as large as California. The BLM should also consider areas on military lands and other lands managed by DOE and BuRec that are potentially appropriate for solar development and mitigation, given the long term possibility of conversion. The fact that DOE is a co-preparer of the PEIS and that BuRec is a sister agency within the Department of the Interior will hopefully make this task easier.

In identifying alternative SESAs, BLM should also give consideration to areas suggested by environmental and industry stakeholders. Although our group is not now in a position to endorse any particular additional areas, we know that suggestions will be forthcoming from various stakeholder groups and believe that they will be helpful to the BLM in its efforts to identify additional alternative areas. In addition, BLM should consider BLM-managed lands that are adjacent to already disturbed private lands, where the combination of these two types of land could sustain solar development. We understand that some such areas have already been suggested by California environmentalists and desert activists.

⁹ Participants in the referenced teleconference were provided with lists of criteria used by three states.

¹⁰ For purposes of this comment letter, "transmission" is defined as exclusive of "gen-ties."

¹¹ The teleconference referred to above revealed that different field offices used different data sets in identifying SESAs and the PEIS should also address these differences.

¹² 43 U.S.C. §§ 4332(2)(C)(iii), (E).

Lastly, we encourage the BLM to continue to look for other high insolation environmentally appropriate lands that should be considered for solar development. Our group pledges to continue to work with the agency to identify these areas. We understand that existing resource management plans may have to be amended to accommodate the results of these efforts in the future.

The PEIS should include comparative analyses of the proposed SESAs and alternatives within each state. These analyses are necessary to ensure that the areas selected to become SEZs do in fact provide the most energy with the fewest resource conflicts, environmental impacts and development hurdles. The core criteria that we have urged above be developed and applied consistently to all lands in current and potential SESAs will be very useful in carrying out these analyses.

As part of its consideration of SESAs, the BLM should undertake a programmatic Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (USFWS). To the extent possible, this Section 7 consultation should also seek to provide project-level take coverage under the federal Endangered Species Act.

We believe that such a consultation is legally required,¹³ and are concerned that the failure to consult could make the entire process legally vulnerable with potential attendant delays. We are also concerned that, if a Section 7 consultation is not commenced now, it will have to be carried out at a later date, and accordingly, will delay the timeline for implementation of actual near-term projects.

We have been given to understand that USFWS and BLM instead intend to undertake Section 7 consultations in connection with specific project proposals for which right of way applications have been filed.¹⁴ While some of these project-specific consultations will be pursued in parallel with the Solar PEIS effort, reducing the timeline to completion for those *particular* projects, complete reliance on project-specific consultations alone has several disadvantages in comparison to consolidated consultation. First, project-level consultation biases siting decisions toward those sites for which applications have been filed, erasing some of the planning benefits of the Solar PEIS effort. A programmatic consultation will help BLM guide developers toward the optimum sites with the least impacts to listed species and habitats. Second, a single, consolidated Section 7 consultation is likely to be more efficient than multiple project-level processes. Third, such consolidation is likely to result in greater consistency across projects. Fourth, a programmatic consultation could provide landscape level analysis of direct and indirect impacts, a robust analysis of cumulative impacts to species and habitats, and a basis for developing large scale coordinated mitigation measures. Finally, a completed Section 7 consultation with incidental take coverage for particular SEZs, as appropriate, will enhance the value of those sites for potential developers and thus the likelihood of speedier development. As the BLM, USFWS and the California Energy Commission (CEC) and Department of Fish and Game (DFG) have all recognized, in general a programmatic consultation with a project-level component for near-term projects will best serve the goal of developing BMPs “and other appropriate . . . guidelines to assist solar . . . developers with siting projects in environmentally suitable locations”¹⁵

¹³ Notably, a Section 7 consultation was done for the Wind PEIS.

¹⁴ This information was provided by a USFWS employee at a public meeting on California’s Desert Renewable Energy Conservation Plan in Victorville, CA on June 18, 2009.

¹⁵ Memorandum of Understanding Between the California Department of Fish and Game, the California energy Commission, the Bureau of Land Management, and the U.S. Fish and Wildlife Service Regarding the

Comments on the SEZs

The fate of projects outside SEZs must be clarified. As indicated above, all of the group participants understand that BLM intends to continue to process applications for projects outside of the proposed zones during this planning process. As a result, there may be several so-called “fast track projects” which will be processed before zones are designated. Once the planning process is completed and the BLM identifies SEZs, the environmental stakeholders want BLM to limit solar development to projects in the SEZs in order to encourage projects to be located only in designated zones. Solar companies would like the BLM to preserve the flexibility to approve solar development and additional projects outside of the SEZs if the projects meet an appropriate set of environmental and development criteria.

If the BLM does not agree to limit development to the SEZs, however, all of the group participants are agreed that BLM must, at minimum, adopt a set of clear criteria upon which field offices can reject projects outside of the SEZs in order to prevent sprawl of energy infrastructure on public lands, both generation and transmission, and to avoid wasting agency resources.

These criteria would ensure that projects outside of the SEZs that were in areas of high environmental conflict or that required new transmission or significant upgrades to transmission lines outside of existing or designated corridors on BLM lands would be rejected by BLM at the beginning of the permitting process. Conversely, projects outside of zones that might be environmentally appropriate include projects sited on brownfields, abandoned mine sites, or other disturbed lands.

The PEIS should outline the process for determining which new projects will be accepted in SEZs. The PEIS must clearly explain how the BLM will treat both existing applications in SESAs that are not identified “fast track” projects and new applications in SESAs. We all agree that we want to deter speculation, ensure that the most suitable lands for renewable development are well-utilized for this purpose, and that there needs to be a fair return for use of public lands.

Further, we agree that the BLM must develop appropriate mechanisms that create opportunities for legitimate project proponents and for appropriate technologies, while recognizing that some technologies may be better or less well-suited for some lands, and that it may be desirable to co-locate combinations of solar technology types to prevent shading in order to maximize electrical output, for example.

As part of this process, the BLM should create standards for rejecting existing and new project applications for lack of technical and financial feasibility. Significant controversy has been created around solar development particularly in the California Desert because the BLM has not said “no” to *any* proposed projects due to technological infeasibility or lack of adequate financing. To identify projects that are likely to be financial viable, BLM should adopt guidance providing for initial screening and increased scrutiny as each project moves forward toward approval. For example, final approval of projects should be conditioned, for financial

Establishment of the California Renewable Energy Action Team, November 17, 2008, p. 2 (hereinafter “2008 MOU”). Accessible at <http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy.Par.76169.File.dat/RenewableEnergyMOU-CDFG-CEC-BLM-USFWS-Nov08.pdf>

feasibility, on having a power purchase agreement, independent financing or demonstrable evidence of qualifications for a DOE loan guarantee. Submission of an interconnection request to the appropriate transmission service provider, such as California Independent System Operator (CAISO), and a queue position should also be required.

Technical feasibility should require that each project proponent has identified land, in terms of qualities and quantities, that is reasonably suitable to their technology, taking into consideration the size of the intended project, applicable technical criteria as well as water availability and compatibility with other prevailing environmental factors. By the time of project approval, the applicant should be required to show that its technology has been successfully demonstrated, or that it has qualified for a federal, state or local emerging technologies program.

As part of the process of weeding out unlikely projects, BLM should also consider requiring project applicants to adhere to specific timetables, including timetables for submitting complete plans of development and for curing deficient submissions.

BLM should further ensure that each SEZ is utilized to its maximum capability, contributing clean, reliable and sustainable power to the grid while minimizing overall greenhouse gas and other emissions. To achieve this goal, BLM should work in cooperation with DOE, the CEC, and grid reliability entities (including CAISO, NERC and WECC) to evaluate whether promoting a diversity of solar and other renewable energy technologies with complementary power characteristics within each SEZ would allow it to provide energy that is more easily and reliably integrated into the grid, lessening greenhouse gas and other emissions that would otherwise result from additional use of conventional resources. For example, photovoltaic plants continue to provide power from indirect insolation during cloudy days, when insolation is insufficient for solar thermal facilities; solar thermal's smoother output curves and potential storage could in turn fill in the more step-like output expected from photovoltaic plants or intermittencies from other renewables. Working together, differing solar technologies could provide stable and reliable power, reduce grid operators' need for conventional plants to make up for intermittent availability, and lessen the likelihood that solar and other renewable resources would have to be curtailed when conventional resources are committed to address intermittencies. BLM's SEZ planning and policies should take these factors into consideration to ensure that the SEZs fully achieve their environmental and energy goals.

Cooperation between Other Federal and California State Agencies is Essential

The PEIS needs to be closely coordinated with the other federal and California state agencies that are currently undertaking overlapping planning efforts and/or have regulatory jurisdiction over renewable energy siting and development. The goal of this coordination should be the greatest degree of consistency that reasonably can be achieved. Consistency is particularly important regarding the broad-scale aspects of the program, in particular the location of the SESAs and the SEZs, the siting and project approval criteria, and the mitigation for impacts to State and/or federally listed species and habitats and other potentially significant impacts.

Coordination is particularly important with the other signatories to the 2008 MOU with BLM - the CEC, the DFG, and USFWS. We urge you to fully implement the goal of the 2008 MOU to facilitate coordination "to reduce the timelines for siting, development, permitting and construction of qualifying RPS projects in the Mojave and Colorado Desert regions while enhancing and maximizing environmental protections." Coordination is also needed with other

key state and federal entities, including the California Public Utilities Commission (PUC), CAISO, DOD, and U.S. Forest Service.

It is important to note that transmission still remains a constraint to new renewable resource development in California, and it is important for the BLM to work actively with the CAISO, the PUC and other relevant agencies toward timely and environmentally sound transmission development to access zones.

Key processes currently underway that will require particular attention include the Renewable Energy Transportation Initiative (RETI), the Desert Renewable Energy Conservation Plan (DRECP), and the project-level reviews of the “fast track” projects seeking to commence construction by the end of 2010. BLM’s PEIS work and specifically the information that it generates need to inform these other related processes and the information those processes generate needs to be taken into account by the BLM as timetables allow.

Failure to coordinate would risk inconsistent approaches, second-guessing, uncertainty and potential delay in the implementation of appropriate projects. In contrast, effective coordination can – and should – lead to improved administrative efficiencies, through unified data gathering, analysis and compiling processes, and the assignment of tasks to minimize duplication and to allocate them to achieve effective and efficient results that meet all requirements. To the extent possible, BLM’s efforts should be undertaken in ways that will provide documents that can be used directly in the processes of other agencies such as the CEC and CDFG, which is particularly important given the resource constraints currently faced by certain state agencies.

BLM should utilize all of the available tools for working with these other agencies, including the Renewable Energy Action Team (REAT) established in the 2008 MOU, the scoping and comment process on the PEIS, and ongoing staff-to-staff contacts. As indicated above, we also recommend that a formal Section 7(a)(2) consultation be undertaken with the USFWS.

Desert Renewable Energy Conservation Plan. We request that the Bureau of Land Management actively participate as one of the key agencies in the State of California’s DRECP. We would like to see the Solar PEIS effort coordinated as closely as possible with the DRECP and vice versa. For example, any biological information from the Solar PEIS, such as information on listed species and BLM special status species, should be shared with the California DFG and the CEC, which are the state lead agencies on the DRECP. And, any conservation planning or biological information generated by the DRECP should be included in the BLM Solar PEIS. We believe that, while the timing of the Solar PEIS and DRECP may not mesh together perfectly, both efforts should be coordinated to the maximum extent possible in order to achieve the best possible conservation planning outcome.

RETI. BLM has been a participant in RETI since its inception and RETI’s CREZ – Competitive Renewable Energy Zones – have clearly been considered by the BLM in developing the proposed SESAs for California. It is essential that BLM officials make sure that RETI participants understand the PEIS process, including its timeline and the options under consideration, and that they are kept fully up to date as to progress and results so that their assumptions, planning and recommendations are based on full and accurate information.

Other topics need to be addressed in the PEIS

The PEIS needs to address what happens after SEZ designation. The PEIS should delineate a clear process for identifying and selecting additional study areas and zones in the years to come, as needed.

The PEIS must present a thoughtful and simple process for mitigation for projects within zones that yields comprehensive, positive environmental benefits, including species, habitat and wildlife corridor protection. The PEIS must assess and present the scientific basis for the proposed mitigation measures in order to show they will be effective. Given the limited availability of private land available for acquisition in the vicinity of many of the proposed projects, BLM should consider other off-site mitigation measures as well.

The PEIS should also provide a similar comprehensive and effective mitigation plan for any projects outside zones if the BLM decides to move forward with processing some projects outside of designated zones, for example, on disturbed lands, brownfields or abandoned mine sites.

Looking forward

To guide longer term planning for renewable energy development on public land, the Obama Administration should develop a planning process with the states, the utilities, transmission planners and all relevant federal agencies to establish national and state targets for renewable production on public lands. The targets would create a common set of expectations about the scope of renewable energy development envisioned for each state that would help the BLM manage stakeholder expectations and concerns. As we envision them, these targets would not be an RPS requirement nor another directive for utilities. They would be expressed as megawatt goals (probably ranges) that could and should be revisited and adjusted at regular intervals to reflect new policies and guidelines at both state and national levels as well as on-the-ground experience with, for example, SEZ energy production and private land development

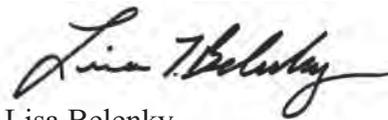
Conclusion

In conclusion, we thank you again for your commitment to developing an environmentally responsible solar development program on our public lands and for considering our comments. If you have any questions about these comments or think we can help you in any way, please do not hesitate to contact us.

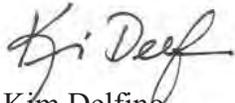
Sincerely,



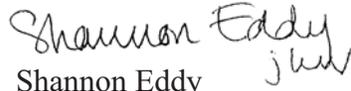
Rainer Aringhoff, President
Solar Millenium



Lisa Belenky
Center for Biological Diversity



Kim Delfino
Defenders of Wildlife



Shannon Eddy
Large-scale Solar Association



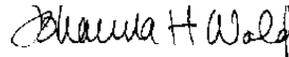
Arthur Haubenstock
BrightSource Energy



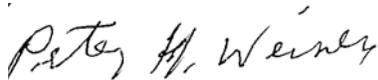
Michael Mantell, Chair
California Desert and Solar Working
Group



Wendy Pulling
Pacific Gas & Electric



Johanna H. Wald
Natural Resources Defense Council



Peter Weiner
Paul Hastings



V. John White
Center for Renewable Energy Efficiency
and Renewable Technology



Carl Zichella
Sierra Club

cc: Steve Black, Senior Counselor, Office of the Secretary, Interior Department
Ned Farquhar, Deputy Assistant Secretary, Land and Energy, Interior Department
Linda Resseguie, BLM Washington Office, Linda_resseguie@blm.gov

Thank you for your comment, D. BRADFORD HARDENBROOK.

The comment tracking number that has been assigned to your comment is SolarM60255.

Comment Date: September 14, 2009 18:52:29PM
Solar Energy Development PEIS
Comment ID: SolarM60255

First Name: D. BRADFORD
Middle Initial:
Last Name: HARDENBROOK
Organization: NEVADA DEPARTMENT OF WILDLIFE
Address: SOUTHERN REGION OFFICE
Address 2:
Address 3:
City: LAS VEGAS
State: NV
Zip: 89108
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: NOI-SolarPEIS-NDOW14Sep09.pdf

Comment Submitted:

Please see attachment



JIM GIBBONS
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
SOUTHERN REGION OFFICE

4747 Vegas Drive
Las Vegas, Nevada 89108
(702) 486-5127 • FAX (702) 486-5133

KENNETH E. MAYER
Director

RICHARD L. HASKINS, II
Deputy Director

SOUTHERN REGION OFFICE
4747 Vegas Drive
Las Vegas, Nevada 89108
(702) 486-5127 • Fax (702) 486-5133

September 14, 2009

NDOW-SR# 10-014

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue - EVS
Argonne, IL 60439

Re: NOI: Programmatic EIS Scoping - Development & Implementation of Agency-Specific Programs for Solar Energy Development; BLM Approach for Processing Existing & Future Solar Applications

Dear PEIS Project Team:

The Nevada Department of Wildlife (NDOW) thanks you for this opportunity to present our preliminary comments during this PEIS scoping phase. We are supportive of the goals to develop renewable energy technologies for lessening the Nation's dependency on fossil fuel resources while also meeting existing and future energy needs. This interest is reflected in the purpose and need for the present PEIS addressing establishment of solar energy facilities on the public lands principally managed by the BLM or receiving funds from the Department of Energy. Nevada's portfolio potential concerning renewable energy generation at utility-scale size is notable. Geothermal, wind, and solar energy presently highlight the majority of this portfolio potential. Several projects are underway state wide to help meet Nevada's requirement that by 2015 renewable energy generation accounts for 20% of Nevada's energy supply.

The majority of proposed solar development is in the State's southerly reaches within Clark, Lincoln, Nye and Esmeralda counties. Not surprising, all Solar Energy Study Areas proposed for Nevada occur in this region. Coincidentally, Nevada's richest biodiversity also occurs here. Wildlife within, adjacent to and near proposed solar developments reflect existing biological diversity, viability, physiognomic character, ecological interconnection, inherent and public values. Of particular interest is the functional degree biological communities are vulnerable to or may be affected, inclusive of the prospects for an individual species' persistence. Mindful of the State's energy goals, we are committed to help the PEIS process achieve solar energy development standards proving environmentally responsible, inclusive of sustainable wildlife conservation. Our experience in working with Nevada's mining industry, utility sectors, and partnerships with federal land and wildlife managers places us in a position for contributing a productive voice in the BLM's and DOE's respective courses of formulating responsible and effective policies and mitigation strategies for otherwise unintentional impacts to wildlife resources.

The intent and planning criteria described in the NOI provide a good foundation on which to begin guiding the PEIS process. However, some questions did arise concerning further need for clarifying

sideboards or implications of some of the criteria in the NOI. Questions and concerns were found to be in common with many previously shared by other agencies, notably by the California Department of Fish & Game, California Energy Commission, and California Department of Parks and Recreation¹. Additional to areas in need of clarification, the PEIS should include comprehensive analyses in consideration of threatened, endangered, and candidate species so listed under the Endangered Species Act of 1973, as amended; birds protected under the Migratory Bird Treaty Act of 1918, as amended; current list of Nevada BLM Sensitive Species; State of Nevada wildlife² classified protected³ and species of conservation priority identified in the 2006 Nevada Wildlife Action Plan⁴. On a case-by-case basis there may be need to also consider other species not previously afforded elevated conservation recognition. These case-by-case considerations may apply across adjoining states.

Seven Solar Energy Study Area's (SESA's) are proposed for Nevada totaling approximately 149,375 acres. The seven areas have varying degrees of shared and unique wildlife resources and habitat characteristics. Maintenance of migration or crucial movement corridors and integrity of ecological/physiognomic dynamics of isolated populations using an adaptive/effectiveness monitoring management approach cannot be over-emphasized. If unavoidable, predicted irretrievable losses or effects should include accurate determination as to whether these impacts are tolerable from a broader regional conservation perspective. This is imperative, especially in consideration of the cumulative spatial and temporal ramifications by other developing land uses also having potential in accelerating landscape changes. Because the maps available on the PEIS web-site are coarse resolution, NDOW is prepared to assist in developing an updated listing of species and related habitats.

Two aspects of solar energy development associated with utility-scale facilities interest NDOW. The sheer size of individual solar developments and the large amount of fresh water required to operate most thermal-solar designs. The large site area needed to support utility-scale energy generation raises concern for direct and indirect effects by individual projects on local wildlife resources. Large-scale grubbing and/or grading a site clear of natural structure, biological and physical, to a relatively flat surface seem commonplace and subsequent treatments for erosion and dust abatement play-in for the life of the project. Even when not all natural features undergo conversion, functionality and quality of remaining fragmented habitat becomes changed, the full effect may not be readily apparent for many years. As you know, projects of this size in the desert southwest would have a near permanent effect and if commitment to retro-fitting solar developments with next-generation technologies is not pursued, efficiencies in local energy generation and natural resource conservation would not be optimized. An additional consideration is the need to address decommissioning of projects when obsolete and the return of the land to a proper functioning ecosystem. The Mohave Desert has been a difficult place to reclaim and any project or action proposed within this environment needs to address this reality.

The second major aspect concerns water supply and quality. As a desert state, Nevada is the driest and acquisition of reliably fresh water supplies capable of supporting thermal-based solar developments may prove regionally very difficult if not project limiting. Many hydrologic basins are over-allocated and the State Water Engineer has ordered prohibitions on large volume appropriations for many, or significantly reduced allocations from amounts on filed applications. Further, the concept of inter-basin transfers is highly controversial, as has been supply allocations within the upper and lower reaches of the greater Colorado River system. Scarce water reserves and the supply needed for thermal solar developments may ramify significant impacts to terrestrial and aquatic wildlife. In such instances where acquisition of a freshwater supply would be logistically problematic and involve significant water extraction and

¹ Online at http://www.energy.ca.gov/siting/solar/peis/notices/scoping_comments/

² Nevada Revised Statute 501.097 online at <http://leg.state.nv.us/NRS/Index.cfm>

³ Chapter 503 of Nevada Administrative Codes; online at <http://leg.state.nv.us/NAC/CHAPTERS.HTML>

⁴ Online at: <http://www.ndow.org/wild/conservation/cwcs/>

treatment for thermal-based, wet solar developments, the PEIS should consider limiting such an area to “dry” solar technology.

It is not uncommon for Nevada’s shallow groundwater aquifers to contain varying levels of heavy metals and/or total dissolved solids. While in certain cases water supply may not be the limiting factor to establishment of a thermal solar facility, process water routed to open ponds in the desert, regardless of water quality, are an invitation for wildlife visitation. In industry where large volumes of water are cycled through a facility’s systems multiple times and then directed to cooling ponds and eventually to open evaporative ponds as waste effluent, solution chemistry will concentrate. NDOW’s experience is that in time solution chemistry often becomes hazardous to wildlife, especially to waterfowl and other migratory water birds because of hyper-saline conditions. While NDOW administers a special permit program for Industrial Artificial Ponds⁵, such evaporation pond scenarios are increasing in numbers as growing regional industries employ evaporative methodologies. The PEIS should emphasize the importance of incorporating proactive, effective wildlife deterrents into solar developments and provide a process where evaluation of a proposed project’s development description demonstrates commitment to minimize artificial pond-related impacts as part of application ranking criteria.

During the course of the NEPA process, NDOW welcomes timely opportunities as a cooperating agency to further contribute its expertise in formulating any additional or modified mitigation measures and filling possible knowledge gaps. When appropriate, adoption of mitigation measures novel to solar energy development as best management practices or standard operating procedures is encouraged.

Thank you again for this opportunity to provide this preliminary input. For additional assistance, please do not hesitate to contact me at NDOW’s Southern Region Office in Las Vegas.

Sincerely,

Brad Hardenbrook

D. Bradford Hardenbrook
Supervisory Habitat Biologist
Southern Region
Nevada Department of Wildlife
(702) 486-5127 x3600
bhrdnbrk@ndow.org

DBH:dbh

Cc: NDOW, Files

⁵ Industrial Artificial Pond Permit information online at <http://www.ndow.org/law/licenses/>.

Thank you for your comment, Erin Robertson.

The comment tracking number that has been assigned to your comment is SolarM60256.

Comment Date: September 14, 2009 18:55:53PM
Solar Energy Development PEIS
Comment ID: SolarM60256

First Name: Erin
Middle Initial:
Last Name: Robertson
Organization: Center for Native Ecosystems
Address: 1536 Wynkoop Street
Address 2:
Address 3:
City: Denver
State: CO
Zip: 80202
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

Center for Native Ecosystems has submitted extensive comments along with The Wilderness Society and other conservation groups.

We also wish to draw attention to another issue not previously covered in our comments.

Slender spiderwort (*Cleome multicaulis*) is present near one of the study areas, and it is possible that suitable habitat may exist within the study area itself. This wetland and playa lake wildflower appears to be sensitive to water diversions and changes in the local water table. It has been extirpated from much of its former range in the Southwest, and the remaining populations in Colorado will be key to its persistence. The BLM has recognized the spiderwort's imperilment by designating it a Sensitive species in Colorado. The BLM should take the following actions to ensure that the actions the agency permits will not further imperil this wildflower:

1. Avoid any direct disturbance of the spiderwort plus 200 m buffers.
2. Require surveys during the spiderwort's blooming season before authorizing disturbance in potential habitat.
3. Avoid approval of any aspects of the project that could result in changes in hydrology for occupied spiderwort habitat.
4. Apply the Colorado Rare Plant Conservation Initiative's Recommended Best Management Practices for Plants of Concern. Although these recommendations were created with oil and gas drilling in mind, most will also be beneficial in mitigating the impacts of solar development.
5. Attempt to mitigate impacts to spiderwort pollinators as well.

Thank you for considering this comment.

Sincerely,
Erin Robertson
Senior Staff Biologist

Thank you for your comment, Eileen Wynkoop.

The comment tracking number that has been assigned to your comment is SolarM60257.

Comment Date: September 14, 2009 18:58:51PM
Solar Energy Development PEIS
Comment ID: SolarM60257

First Name: Eileen
Middle Initial:
Last Name: Wynkoop
Organization: NV Energy
Address: P.O. Box 98910 MS30
Address 2:
Address 3:
City: Las Vegas
State: NV
Zip: 891510001
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: NVEnergy_Solar Study Areas Comments_SEP142009.pdf

Comment Submitted:



September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, Illinois 60439

To Whom It May Concern:

This letter presents scoping comments from NV Energy as a result of the Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement (PEIS) to Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management (BLM) Approach for Processing Existing and Future Solar Applications, published in the Federal Register on Tuesday, June 30, 2009. NV Energy understands this notice to be in addition to the original Notice of Intent (NOI) published on Thursday, May 29, 2008.

With respect to the original notice, NV Energy submitted scoping comments on July 15, 2008 as "*Nevada Power Company and Sierra Pacific Power Company, subsidiaries of Sierra Pacific Resources*". The tracking number assigned to this comment letter was SolarS50499. Please note that Nevada Power Company and Sierra Pacific Power Company (i.e., Sierra Pacific Resources), are now doing business as NV Energy.

NV Energy appreciates the U. S. Bureau of Land Management (BLM) and Department of Energy's (DOE) effort to incorporate into the PEIS the assignment of specific public lands as solar study areas with the intent to protect and preserve areas for future solar energy development, per Secretarial Order No. 3285, and using economic stimulus funding to enhance the PEIS environmental analysis. The resources used to develop the new solar study area maps included California's Renewable Energy Transmission Initiative, the Western Governors' Association Western Renewable Energy Zone and Transmission Study and existing BLM resource information. NV Energy requests that the BLM and DOE also include the State of Nevada's Renewable Energy Transmission Access Advisory Committee's (RETAAC) reports which propose recommendation for improved access to the [electrical] grid system, by which renewable energy industries can set up and have market access in Nevada and neighboring states. These reports are located at the following website: <http://www.retaac.org/>.

The Notice of Availability published on June 30, 2009 has generated some confusion among project proponents and local BLM field offices on the intent of BLM's procedures in processing solar development right-of-way applications. Consistent procedures are necessary to understand the process in filing for solar development rights-of-way within and outside of solar study areas before or after June 30, 2009.

Additionally, with respect to "*alternative procedures*" that BLM is considering (i.e., non-competitive and competitive, application fees and diligent development requirements) for solar energy development applications within the solar energy study areas, it is not clear if such alternative procedures are to be subject to the PEIS analysis or if BLM is considering them separately with the intent to implement them through Instruction Memoranda or other internal policy dissemination to the field office level without the public having an opportunity to review and comment on them. It is also not clear if such procedures apply to solar energy development applications outside of the proposed solar energy study areas. If the intent is to implement nomination and competitive procedures similar to geothermal development, nominated sections are not always released in their entirety so sections originally intended to be developed become fragmented. This leads to more numerous, yet smaller footprint projects than originally planned/proposed. This also prohibits larger, more cost-effective projects to be developed. Fragmentation of land sections within good solar insolation areas could drive up the costs of projects, and ultimately the cost of the energy produced that is sold to market. Such competitive procedures could also delay viable projects from proceeding through the permitting requirements of other regulatory processes (i.e., state utility commission approvals of power purchase agreements).

Another source of confusion is the multitude of solar energy project applications that overlay each other. There seems to be an inconsistent process in which applicant might have the first-in-place rights, and how that is determined. Whether it is the application submittal date, the completeness of the application package, the payment of the processing fee, or which overlying applicant is first to achieve all of these, there seems to be no clear answer at the field office level.

The location and configurations of the solar energy study areas takes into account various important and sensitive considerations. Comparing the locations of the proposed solar study areas to the areas of currently proposed solar projects which applicants have identified for development seems to indicate an issue that should be addressed in the designation of any solar study area or zone; that being, the factors that solar project developers take into consideration when siting solar projects. Certainly proximity to existing infrastructure, slope, terrain, avoidance and/or minimization of impacts to sensitive resource areas/issues, but also how all these factors impact the price at which to competitively sell the power on the market and site constructability costs. Designating solar study areas may or may not be cost-prohibitive to a solar developer or purchaser of the power. If solar zones are designated in specific locations, they may prove to be cost-prohibitive and therefore, essentially useless for development. Additionally, although it may appear that there are transmission lines in close proximity to proposed solar study areas, they may not be able to take on the addition of new solar generation output. Extensive modeling studies must be done to assure that there is adequate capacity to interconnect the power of a new solar project to existing transmission lines. These studies take time and considerable amounts of money and may make or break an economic analysis for the project.

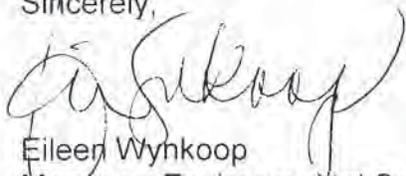
There is a critical issue for solar project developers to receive economic stimulus funding for projects to start construction before the end of 2010; however, many projects

are on a timeline that is tied to the completion of this PEIS, the schedule for which is "*to be determined*". An unknown schedule for any renewable energy project developer is detrimental for securing long-term power purchase agreements with utilities and other power purchasers. By the nature of this unknown schedule, it's possible that many solar projects will not qualify for the federal funding. The PEIS should address this issue.

Some of the proposed solar study areas have unusually irregular shapes that may not necessarily be conducive to the squared, or blocked, nature of solar project footprints. Any solar zones designated in the PEIS should take into account the adequacy and constructability of solar projects when finalizing the shape/boundary of the zones.

NV Energy appreciates the additional opportunity to participate in and provide comments to the development of the PEIS.

Sincerely,



Eileen Wynkoop
Manager, Environmental Services

Thank you for your comment, Terrence Shannon.

The comment tracking number that has been assigned to your comment is SolarM60258.

Comment Date: September 14, 2009 19:12:47PM
Solar Energy Development PEIS
Comment ID: SolarM60258

First Name: Terrence
Middle Initial: A
Last Name: Shannon
Organization: Cogentrix Solar Services, LLC
Address: 24310 Moullton Parkway
Address 2:
Address 3:
City: Laguna Hills
State: CA
Zip: 92637
Country: USA
Email: terrenceshannon@cogentrix.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Cogentrix Comment Letter-BLM NOI-PEIS-SESA.doc

Comment Submitted:



Cogentrix Energy, Inc.
9405 Arrowpoint Boulevard
Charlotte, NC 28273-8110
704-525-3800
Fax 704-529-5313

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

Subject: Bureau of Land Management Solar Energy Notice of Intent;
Comments of Cogentrix Energy, LLC

Dear Bureau of Land Management/Argonne National Laboratory:

On behalf of Cogentrix Solar Services, LLC, I am pleased to submit comments regarding the May 29, 2008 Notice of Intent (NOI) by the Bureau of Land Management (BLM) to prepare a Programmatic Environmental Impact Statement (PEIS) to Evaluate Solar Energy Development on the U.S. Bureau of Land Management's (BLM) Solar Energy Study Areas (SESAs).

Cogentrix appreciates the effort the BLM has expended in establishing the 24 Solar Energy Study Areas (SESAs), and has reviewed the limited amount of detail provided as to how these 24 sites were selected. In comparison to the initial screening criteria Cogentrix employed in evaluating potential solar sites, we have made several important observations. The criteria BLM sited are either equal to or less stringent than those employed in selecting the Cogentrix California projects located on BLM land. In particular, Cogentrix would like to draw your attention to Cogentrix's Baker and Silurian Valley Solar Projects.

Baker is located northwest of Hwy 15 near Baker, California. The disturbed area proposed for the site is roughly 3700 acres, which exceeds the 2000 acre minimum BLM used for selecting SESAs. Cogentrix is proposing to use CPV on the site. This solar technology has less intensive land use as compared to CSP technologies and also has a minimal water requirement by comparison. A Plan of Development (POD) has been submitted and BLM comments were recently received, to which Cogentrix is currently preparing a response. The site is contained in an existing transmission corridor and there are two existing transmission lines in the corridor and abundant room for additional capacity. Cogentrix prepared a report regarding the adequacy of the corridor for the combined use as a solar facility, while maintaining adequate space for future transmission needs. The BLM reviewed the report and has ruled that the project that Cogentrix has proposed and is contained in their POD allows for future transmission expansion. Therefore, they have agreed to proceed with the processing of Cogentrix's ROW application. Also, the California RETI process proposed a high voltage transmission, labeled Mountain Pass, as part of their recent Phase 2A Final Report.

In addition, the Baker site is located next to access roads and is a relatively level site well below the 5% criteria that the BLM employed for selection of the SESAs. The site is not located on any protected or "sensitive" land and has a high insolation making it very attractive for a solar site. The Baker site has the

necessary TUP for siting a solar met station, but one has not been sited since the transmission corridor and the possibility of combined use was yet to be resolved.

Silurian Valley is located 13 miles from Baker on the east side of Hwy 127. The disturbed area proposed for the site is roughly 2500 acres, which exceeds the 2000 acre minimum BLM used for selecting SESAs. Cogentrix is also proposing to use CPV on the site. This solar technology has less intensive land use as compared to CSP technologies and also has a minimal water requirement by comparison. A Plan of Development (POD) has been submitted and BLM comments were recently received, to which Cogentrix is currently preparing a response. In addition, recently completed biological and botanical field surveys found no evidence of desert tortoise or any other threatened or endangered species.

The Silurian Valley site is adjacent to a major LADWP transmission corridor. There are four large transmission lines within the existing corridor. In addition, the site is located next to access roads and is a relatively level site well below the 5% criteria that the BLM employed for selection of the SESAs. Finally, the site is not located on any protected or “sensitive” land and has a high insolation making it very attractive for a solar site. Cogentrix has sited a solar met station on the site and is accumulating critical solar site and design data.

Cogentrix recommends and requests that the BLM add the Baker and Silurian Valley sites as SESAs and eventual SEZs with all the associated benefits going forward. We believe that this is an excellent action and will facilitate the development of solar energy in the exact type of regions that the existing 24 SESAs BLM identified. This is additionally important since they two sites are strategically located outside the “monument area” Senator Diane Feinstein will be proposing later this month.

Please contact us if you have any questions or would like additional information regarding the Baker and Silurian Valley sites or proposed projects. Also, please contact us to discuss the merits of this recommendation for inclusion of these two sites into the SESAs pool.

As a developer of solar resources in a number of western states, Cogentrix is interested in a transparent, open process based on scientific principles. We look forward to working with the BLM on this historic undertaking. Thank you.

Sincerely,

Terrence A. Shannon
Manager, Environmental Development
Cogentrix Solar Services, LLC

CC: BLM-S Borchardt, G Miller, J Patrovsky

Thank you for your comment, April Sall.

The comment tracking number that has been assigned to your comment is SolarM60259.

Comment Date: September 14, 2009 19:26:12PM
Solar Energy Development PEIS
Comment ID: SolarM60259

First Name: April
Middle Initial:
Last Name: Sall
Organization: The Wildlands Conservancy
Address: 39611 Oak Glen Rd. #12
Address 2:
Address 3:
City: Oak Glen
State: CA
Zip: 92399
Country: USA
Email: april@wildlandsconservancy.org
Privacy Preference: Don't withhold name or address from public record
Attachment: Solar_PEIS_Comments_09_2.doc

Comment Submitted:

September 14th, 2009

Delivered via e-mail (project website), and U.S. mail with attachments

Solar Energy PEIS
Argonne National Laboratory
9700 Cass Avenue
EVS/900
Argonne, IL 60439

The Wildlands Conservancy
39611 Oak Glen Rd. #12
Oak Glen, CA 92399

RE: Scoping Comments for the Solar Energy Development Programmatic EIS: Solar Energy Study Areas (SESA's)

Dear BLM and DOE staff:

The Wildlands Conservancy (hereafter, TWC) would like to thank the Bureau of Land Management and the Department of the Interior for the opportunity to provide public scoping comments on the Solar Programmatic Environmental Impact Statement (PEIS); which is aiming to further develop solar energy resources on 24 tracts of BLM-administered lands throughout the south west states (California, Utah, Arizona, New Mexico, Nevada, and Colorado), which are designated as Solar Energy Study Areas (hereafter SESA's). These scoping comments will focus on the California SESA's.

TWC is a 501c3 non-profit public benefit corporation with the dual mission to preserve the beauty and biodiversity of our earth for present and future generations, and to provide free outdoor education to our youth. TWC has preserved more land in California with private funding than any other conservation organization and owns the largest non-profit preserve system in CA.

TWC is extremely supportive of renewable energy development and eliminating our dependence on fossil fuel energy sources and reducing our carbon footprint. TWC leads by example; our first preserve was established off-the-grid and self-sufficient in 1995. Since that time we have installed photovoltaic solar arrays on the majority of our preserves. TWC has a strong vested interest in the current renewable energy discussion and corresponding developments being proposed on federal lands within the California Desert region.

TWC is passionate about land conservation and preserving intact, functioning ecosystems. We initiated the largest private land acquisition project in U.S. History, The Catellus Land Purchase. This purchase of over 600,000 acres in the CA Desert connected Joshua Tree National Park to Mojave National Preserve with public conservation lands. These lands were all gifted to the Dept. of the Interior for management of their conservation resources and values. Just 4 years after the completion of this project, applications for renewable energy projects and the ‘greening’ of California’s energy supply has become a targeted goal. This can be accomplished while continuing to protect our treasured landscapes and fragile ecosystems.

TWC is an advocate for the preservation of the unique and sensitive lands of the Mojave Desert, and we request that the following comments be applied to the PEIS to maintain the conservation, historic, and recreation values of these public lands.

One of our goals is to facilitate the determination of the Solar Energy Zones’ (SEZ’s) from analysis of the SESA’s. We hope that you will consider our rationale for why these SESA’s need to be further considered and revised for solar energy development in attempt to maintain conservation values within the California Desert Conservation Area (CDCA). We highly praise and thank the BLM for their hard work in identifying the lands in each SESA; however we are suggesting that these SESA’s be scaled down in size to minimize environmental impacts in the CDCA. The following comments are formulated to further identify the most appropriate lands for solar development.

In an effort to facilitate the BLM’s daunting task of identifying suitable public lands for solar development, a number of environmental organizations including TWC have worked together to develop a desert siting criteria memo specifically designed for use by the BLM in the California Desert Conservation Area (CDCA). These criteria will help to identify lands both within and outside the SESA’s that are lower in environmental resources and sensitivity. This memo is attached and should be utilized in the Solar PEIS SESA and SEZ designation.

We understand that the goal of the Solar PEIS is to attain the targets established by Congress as set forth in Title II, Section 211 of the Energy Policy Act of 2005, the Executive Order 13212, Actions to Expedite Energy-Related Projects, and in response to the Secretary of the Interior’s Secretarial Order No. 3285 issued March 11th, 2009. The PEIS will assist agencies to develop and implement agency-specific programs that would establish environmental policies and environmental impact mitigation strategies for solar development.

We hope for the Solar PEIS to utilize a constructive and conservation biology approach to SESA (and ultimately SEZ) designation, as there are appropriate lands available for solar development that, if developed, will deliver minimal harm to the sensitive desert environment and surrounding resources.

- **SESA necessity (Executive Order Compliance):**

The executive order does not seem to favor production over conservation, as it calls for executive departments to expedite projects that will increase the production, transmission, or conservation of energy. Considering that conservation efforts can significantly reduce GHG emissions alone

Without altering the environment or land use values, we feel that these SESA's are unnecessary as the first step in combating climate change.

- **EPA 2005 compliance:**

The Solar PEIS NOI of May 29th, 2008 refers to the need to fulfill the requirements of the EPA 2005 (title...). This section of the EPA states that the Secretary of the Interior should within 10 years of enactment of the Act "...seek to have approved non-hydropower renewable energy projects located on public lands with a generation capacity of at least 10,000 MW of electricity." With 66 active solar applications on public lands with the current projected capacity to generate 48,000 MW, and more projected from existing wind and geothermal project applications, compliance with this stated section of the EPA 2005 is already assured, therefore eliminating the need for many large-scale solar projects within the SESA's and the CDCA.

- **Solar Energy Study Area Maps (CA):**

- The lands between JTNP and MCAGCC that are designated as BLM lands being analyzed for solar development in the PEIS: These lands are in direct wildlife linkages from the park to the marine base (note SCW linkages study).
- Lands that border MCAGCC between JTNP and Mojave National Preserve—these include Catellus sections and fall within proposed national monument boundary—need to be removed from analysis. They also include several ACEC's, WSA's and DWMA's such as Pisgah Lava Flow ACEC.
- Contingent corridors: we request that the corridor along hwy 62 and hwy 247 through the Big Morongo Canyon ACEC and TWC lands (Pioneertown Mts. Preserve) be removed from the CA SESA map.

We understand that 24 tracts of BLM-administered land public lands in the west will be designated as prime zones for utility-scale solar energy development, and that they will work to fund environmental studies and open new solar energy permitting offices and speed the reviews of industry proposals (taken from Secretary Ken Salazar's Press Release Announcing 'Fast Track' Initiatives for Solar Energy Development on Western Lands, June 29th, 2009).

'The BLM will continue to process existing renewable energy applications both within and outside the solar energy study areas'. This should not be the case. Once the SESA's are in place, only here should applications be continued to be processed, and not outside them. There

were already 158 active solar applications covering 1.8 million acres with a projected capacity to generate 97,000 MW of electricity. Some of these applications may gain approval, and some are not even ‘real’; they are from speculators. This much public land is more than necessary even

Without considering other renewable energy options, including conservation, the use of previously disturbed lands (both private and public), and local distributed RE generation such as solar PV on rooftops of commercial and residential buildings. Therefore, land outside of these SESA’s should no longer be needed for consideration of solar development.

The BLM has accepted many solar transmission applications for ROWS in environmentally sensitive areas and in areas that have no access to sufficient existing transmission and are far from designated transmission corridors. We are requesting that no solar projects be approved outside of the solar energy zones developed using the SESA’s to determine areas with the minimal environmental impacts.

- The need for large-scale solar utilities is being overestimated and fails to protect and consider land values (environmental, recreational, historical, scenic, and cultural). If this much public land is set aside for solar, all these other values will be either lost or severely damaged.
- **Prioritization of degraded/disturbed lands (both public and private)**
- In parallel develop as rapidly as possible distributed generation (DG), retrofitting, and energy efficiency practices. This will determine how much land is truly necessary for large-scale solar. This can and should be included in the discussion as it plays a significant role in renewable energy development.
- Rooftop solar, PV, and other forms of DG will become more economically feasible as time goes on, and they will be expedited. New figures suggest rooftop PV will reach and be competitive with fossil fuel energy by 2011.
 - US DOE states regarding its Solar Energy Technology Program: “PV systems built in ‘brownfields’—the estimated 5 million acres of abandoned industrial sites in our nation’s cities—could supply 90% of America’s current electricity”. This does not even include the potential for PV systems on rooftops.
- Private lands such as fallowed ag-lands need to be considered first and prioritized over public, intact BLM lands
- **Specific comments to each SESA:** specific areas to prioritize for solar development and areas to eliminate from each SESA

We understand that not all of the land in each SESA will be developed for solar electricity production; however we want to ensure that the applications that do get permitted are done so in the most appropriate areas of each SESA. This includes the lands that are closest to existing transmission, and previously disturbed/degraded lands.

The Solar PEIS website states that ‘threatened and endangered species designated critical habitat, wildlife movement corridors, and BLM ACEC’s and DWMAS’ would be

excluded from lands within the solar energy study areas. Sections of each SESA seem to violate this standard:

- **Iron Mountain SESA:** This SESA is one the 2 SESA’s that we recommend be eliminated altogether from solar energy development studies due to highly sensitive resources and inconsistency with our siting criteria:
 - Again, located within the core of CA desert region; provides core habitat
 - Remote and isolated from adequate existing transmission
 - Would effectively sever important connectivity in the Mojave/Coloradan desert eco-tone and the conservation investments already in place, biologically disconnecting areas that currently allow for movement of plants and animals through the landscape
 - Desert Tortoise habitat
 - Sensitive cultural sites (see comments from The Wilderness Society)
 - If developed, would likely compromise existing desert bighorn sheep movement corridors
 - Opportunities currently exist to improve essential connectivity across the MWD aqueduct, including improvements to movement for desert tortoise, bighorn sheep and other wide-ranging animals that should not be precluded.
 - Includes citizen’s proposed wilderness inventory lands
 - Rare plant occurrences such as white-margined beardtongue (*Penstemon albomarginatus*)
 - Western edge overlaps know Bighorn Sheep range
 - Large drainage with functions as ephemeral stream

- **Riverside East**—located w/in core of CA desert; DWMA for Desert Tortoise in western part of this SESA; Desert Tortoise critical habitat outside of DWMA/ACEC boundary in western and southern areas of this SESA; identified desert tortoise habitat in western, northwestern, and northeastern part of this SESA (CNDDDB 2009); severs the connectivity and linkage b/w N. Colorado and Eastern Co. desert tortoise recovery units that is used in the Draft Revised Recovery Plan to justify combining these 2 units; new plant species in the process of being described around Palen dry lake; numerous sensitive cultural sites;

Colorado Desert aboriginal trails; could compromise desert bighorn sheep movement corridors; rare plant occurrences

- Areas of this SESA may become possible donations to Joshua Tree National Park
 - No ‘brownfields’ are located within this SESA
 - Eastern part and Ford Dry lake has few disturbed lands (mechanically)

 - Blythe airport—disturbed lands above it (abandoned alfalfa fields)
 - If developed, this would effectively sever important connectivity in the Mojave/Coloradan desert eco-tone and the conservation investments already in place, biologically disconnecting areas that currently allow for movement of plants and animals through the landscape; the western portion of this SESA is dense microphyll woodland and is a transition zone between Mojave and Sonoran Desert eco-regions.

 - There are opportunities that currently exist to improve essential connectivity across the I-10 corridor, including improvements to movement for desert tortoise, bighorn sheep and other wide-ranging animals and should not be precluded.
 - Threats to potential wildlife linkages around JTNP
 - Cumulative impacts of potential solar and other projects on the boundary of JTNP are of significant concern
 - Palen Dry Lake: sensitive microphyll woodland habit surrounds this feature and includes newly discovered plant species
 - Sensitive cultural resources: South McCoy Mts., Papago Creation site north of Desert Center, Ford Dry Lake, Palen Dry Lake, Colorado Desert Aboriginal trails, and Sidewinder Well ACEC
- **Pisgah SESA:** We recommend this SESA to be either eliminated or significantly reduced in size to avoid impacts to the following:
- Desert Tortoise movement corridor and occupied habitat along western edge of Cady Mts. to maintain connectivity between the Ord-Rodman DWMA/ACEC and the Superior-Cronese DWMA/ACEC
 - Sensitive cultural sites: The eastern end of this SESA has trails out of the mountains to the ancient lake bed, sleeping rings, and obsidian chipping sites
 - Rare plant occurrences (i.e. *Penstemon albomarginata*)

- Pisgah Lava Flow ACEC (site for numerous long-term evolutionary biological studies and new species discovery)
 - The northern boundary of this SESA extends into rare plant habitat and we would like to see it moved slightly further south
-
- This SESA is directly adjacent to Pisgah lava flow ACEC and Cady Mts. WSA
 - East-west corridor of movement for Desert Tortoise
-
- **Imperial East SESA:** We recommend this SESA be reduced as appropriate to avoid impacts to the following:
 - Sensitive cultural sites
 - Riparian habitat areas adjacent to the All-American canal
 - Flat-tailed horned lizard range
 - This SESA best fulfills the desert siting criteria memo (attached) to analyze/ study solar potential, and possible development.

Conclusion: We recommend several lands that may be further analyzed to potentially replace the SESA's we are requesting be eliminated from solar energy study and development. These include lands in Antelope Valley and Westmoreland

Final Issues and Recommendations:

- **Light blue areas on CA SESA map:** BLM lands being analyzed for solar development in PEIS—we suggest that the need for these lands outside the designated SESA's be eliminated. These areas should not be analyzed until the SESA's have been thoroughly analyzed finalized, as the acreage amounts in these already exceed the total need.
- **Desert Siting Criteria:** Many environmental organizations have worked together to determine areas within California, including the CDCA, that are appropriate for solar development, emphasizing on previously disturbed lands (both private and public) that are close to existing transmission and urban load centers. (see attached Desert Siting Criteria Memo)
- **Climate change** has increased the need to preserve wildlife linkages; therefore the PEIS should address ecosystem protection and conservation, as global climate change causes habitat fragmentation and degradation, causing wildlife to move out of their current ranges.

- **Solar Technologies untested at this scale:** Another thing to consider is that many of these solar technologies being proposed has been untested at the scale they are requesting. This has to be considered before hundreds of thousands of acres of public land acres are destroyed by solar development, because if these plants are built and then become inoperable, the land has been wasted, and cannot be restored.

- **Water issues:** Concentrated solar thermal power plants (CSP) require large amounts of water to function and operate properly. The desert has limited water resources, and its simply unrealistic and ludicrous to assume that water will be available (as groundwater) in the sites many of these projects are being proposed as it just is not available. The little water that does exist in the desert is needed to maintain aquifer levels for wildlife and plants. This means that if a CSP plant does get permitted in any one of these desert sites, it will have to bring water in from elsewhere, increasing the carbon footprint that we are trying to eliminate by producing solar electricity in the first place.
- **We strongly urge you to consider previously disturbed lands** such as fallowed agricultural lands and ‘brownfields’ first, rather than undisturbed lands that cannot be restored once destroyed. This applies to both private and public lands.

Finally, we want to stress that we are highly supportive of renewable energy generation, and even solar generation, in the California Desert. However, it needs to be sited in the appropriate locations such as **previously disturbed private and public lands** before considering untouched, pristine desert landscapes, and achieved through distributed generation (i.e. PV). We have attached the Desert Siting Criteria memo for your examination to find these more appropriate lands for solar development.

**Note: TWC supports the CA SESA comment portion of the group comment document submitted by The Wilderness Society, NRDC and Sierra Club, et al.

Thank you for the opportunity to provide insight and comment regarding the Solar Programmatic Environmental Impact Statement.

Sincerely,

A handwritten signature in black ink on a light yellow background. The signature is cursive and appears to read 'April Sall'.

April Sall, Conservation Director
The Wildlands Conservancy

Thank you for your comment, April Sall.

The comment tracking number that has been assigned to your comment is SolarM60260.

Comment Date: September 14, 2009 19:28:38PM
Solar Energy Development PEIS
Comment ID: SolarM60260

First Name: April
Middle Initial:
Last Name: Sall
Organization: The Wildlands Conservancy
Address: 39611 Oak Glen Rd.
Address 2:
Address 3:
City: Oak Glen
State: CA
Zip: 92399
Country: USA
Email: april@wildlandsconservancy.org
Privacy Preference: Don't withhold name or address from public record
Attachment: Desert Siting Criteria Memo June 29.pdf

Comment Submitted:

Audubon California
California Native Plant Society * California Wilderness Coalition
Center for Biological Diversity * Defenders of Wildlife
Desert Protective Council * Mojave Desert Land Trust
National Parks Conservation Association
Natural Resources Defense Council * Sierra Club * The Nature Conservancy
The Wilderness Society * The Wildlands Conservancy

Renewable Siting Criteria for California Desert Conservation Area

Environmental stakeholders have been asked by land management agencies, elected officials, other decision-makers, and renewable energy proponents to provide criteria for use in identifying potential renewable energy sites in the California Desert Conservation Area (CDCA). Large parts of the California desert ecosystem have survived despite pressures from mining, grazing, ORV, real estate development and military uses over the last century. Now, utility scale renewable energy development presents the challenge of new land consumptive activities on a potentially unprecedented scale. Without careful planning, the surviving desert ecosystems may be further fragmented, degraded and lost.

The criteria below primarily address the siting of solar energy projects and would need to be further refined to address factors that are specific to the siting of wind and geothermal facilities. While the criteria listed below are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. They were developed with input from field scientists, land managers, and conservation professionals and fall into two categories: 1) areas to prioritize for siting and 2) high conflict areas. The criteria are intended to guide solar development to areas with comparatively low potential for conflict and controversy in an effort to help California meet its ambitious renewable energy goals in a timely manner.

Areas to Prioritize for Siting

- Lands that have been mechanically disturbed, i.e., locations that are degraded and disturbed by mechanical disturbance:
 - Lands that have been “type-converted” from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use).¹
- Public lands of comparatively low resource value located adjacent to degraded and impacted private lands on the fringes of the CDCA:²
 - Allow for the expansion of renewable energy development onto private lands.
 - Private lands development offers tax benefits to local government.
- Brownfields:
 - Revitalize idle or underutilized industrialized sites.
 - Existing transmission capacity and infrastructure are typically in place.

- Locations adjacent to urbanized areas:³
 - Provide jobs for local residents often in underserved communities;
 - Minimize growth-inducing impacts;
 - Provide homes and services for the workforce that will be required at new energy facilities;
 - Minimize workforce commute and associated greenhouse gas emissions.
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locations proximate to load centers.
- Locations adjacent to federally designated corridors with existing major transmission lines.⁴

High Conflict Areas

In an effort to flag areas that will generate significant controversy the environmental community has developed the following list of criteria for areas to avoid in siting renewable projects. These criteria are fairly broad. They are intended to minimize resource conflicts and thereby help California meet its ambitious renewable goals. The criteria are not intended to serve as a substitute for project specific review. They do not include the categories of lands within the California desert that are off limits to all development by statute or policy.⁵

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant⁶ populations of federal or state threatened and endangered species,⁷ significant populations of sensitive, rare and special status species,⁸ and rare or unique plant communities.⁹
- Areas of Critical Environmental Concern, Wildlife Habitat Management Areas, proposed HCP and NCCP Conservation Reserves.¹⁰
- Lands purchased for conservation including those conveyed to the BLM.¹¹
- Landscape-level biological linkage areas required for the continued functioning of biological and ecological processes.¹²
- Proposed Wilderness Areas, proposed National Monuments, and Citizens' Wilderness Inventory Areas.¹³
- Wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands.¹⁴
- National Historic Register eligible sites and other known cultural resources.
- Locations directly adjacent to National or State Park units.¹⁵

EXPLANATIONS

¹ Some of these lands may be currently abandoned from those prior activities, allowing some natural vegetation to be sparsely re-established. However, because the desert is slow to heal, these lands do not support the high level of ecological functioning that undisturbed natural lands do.

² Based on currently available data.

³ Urbanized areas include desert communities that welcome local industrial development but do not include communities that are dependent on tourism for their economic survival.

⁴ The term "federally designated corridors" does not include contingent corridors.

⁵ Lands where development is prohibited by statute or policy include but are not limited to:

National Park Service units; designated Wilderness Areas; Wilderness Study Areas; BLM National Conservation Areas; National Recreation Areas; National Monuments; private preserves and reserves; Inventoried Roadless Areas on USFS lands; National Historic and National Scenic Trails; National Wild, Scenic and Recreational Rivers; HCP and NCCP lands precluded from development; conservation mitigation banks under conservation easements approved by the state Department of Fish and Game, U.S. Fish and Wildlife Service or Army Corps of Engineers a; California State Wetlands; California State Parks; Department of Fish and Game Wildlife Areas and Ecological Reserves; National Historic Register sites.

⁶ Determining “significance” requires consideration of factors that include population size and characteristics, linkage, and feasibility of mitigation.

⁷ Some listed species have no designated critical habitat or occupy habitat outside of designated critical habitat. Locations with significant occurrences of federal or state threatened and endangered species should be avoided even if these locations are outside of designated critical habitat or conservation areas in order to minimize take and provide connectivity between critical habitat units.

⁸ Significant populations/occurrences of sensitive, rare and special status species including CNPS list 1B and list 2 plants, and federal or state agency species of concern.

⁹ Rare plant communities/assemblages include those defined by the California Native Plant Society’s Rare Plant Communities Initiative and by federal, state and county agencies.

¹⁰ ACECs include Desert Tortoise Desert Wildlife Management Areas (DWMAs). The CDCA Plan has designated specific Wildlife Habitat Management Areas (HMAs) to conserve habitat for species such as the Mohave ground squirrel and bighorn sheep. Some of these designated areas are subject to development caps which apply to renewable energy projects (as well as other activities).

¹¹ These lands include compensation lands purchased for mitigation by other parties and transferred to the BLM and compensation lands purchased directly by the BLM.

¹² Landscape-level linkages provide connectivity between species populations, wildlife movement corridors, ecological process corridors (e.g., sand movement corridors), and climate change adaptation corridors. They also provide connections between protected ecological reserves such as National Park units and Wilderness Areas. The long-term viability of existing populations within such reserves may be dependent upon habitat, populations or processes that extend outside of their boundaries. While it is possible to describe current wildlife movement corridors, the problem of forecasting the future locations of such corridors is confounded by the lack of certainty inherent in global climate change. Hence the need to maintain broad, landscape-level connections. To maintain ecological functions and natural history values inherent in parks, wilderness and other biological reserves, trans-boundary ecological processes must be identified and protected. Specific and cumulative impacts that may threaten vital corridors and trans-boundary processes should be avoided.

¹³ Proposed Wilderness Areas: lands proposed by a member of Congress to be set aside to preserve wilderness values. The proposal must be: 1) introduced as legislation, or 2) announced by a member of Congress with publicly available maps. Proposed National Monuments: areas proposed by the President or a member of Congress to protect objects of historic or scientific interest. The proposal must be: 1) introduced as legislation or 2) announced by a member of Congress with publicly available maps. Citizens' Wilderness Inventory Areas: lands that have been inventoried by citizens groups, conservationists, and agencies and found to have defined “wilderness characteristics.” The proposal has been publicly announced.

¹⁴ The extent of upland habitat that needs to be protected is sensitive to site-specific resources. For example: the NECO Amendment to the CDCA Plan protects streams within a 5-mile radius of Townsend big-eared bat maternity roosts; aquatic and riparian species may be highly sensitive to changes in groundwater levels.

¹⁵ Adjacent: lying contiguous, adjoining or within 2 miles of park or state boundaries. (Note: lands more than 2 miles from a park boundary should be evaluated for importance from a landscape-level linkage perspective, as further defined in footnote 12).

Thank you for your comment, Michael Crow.

The comment tracking number that has been assigned to your comment is SolarM60261.

Comment Date: September 14, 2009 19:41:38PM
Solar Energy Development PEIS
Comment ID: SolarM60261

First Name: Michael
Middle Initial:
Last Name: Crow
Organization: Arizona State University
Address: Office of the President
Address 2:
Address 3:
City: Tempe
State: AZ
Zip: 85287
Country: USA
Email: todd.hardy@asu.edu
Privacy Preference: Don't withhold name or address from public record
Attachment: BLM Comments & Attachments 09-14-09.pdf

Comment Submitted:


ARIZONA STATE UNIVERSITY

September 14, 2009

Attn: Lisa Jorgensen
and Linda Resseguie
Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Re: Identification of Solar Energy Study Areas in the Development of a Programmatic Environmental Impact Statement pursuant to Title II, Section 211 of the Energy Policy Act of 2005, in accordance with Executive Order 13212, Actions to Expedite Energy-Related Projects, and in response to the Secretary of the Interior's Secretarial Order No. 3285 issued March 11, 2009

Dear Ms. Jorgensen and Resseguie:

On June 30, 2009, The U.S. Department of Energy ("DOE") and the Bureau of Land Management ("BLM") (DOE and BLM together the "Agencies") issued a *Federal Register* Notice of Availability informing the public of the availability of the solar energy study area maps, and soliciting public comments for consideration in identifying environmental issues, existing resource data, and industry interest with respect to the proposed study areas. These comments are offered by the Arizona Board of Regents for and on behalf of Arizona State University ("ASU") in response to the June 30, 2009 Notice of Availability.

ASU files these comments in support of the overall objective of identifying federal land and overall procedures that can be used to speed the development and use of solar energy for the benefit of residents and businesses in areas served by the Region. Finding pathways to develop renewable energy resources in an environmentally responsible way, and with minimal delay, is a national objective we share. We at ASU are actively working toward that goal in a collection of multidisciplinary initiatives conducted with significant federal and private support. *However, our comments below also offer specific observations and suggestions centered on the strong belief that the current effort to identify solar study areas in Arizona significantly and unnecessarily understates the opportunity to advance an appropriate solar agenda in the Region.*

Background

The Agencies are preparing a draft Programmatic Environmental Impact Statement ("PEIS") pursuant to the National Environmental Policy Act to evaluate utility-scale solar energy development in six Western states: Arizona, California, Colorado, Nevada, New Mexico, and Utah (collectively the "Region"). On the basis of the information and analyses developed in the PEIS, the Agencies will develop and implement agency-specific programs that would establish environmental policies and environmental impact mitigation strategies for optimum solar energy development throughout the Region. In the course of the PEIS analyses, the Agencies have identified a number of tracts of BLM-administered land for in-depth study. Some or all of the proposed solar energy study areas identified in the analyses may be found appropriate for designation as "solar energy zones" in the future.

OFFICE OF THE PRESIDENT

FULTON CENTER AT COLLEGE AVENUE AND UNIVERSITY DRIVE
PO BOX 877705, TEMPE, AZ 85287-7705
(480) 965-8972 FAX: (480) 965-0865
www.asu.edu/president

Thus far, out of over 12 million acres of BLM land in Arizona, three solar energy study areas have been identified by BLM in Arizona: Brenda (4,321 acres), Bullard Wash (8,201 acres), and Gillespie (3,970 acres) (collectively the “Arizona Study Areas”). As discussed in more detail below, the preliminary selection of the Arizona Study Areas resulted from a methodology and process that we believe was far too restrictive in its approach. Its current direction yields dramatically inconsistent results within the Region and fails to satisfy the objective of creating a pathway for streamlined optimization of appropriate use of federal lands to enhance the use of solar energy in Arizona and the southwestern United States.

Our recommendations for corrective action in this process are included below. They are proposed to ensure that: (1) analyses related to the subject PEIS achieve their intended objectives; and (2) study areas and “solar energy zones” are ultimately identified within parameters that leverage the full potential for responsible deployment throughout the Region and particularly in Arizona...the state most agree has the greatest solar resource of any state in the country.

Preliminary Selection of Study Areas in the Region

The criteria suggested by BLM for the selection of solar study areas in the Region were framed in an effort to identify those parcels on which solar energy could be reasonably and responsibly developed, without undue delay. The apparent objective was to create opportunities for early solar deployment in conjunction with the development of the PEIS. It was suggested that land be designated for analyses, outside “sensitive resource areas”¹:

- in areas with solar insolation of 6.5 kilowatt-hours per square meter per day or above;
- with slope less than 5%;
- within 25 miles of transportation corridors or transmission lines; and
- on tracts of 2,000 acres or more.

The methodology chosen in the selection of the Arizona Study Areas amended the general criteria by: (1) tightening the general selection criteria (e.g. increasing the minimum tract size to 2,500 acres)²; and (2) employing different criteria that significantly limited the eligibility of BLM land for review.

Variant and supplemental criteria that further reduced the inventory of BLM land considered for solar study area treatment in Arizona involved:

1. excluding areas of “high sensitivity”;³

¹ For purposes of study area selection, “sensitive resource areas” included:

- (1) National Landscape Conservation System lands (except that lands within the California Desert Conservation Area that have no other special designation may be included in a solar energy study area);
- (2) Threatened and endangered species designated critical habitat;
- (3) Back-country byways;
- (4) Areas of known Tribal concern;
- (5) Areas of known high cultural site density; and
- (6) Areas designated for right-of-way avoidance or right-of-way exclusion in BLM land use plans. Such areas include BLM areas of critical environmental concern, areas with important visual resources, special recreation management areas, areas allocated to maintain wilderness characteristics, wildlife movement corridors, and areas where the BLM has made a commitment to take certain actions with respect to sensitive species habitat.

² It is not clear if the 6.5 insolation rating and the suggested 25 mile criterion were used in the selection of the Arizona Study Areas. Reports of consideration of “high” isolation and areas “near” transportation and transmission lines were reported.

³ “High Sensitivity” criteria included: Areas of Critical Environmental Concern, Areas Allocated to Maintain Wilderness Characteristics, Desert Tortoise Habitat Category 1 and 2, Visual Resource Management (VRM) Classes I and II, Wildlife

2. excluding areas of “medium sensitivity”;⁴
3. excluding Arizona Game & Fish Territories; and
4. excluding area that is the subject of an existing solar development application.

The additional exclusions employed in Arizona in 1 and 2 above may well be necessary in some measure to protect environmentally sensitive areas. The effect of exclusions 1 and 2 have on the process should be examined in the final analysis. However, even though we do not know how much BLM land was removed from consideration based on 1 and 2, for the purposes of these comments, their impact is secondary compared to the effects of 3 and 4 above.

The additional exclusions noted in 3 and 4 above eliminate virtually all BLM land in Arizona by application and all land of current commercial development interest by definition. As shown in Attachment 1, the filter utilized to exclude Arizona Game & Fish Territories blanket the entire state. Arizona is blessed with abundant wildlife and land that needs to be carefully preserved to support it. However, the related land exclusion here requires qualitative analysis to be meaningful, not an automatic application. Likewise, there is no need to categorically exclude all land under current application. To do so, in combination with all of the supplemental layered exclusions applied in Arizona, produces tracts of land that no one will presumably have an objection to...but that no one has a stated interest in developing.

The current Arizona Study Areas are the product of a risk adverse approach that is not as productive or informative as it should be at this stage in the process. The approach taken so far in Arizona was well intentioned. It was an attempt to minimize objection for speedy processing while identifying new sites for development. Unfortunately, it offers minimal room for review and study in the state with the most opportunity and potential.

Each of the BLM offices in the other states in the Region reported that study areas were identified in using criteria that were not as restrictive as those used in Arizona. None reported such blanket exclusions as those prompted by the use of Arizona Game & Fish Territories. None reported that areas subject to existing applications were excluded.

The total acreage included in the proposed study areas in each state throughout the Region is summarized in Attachment 2. It shows that differences in approaches in each state resulted in dramatically different results:

- Arizona Study Areas represent the smallest total acreage proposed in any state the Region.
- Three states propose study areas of more than 100,000 acres each compared to 16,492 acres for Arizona’s total study area.
- Nevada suggested the study of seven separate sites totaling nine times the total area designated in Arizona.
- In a percentage comparison of total study area acreage to total BLM land in each state, Arizona has the smallest proposed total study area of the five states with significant areas of solar isolation over 6.5.

Movement, Wild Horse and Burro Herd Management Areas, Sensitive Species Habitat, Right-Of-Way Avoidance Areas, Back Country Byways, Areas of Tribal Concern. The degree to which these criteria differed from the general guidelines is not yet available.

⁴ “Medium Sensitivity” criteria included: Special Recreation Management Areas, VRM Class III, Areas inventoried as having Wilderness Characteristics, Allocated Utility Corridors, and Desert Tortoise Habitat Category 3. The degree to which these criteria differed from the general guidelines is not yet available.

- California has only 19% more BLM land than Arizona, but its total proposed study area is more than 21 times, or 2,100%, greater than the size of the Arizona Study Areas.

The disparity in approaches and uneven results suggest that an alternative procedure and objective is necessary.

Recommendations

First, the identification of solar study areas should begin with the consideration of BLM land that is not likely to present environmental concern. There are over 12 million acres of BLM land in Arizona. As shown in Attachment 3, over 4 million acres of BLM land in Arizona are considered to be of “moderate” or “low” known sensitivity. As shown in Attachment 4, after consideration of solar insolation and slope as suggested in this matter, Arizona offers almost 1 million acres of “moderate” and “low” sensitivity BLM land. In fact, over 780,000 acres of BLM land in Arizona has insolation of over 6.5, slope of less than 5%, and “low” known environmental sensitivity. If further reduction of that filtering process is warranted due to environmental concerns, it should be conducted in phased review of study areas as they are honed to produce the most appropriate areas in which to promote solar development. Wholesale application of Game & Fish Territories should be replaced with objective review and analysis.

Second, areas that are the subject of existing applications should not be excluded. Apparently no other state did so in designating study areas. Given the ultimate need to actually develop the land, exclusions in this vein are unproductive.

Third, uniform minimum tract size for study areas should be established for all states in the Region. Given current and expected advances in technology minimum tract size should be re-considered.

Fourth, the approaches in each of the states of the Region should be normalized for uniform assessment of opportunities to develop solar energy. The disparities among the six states in the Region noted above and in Attachment 2 should not be allowed to stand. Any process that places the lowest priority on the state of highest potential is suspect and needs to be modified, to at least assure consideration of all states on equal terms.

Fifth, the Restoration Design Energy Project, an effort to examine remediation of disturbed or previously developed BLM land, should be directly connected with this review.

Sixth, a collaborative effort by representatives of the Agencies and each of the states in the Region should be initiated within the next thirty days to further advise the Agencies. As soon as the appropriate experts can be identified by all concerned, they should convene to refine, normalize, and finally establish the criteria that will determine where areas should be studied. Even more importantly, the group could thereafter also help to identify and prioritize the opportunities to develop solar energy in each state after careful review of the individual characteristics of proposed sites.

Summary

The solar study area approach taken so far in Arizona focuses on identifying land where virtually no one will have an objection and which in all probability will not be developed by commercial interests. It simply “looks through the wrong end of the telescope”. There is no compelling reason why more restrictions and exclusions should be applied to the study of opportunities for solar development in the state with the most solar insolation. Instead, areas of study should be considered with a uniform approach that favors maximum results. The process should involve deeper examination of circumstances in each category considered. Opportunities should be sorted with a goal of identifying the best possible sites that

have the real potential to produce a targeted amount of energy...on terms that are consistent throughout the Region.

Should our suggestion that the collaborative effort mentioned above be accepted, ASU is willing to host and organize the effort. We are also interested in helping to sort through the important environmental and development issues that attach here in any way that we can be of assistance.

Sincerely,



Michael M. Crow
President

MMC:th
/c

Attachments (4)

c: Jim Kenna
State Director
Arizona State Office
Bureau of Land Management
One North Central Avenue
Suite 800
Phoenix, AZ 85004-4427

Arizona Game and Fish Territory

"Study Area" Procedure - Step 1



Source: Map provided from the BLM Arizona State Office. It was produced for the BLM Renewable Energy Conflict Analysis report as one of the procedure steps for Solar Study Area selection. BLM Arizona State Office obtained the data from the Arizona Game and Fish department.

ARIZONA

Solar Energy Study Areas	Acreage
Brenda	4,321
Bullard Walsh	8,201
Gillespie	3,970
Total	16,492

Total Managed BLM Surface Acres of Public Lands	12,200,000
Percentage of Solar Study Areas over Total BLM Managed Area	0.14%

CALIFORNIA

Solar Energy Study Areas	Acreage
Imperial East*	12,830
Iron Mountain*	109,642
Pisgah*	26,282
Riverside East*	202,295
Total	351,049

Total Managed BLM Surface Acres of Public Lands**	15,200,000
Percentage of Solar Study Areas over Total BLM Managed Area	2.31%

COLORADO

Solar Energy Study Areas	Acreage
Antonito Southeast	9,598
De Tilla Gulch*	1,522
Fourmile East	3,882
Los Mogotes East	5,909
Total	20,911

Total Managed BLM Surface Acres of Public Lands	8,300,000
Percentage of Solar Study Areas over Total BLM Managed Area	0.25%

NEVADA

Solar Energy Study Areas	Acreage
Amargosa Valley*	32,699
Dry Lake*	16,516
Delamar Valley	17,932
Dry Lake North	49,775
East Mormon Mountain	7,418
Gold Point	5,830
Miller's	19,205
Total	149,375

Total Managed BLM Surface Acres of Public Lands	48,000,000
Percentage of Solar Study Areas over Total BLM Managed Area	0.31%

NEW MEXICO

Solar Energy Study Areas	Acreage
Afton*	55,810
Mason Drew	17,984
Red Sand	47,666
Total	121,460

Total Managed BLM Surface Acres of Public Lands	13,400,000
Percentage of Solar Study Areas over Total BLM Managed Area	0.91%

UTAH

Solar Energy Study Areas	Acreage
Escalante Valley	6,648
Milford Flats South	6,440
Wah Wah Valley	3,676
Total	16,764

Total Managed BLM Surface Acres of Public Lands	22,900,000
Percentage of Solar Study Areas over Total BLM Managed Area	0.07%

*Study area includes pending applications

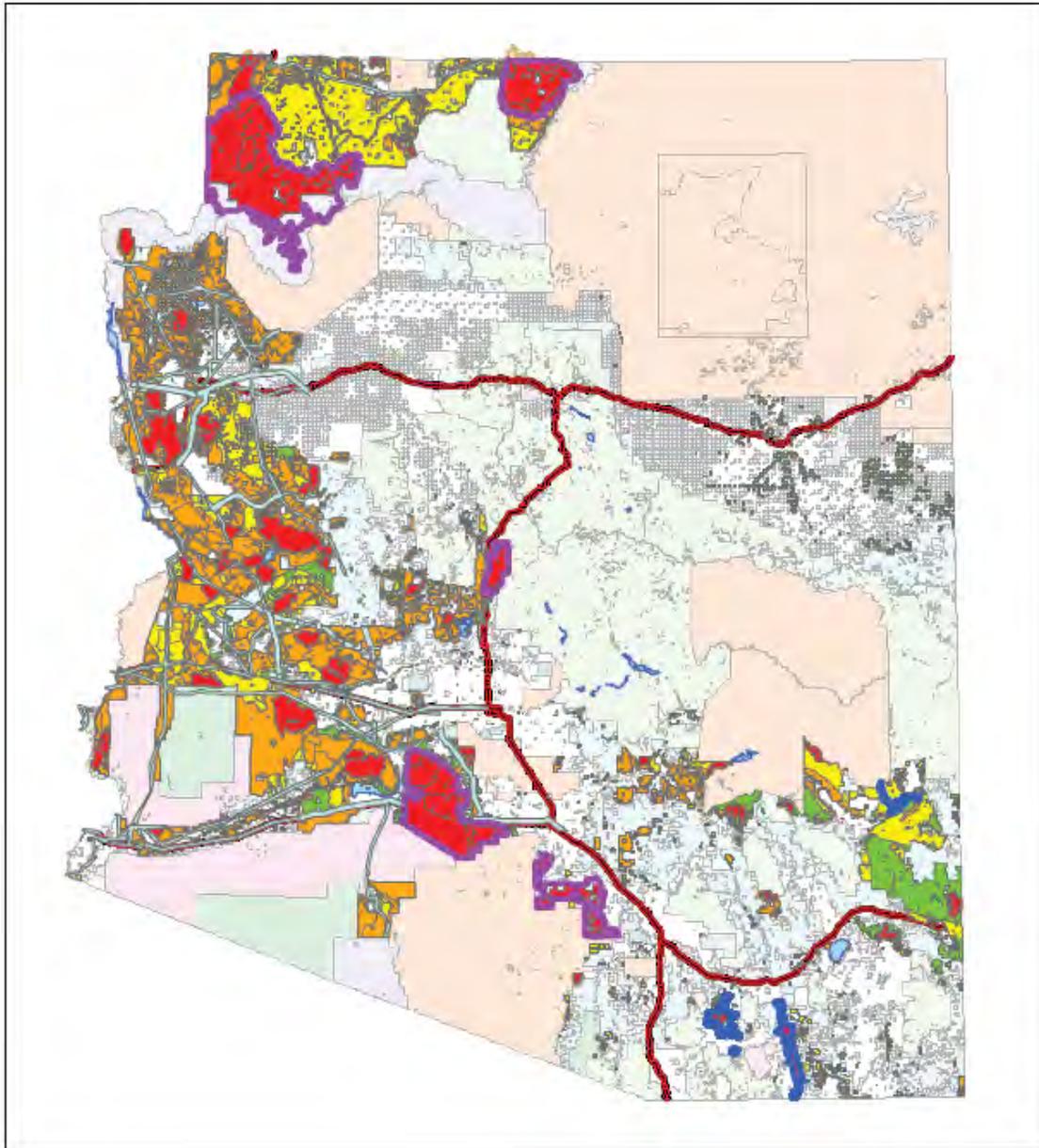
**California also manages 1.4 million acres in northwestern Nevada, which is excluded for this purpose

Note: Total BLM Managed Area refers to Total Managed BLM Surface Acres of Public Lands

BLM Acreage with Environmental Sensitive Zones Overlay

Renewable Energy Conflict Analysis

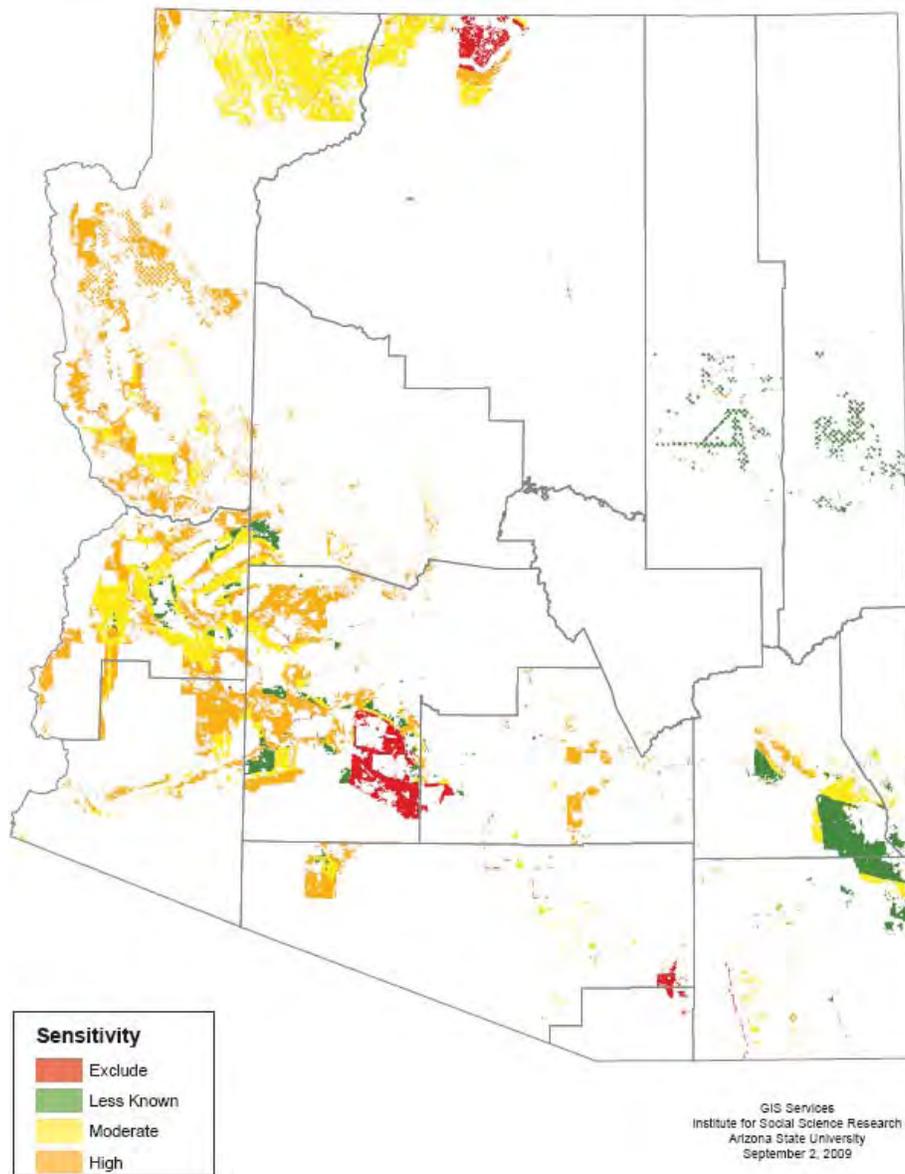
State of Arizona



<u>Areas</u>	<u>Acreage</u>
Exclude-Red	2,943,290
Low Known-Green	1,077,505
Moderate-Yellow	3,070,540
High-Orange	5,090,530
Total	12,181,865

Source: Map obtained from the BLM Renewable Energy Conflict Analysis report produced by the BLM Arizona State Office

BLM Acreage with Environmental Zones and Solar Radiation Overlap



Areas	Acreage
Exclude-Red	412,957
Low Known-Green	783,412
Moderate-Yellow	1,891,037
High-Orange	2,315,431
Total	5,402,837

Sources: Environmental Sensitivity Zones were determined and provided by the BLM Arizona State Office. The data for Solar Radiation (at less than 5% slope and above 6.5 kWh/m²/day) was provided by NREL.

Thank you for your comment, Robert Bendick.

The comment tracking number that has been assigned to your comment is SolarM60262.

Comment Date: September 14, 2009 19:47:25PM
Solar Energy Development PEIS
Comment ID: SolarM60262

First Name: Robert
Middle Initial:
Last Name: Bendick
Organization: The Nature Conservancy
Address: 4245 Fairfax Drive
Address 2:
Address 3:
City: Arlington
State: VA
Zip: 22203
Country: USA
Email: rbendick@tnc.org
Privacy Preference: Don't withhold name or address from public record
Attachment: 2.Att.2b_San_Luis_Valley[1].ppt

Comment Submitted:

Attachment 2b. Maps of observed intersections between BLM Solar Energy Study Areas and natural resource values.

These maps include the following:

- A. Bald eagle winter forage: Intersects Antonito Southeast
- B. Elk highway crossing: Intersects Fourmile East
- C. Elk severe winter range: Intersects DeTilla Gulch, Los Mogotes East, and Antonito Southeast
- D. Gunnison’s prairie dog colonies (active and unknown): Intersect DeTilla Gulch, Fourmile East, and Los Mogotes East
- E. Pronghorn winter concentration areas: Intersect DeTilla Gulch and Los Mogotes East
- F(1). Landscape intactness: San Luis Valley
- F(2). Landscape intactness: DeTilla Gulch
- F(3). Landscape Intactness: Fourmile East
- F(4). Landscape Intactness: Los Mogotes East
- F(5). Landscape Intactness: Antonito Southeast

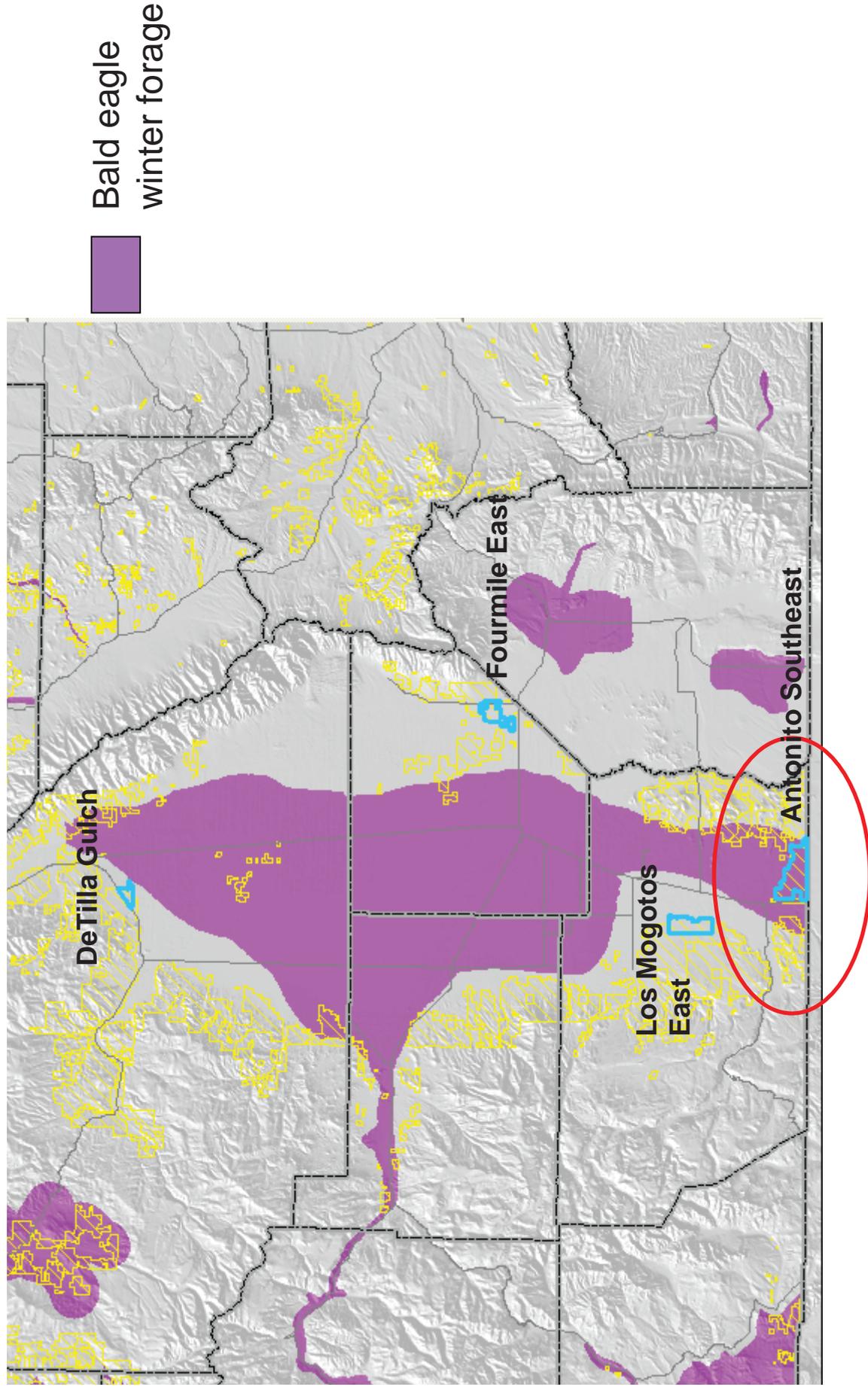
Intersections observed but not included in this attachment include:

- Sandhill crane habitat - no GIS layer available - hard copy map only)
- Riparian areas – evident in Attachment 1.
- TNC portfolio sites -

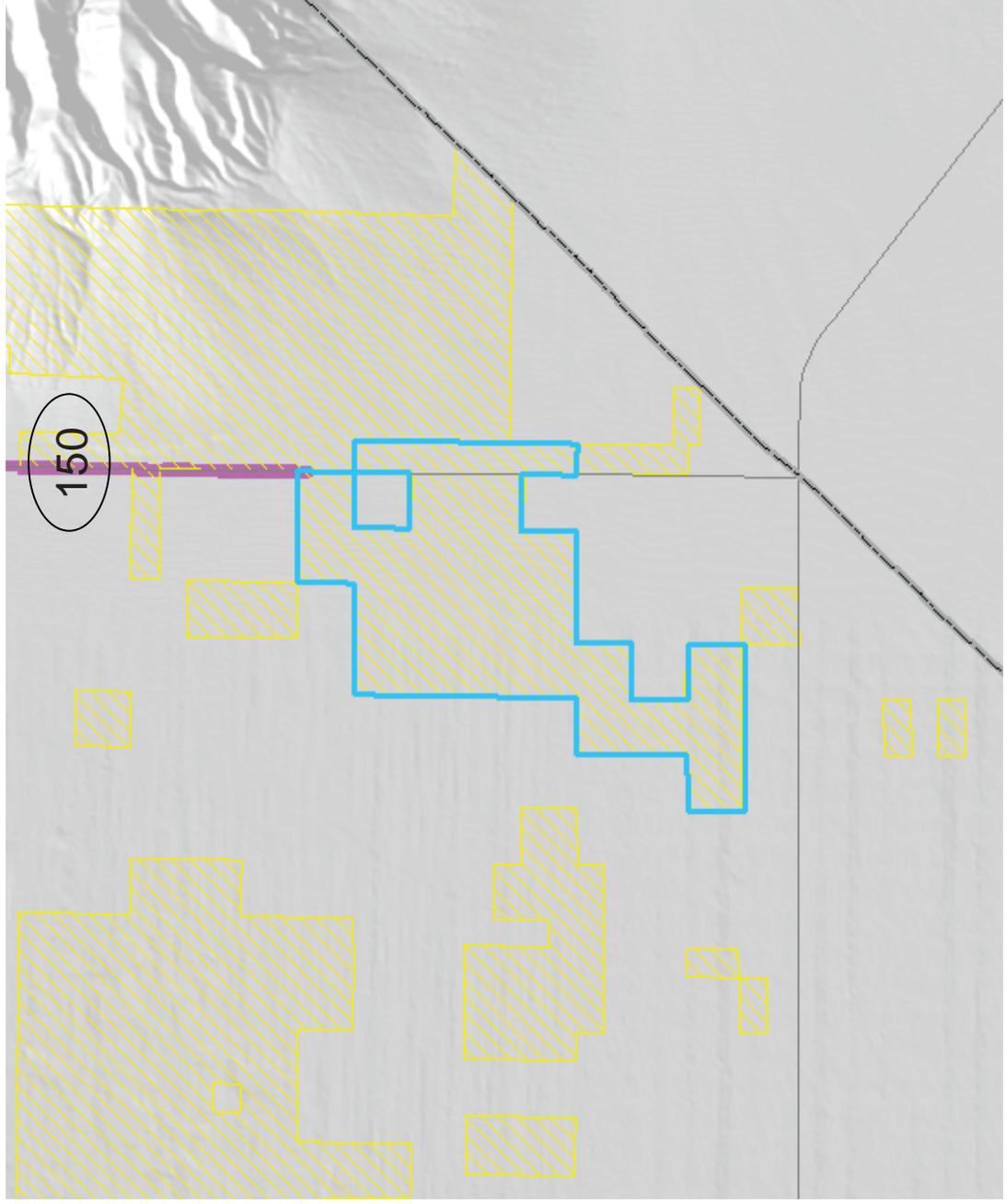
Common map elements:

	BLM
	Solar Energy Study Areas
	Roads
	Counties

A. Bald eagle winter forage: Intersects Antonito Southeast

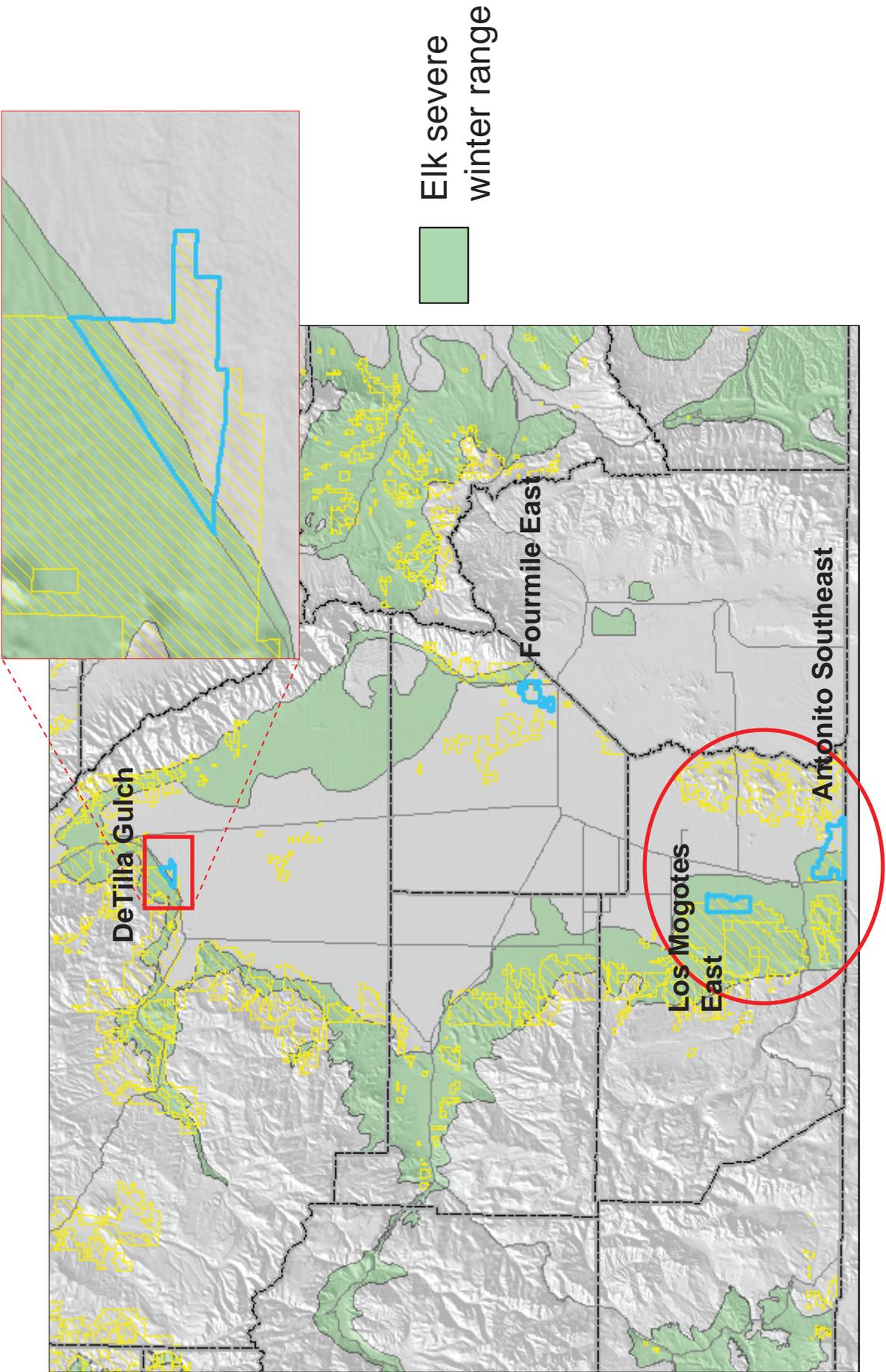


B. Elk highway crossing: Intersects Fourmile East

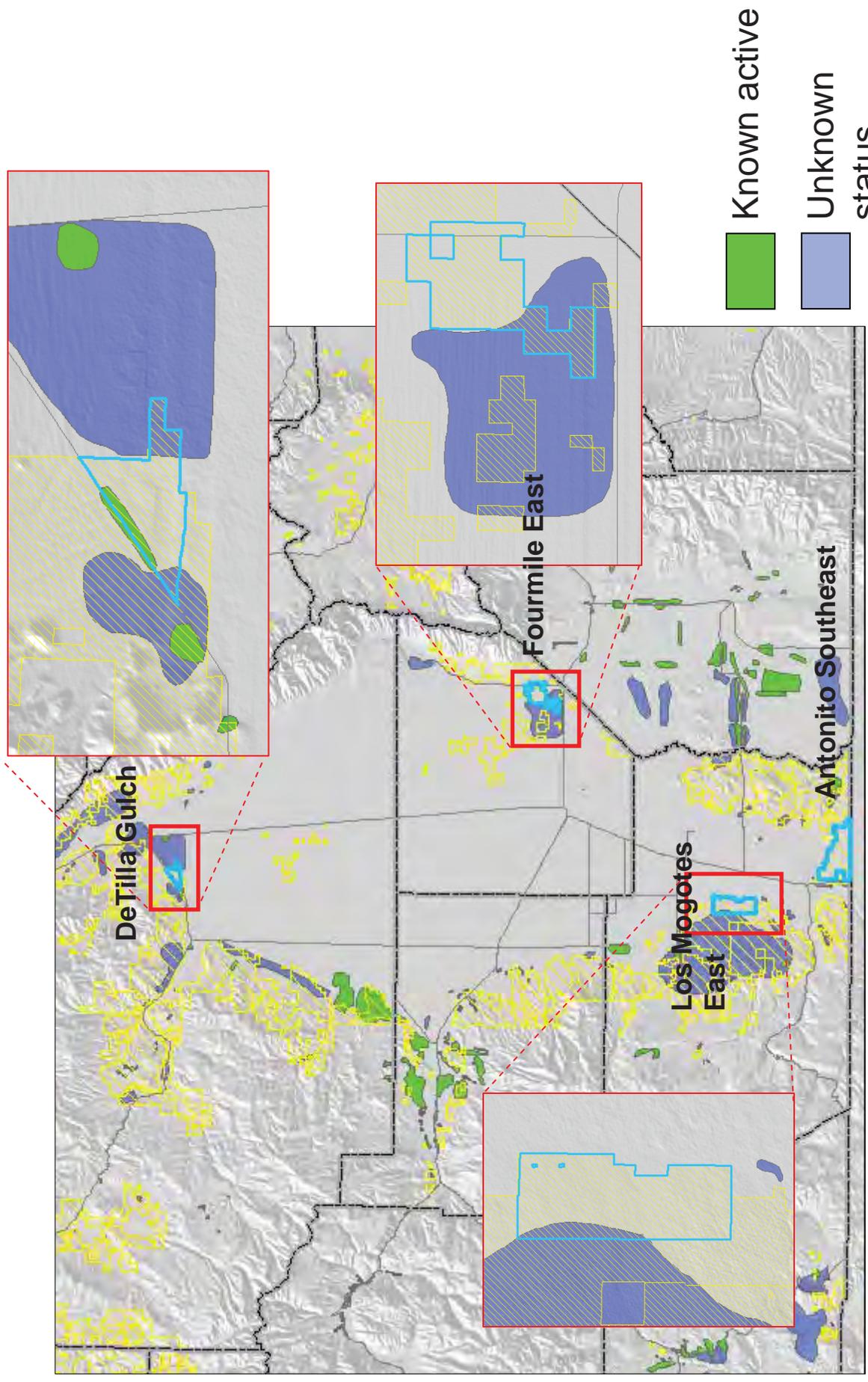


Elk highway
crossing

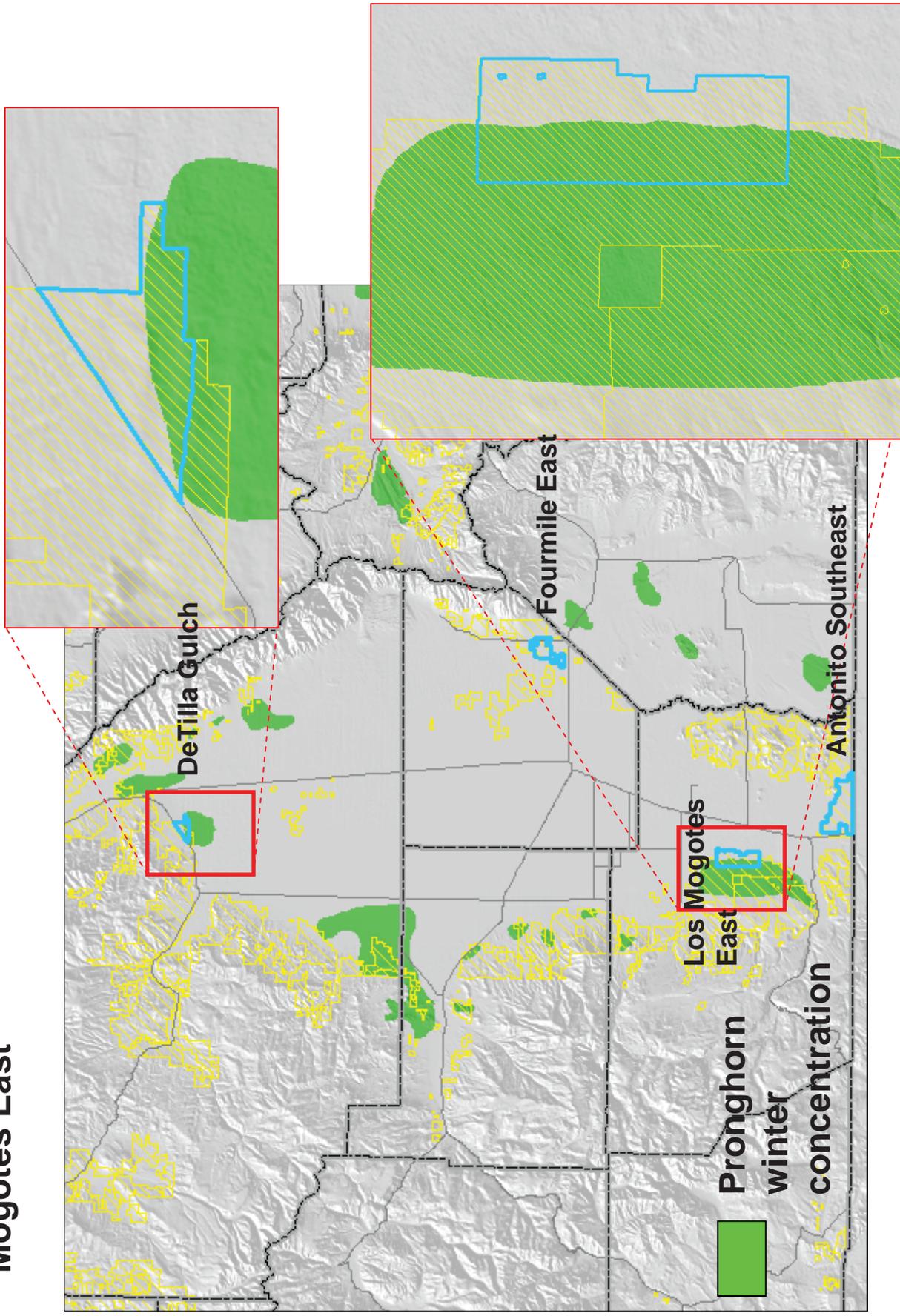
C. Elk severe winter range: Intersects DeTilla Gulch, Los Mogotes East, and Antonito Southeast



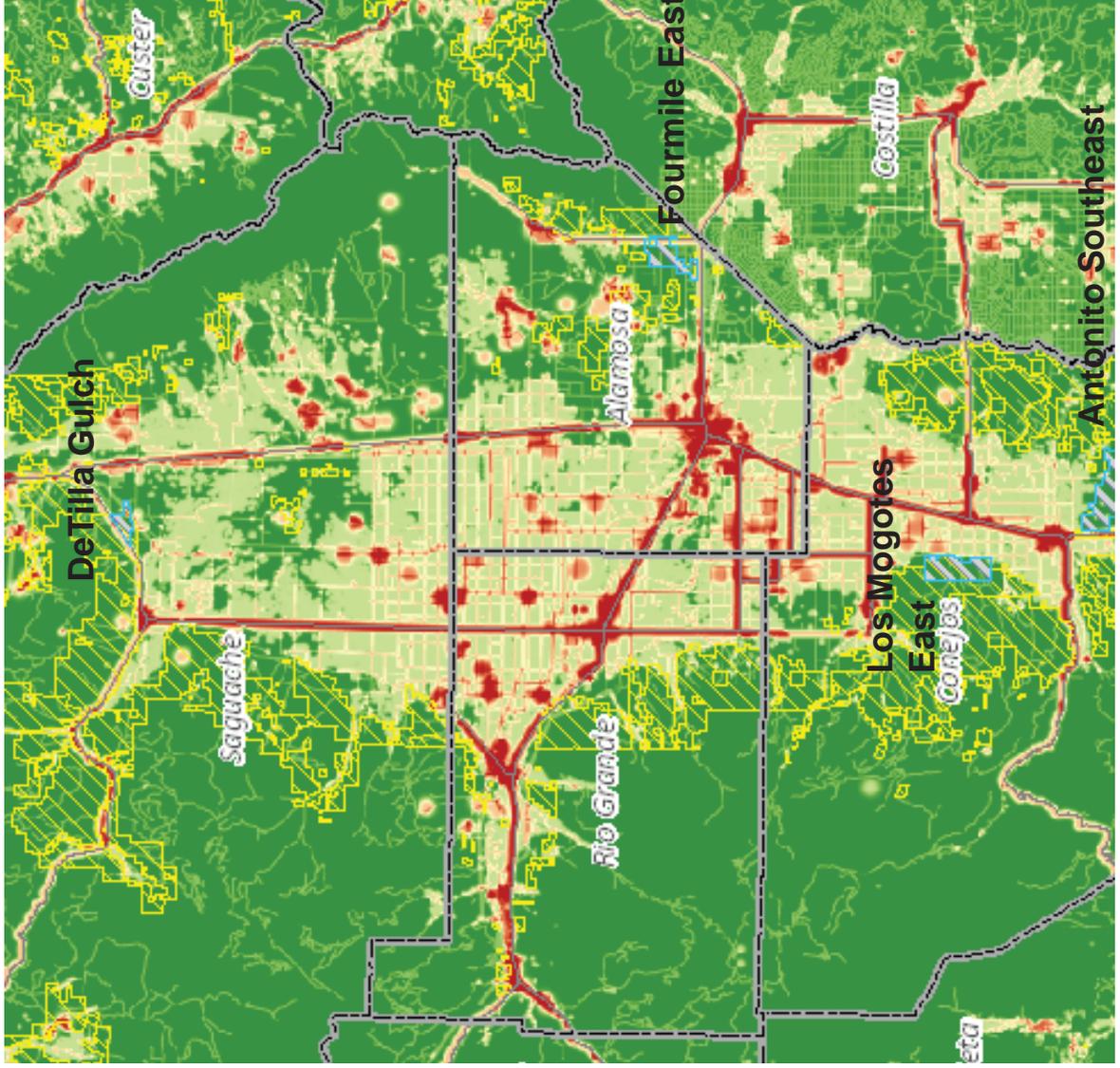
D. Gunnison's prairie dog colonies (active and unknown): Intersect DeTilla Gulch, Fourmile East, and Los Mogotes East



E. Pronghorn winter concentration areas: Intersect DeTilla Gulch and Los Mogotes East



F(1). Landscape intactness: San Luis Valley



More intact

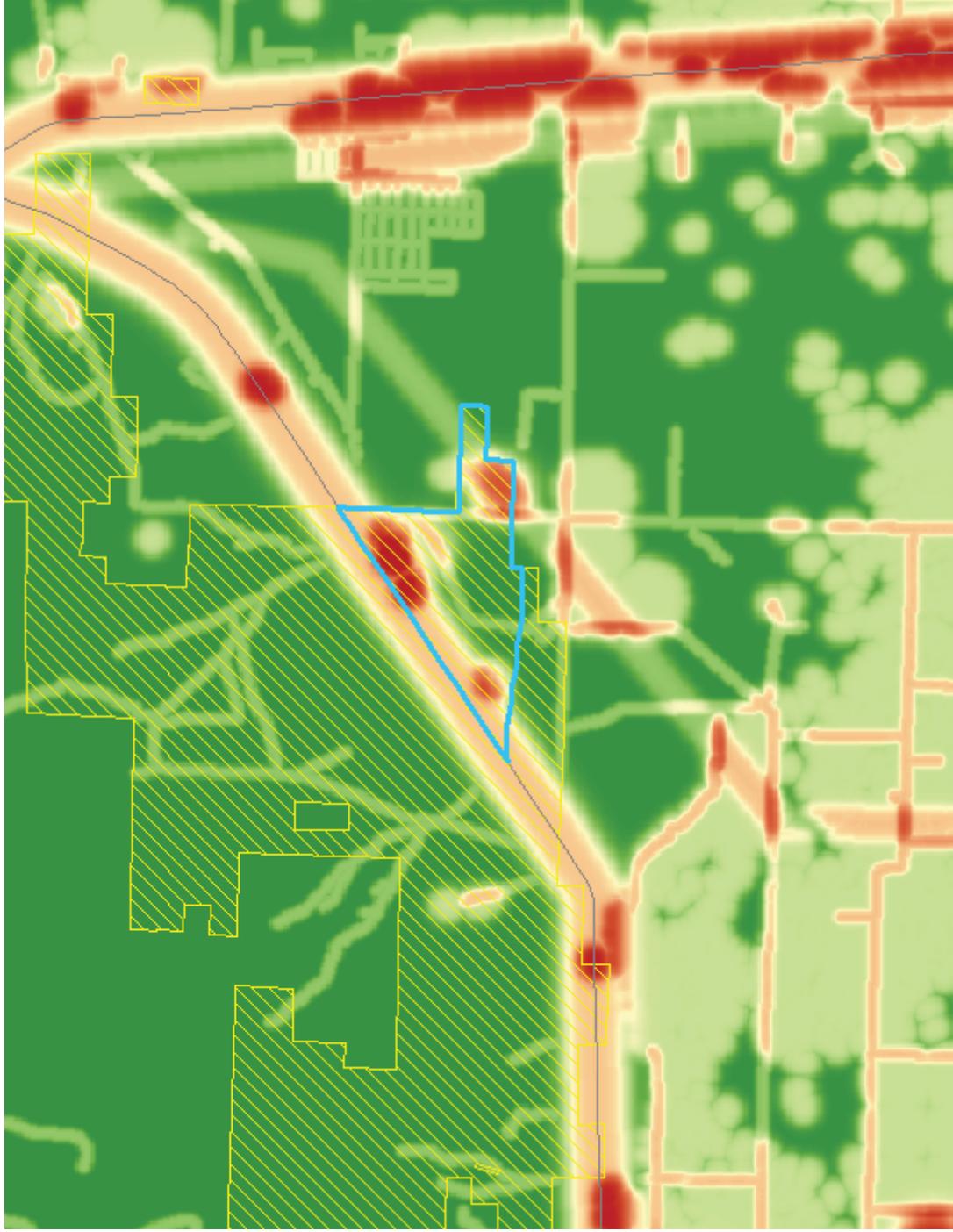


Less intact

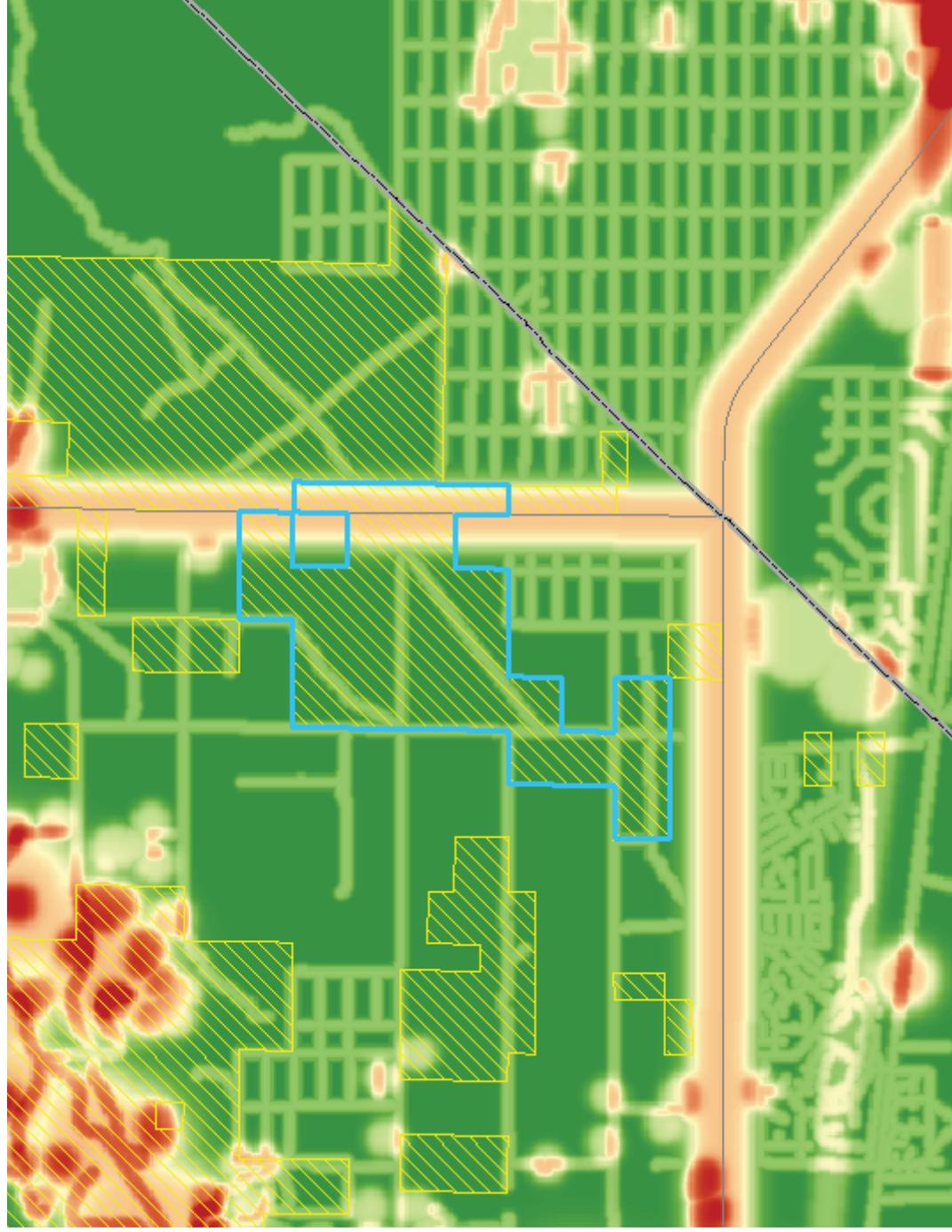
TNC developed this map for all of Colorado. Only the San Luis Valley is shown here. Inputs include:

- Agriculture
- Urban development
- O&G development
- Surface mining
- Roads (primary and secondary, local and primitive)

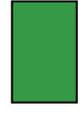
F(2). Landscape intactness: DeTilla Gulch



F(3). Landscape Intactness: Fourmile East

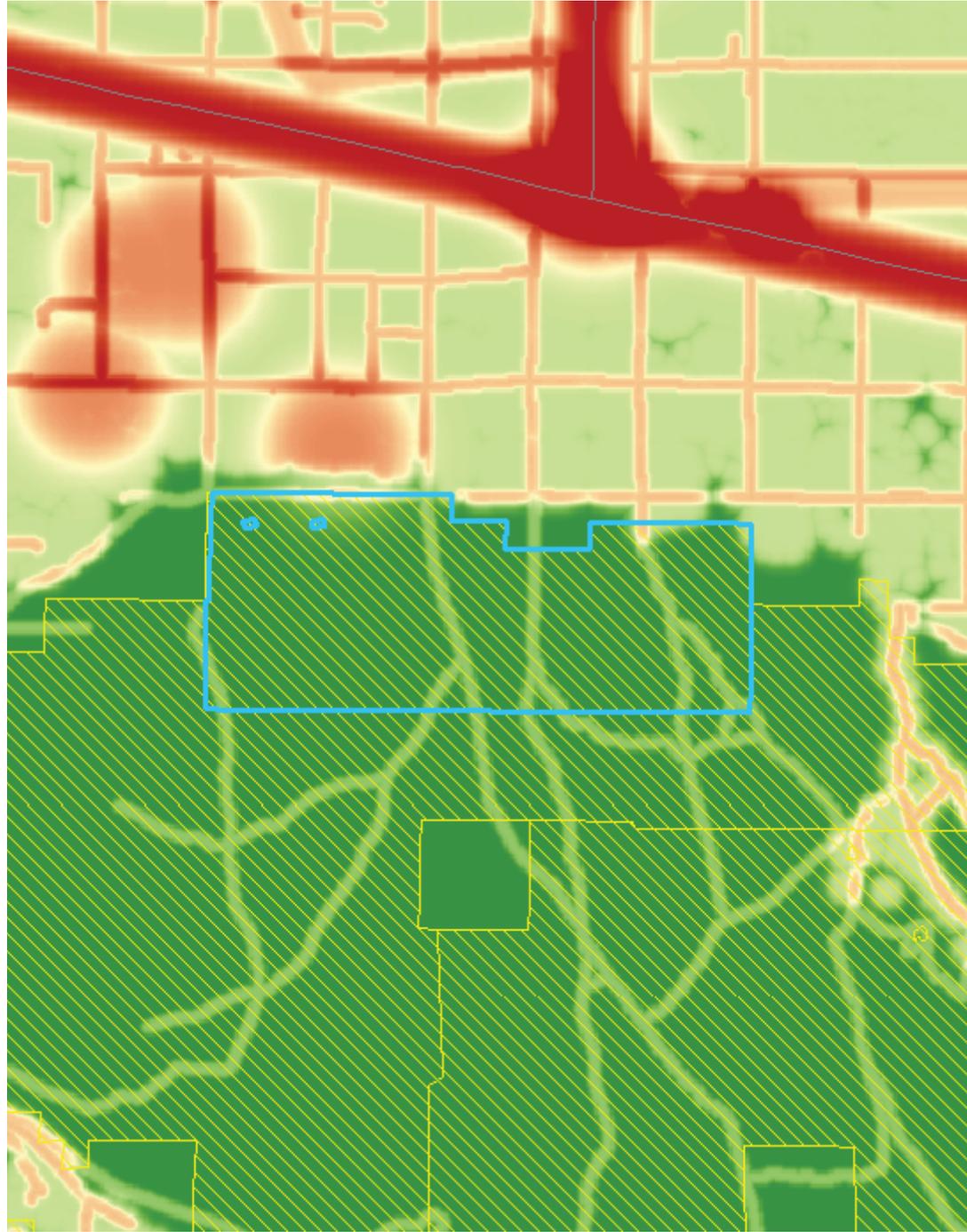


More intact

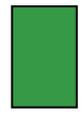


Less intact

F(4). Landscape Intactness: Los Mogotes East

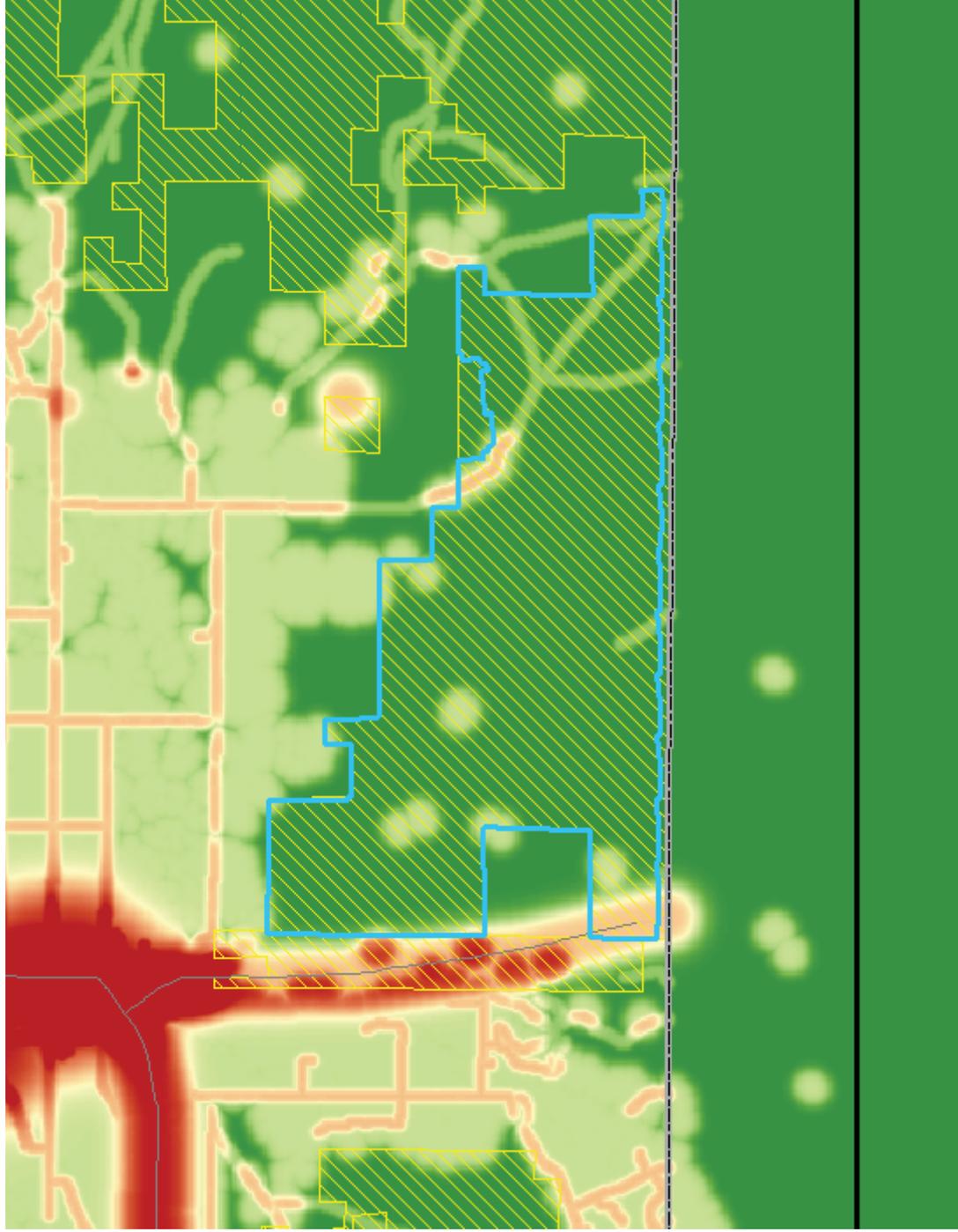


More intact



Less intact

F(5). Landscape Intactness: Antonito Southeast



More intact



Less intact

Thank you for your comment, Lisa Belenky.

The comment tracking number that has been assigned to your comment is SolarM60263.

Comment Date: September 14, 2009 20:03:56PM
Solar Energy Development PEIS
Comment ID: SolarM60263

First Name: Lisa
Middle Initial:
Last Name: Belenky
Organization: Center for Biological Diversity
Address: 351 California Street
Address 2:
Address 3:
City: San Francisco
State: CA
Zip: 94104
Country: USA
Email: lbelenky@biologicaldiversity.org
Privacy Preference: Don't withhold name or address from public record
Attachment: CBD BLM SASE comments for PDEIS 9 14 09 final w exhibits.pdf

Comment Submitted:



VIA WEB UPLOAND AND U.S. MAIL (with references)

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, IL 60439
Web submission at: <http://solareis.anl.gov/involve/comments/index.cfm>

Re: Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications

To whom it may concern:

Please accept the following comments on Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement To Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications (“NOI Maps”) for the programmatic environmental impact statement (PEIS) to evaluate solar energy development on public lands in six western states and the maps provided for public review. These comments incorporate by reference our earlier scoping comments on the PEIS submitted on July 15, 2008.

The Center for Biological Diversity (“Center”) is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 220,000 members and online activists from throughout the country who are interested in the conservation and management of our public lands including over 40,000 members many of whom reside in the six western states which are the focus of this PEIS - Arizona, California, Colorado, New Mexico, Nevada, and Utah.

I. Introduction

The Center for Biological Diversity is dedicated to ensuring that atmospheric CO₂ levels are reduced to below 350 ppm, which leading climate scientists warn is necessary to prevent catastrophic climate change. If greenhouse gas emissions are not immediately reduced, the current atmospheric CO₂ level of almost 390 ppm will rise to approximately 500 ppm by mid-century, triggering mass wildlife extinctions, disruptive global weather and ecosystem changes,

and widespread human suffering. Energy conservation and a rapid transition to renewable energy are necessary to bring about the required CO₂ reductions, but important habitats and wild areas should not be sacrificed to meet these targets.

Accordingly, the development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions and avoid the worst consequences of global warming but must be paired with immediate efforts to require conservation. Simply increasing available energy by adding renewable sources will not achieve the needed greenhouse gas reductions to stem the tide of global warming. The Center strongly supports the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any projects, solar power projects must be thoughtfully planned to minimize impacts to the environment. For example, large scale industrial solar projects that are the subject of the PEIS should avoid impacts to sensitive species and habitats and, optimally, such projects should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission corridors and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local and regional impacts, and effects on species and habitats, can renewable energy production be truly sustainable.

II. Alternatives Analysis

Disturbed Lands

To the extent that large industrial-scale solar projects are needed to meet renewable energy goals, developers should be encouraged to first look to already disturbed lands to site these projects, whether those disturbed areas are on public or private lands. As part of the planning process, BLM should identify alternative sites for the zones including, specifically, areas where environmental values including plant and wildlife habitat was destroyed or heavily impacted due to past projects (such as mining) or other uses and encourage the re-use of these lands for solar projects and other renewable energy projects. In this way, impacts to remaining habitats and other resources on our public lands can be minimized while accommodating new industrial-scale solar power projects.

In addition, as discussed above regarding the purpose and need for this project, the public ownership of land should not be the deciding factor in responsible environmental siting for large-scale industrial solar projects -- several of which are proposed to cover more than six square miles in size. A robust alternatives analysis should include a review of alternative sites on disturbed land through out these six states that may be appropriate for solar industrial development regardless of ownership. This is true for both the zones and individual projects. In California, for example, several counties and local governments are actively working to attract large-scale solar development to previously disturbed private lands where infrastructure already exists and where these projects will have the greatest benefit for local economies. Siting in such areas would also avoid many of the impacts to species and habitats on our public lands. To the extent that there may be BLM lands adjacent to and interspersed with private disturbed lands that may be appropriate for siting renewable energy development BLM should consider those areas in this PEIS.

Water Conservation

Water is a precious and increasingly scarce resource in all of the southwestern states covered by the PEIS.¹ The PEIS should consider at least one alternative that would require the use of the most water efficient technologies by all solar projects on public lands including within the SEZs once adopted. The impacts from water withdrawals in arid environments are well known and can include impacts to surface springs and flows that are critical to many desert species from pupfish to bighorn sheep.² As discussed in the Center's earlier scoping comments on this project the DOI should ensure that all federal reserved water rights essential to the protection of rare, imperiled and listed species, are fully protected on all public lands including wildlife refuges, parks, forest lands, and BLM lands from both surface and groundwater withdrawals by large-scale industrial solar projects wherever they are sited. Specifically, the BLM must protect all water sources needed to ensure species and habitats survive and recover on our public lands.

For example, the proposed Amargosa_Valley Study Area lies up-gradient from the Ash Meadows National Wildlife Refuge, a biodiversity hotspot, home to at least 24 plants and animals found nowhere else in the world. Four fish and one plant species found there are currently listed as endangered.³ The refuge is ranked as B1 P1 M1 (Outstanding site biological significance, good chance of being immediately threatened, loss or irretrievable degradation of populations could occur within one year) by the Nevada Heritage Program.⁴ Thus, impacts from the water needs of any solar energy facility in this proposed zone are a major concern. The Amargosa Valley Study Area also lies up-gradient and adjacent to Death Valley National Park which could be affected by water withdrawals for solar plants in this proposed zone.

Clearly, in considering the study areas the BLM must fully identify and analyze both the potential water needs of the foreseeable solar development and the impacts such water use could have on the environment. Alternatives that would require far less water use, such as dry cooled technologies and others, must be considered in order to avoid significant impacts to the environment from the proposed development in all of the proposed zones in order to comply with both NEPA and the ESA. Specifically, BLM should consider alternatives that would: prohibit use of water for cooling; encourage technological innovation to eliminate or vastly reduce the water needed for cleaning solar panels and mirrors; require the use of recycled water where available; and require capture and treatment of all waste water so that it can be safely returned to groundwater basins through infiltration or reused on site.

¹ See, e.g., Barnett and Pierce, 2009, *Sustainable water deliveries from the Colorado River in a changing climate*, PNAS, www.pnas.org/cgi/doi/10.1073/pnas.0812762106; Barnett and Pierce, 2008, *When will Lake Mead Run Dry?* Water Resources Research, Vol. 44, W03201, doi:10.1029/2007WR006704, 2008.

² Deacon, James E., Williams, A.E., Williams, C.D., and Williams, J.E.; September 2007, *Fueling Population Growth in Las Vegas: How Large-scale Groundwater Withdrawal Could Burn Regional Biodiversity*, BioScience Vol. 57 No. 8 688-698.

³ Ash Meadows National Wildlife Refuge, at <http://www.fws.gov/desertcomplex/ashmeadows/>

⁴ Nevada Natural Heritage Program. 2006. Scorecard 2006: Highest Priority Conservation Sites. Carson City, NV. 57p.

Honoring Conservation Commitments for Donated Lands

The BLM should eliminate from consideration as SEZs all lands that were donated to the BLM for conservation. For example, several of the proposed zones in California include lands donated to the federal government by The Wildlands Conservancy with the understanding that the lands would be permanently protected. Eliminating these lands from consideration for the zones would uphold the government's original promise of protection of these lands and affirm the principle that lands donated for conservation must truly be conserved.

Smaller and/or Fewer Zones

California: For California the Center has produced a map based on a set of environmental criteria, attached hereto as Exhibit 1, that provides an alternative set of solar zones— eliminating Iron Mountain, reconfiguring and shrinking Riverside East and Pisgah, and adding potential alternative zones for study by the Chocolate Mountains, Westmoreland, and Antelope Valley where BLM land and disturbed private lands are in close proximity. In preparing this map the Center utilized the “Renewable Siting Criteria for California Desert Conservation Area” developed by a coalition of environmental groups and previously provided to the BLM (attached hereto as Exhibit 2).

It is important to note that the Center has found significant discrepancies between available GIS files for cultural resources and mapped cultural resources in BLM documents in California. While some of this may be intentional, because the locations of particularly sensitive cultural resources should not be disclosed to the public, but other discrepancies appear to be simply gaps or conflicts in the existing data. In any case, it appears that BLM will require better data sets on these important resources in order to fairly analyze impacts from the proposed solar zones. *We urge the BLM to fully engage in the required consultations with the affected tribes in all of the states to obtain the best possible data regarding the locations of all significant cultural sites as part of this process.*

Nevada: For Nevada, the Center urges the BLM to consider reconfiguring the East Mormon Mountain Study Area to provide a buffer for the Mormon Mesa and Beaver Dam Slope ACECs and desert tortoise critical habitat, and eliminating areas in the Toquop Wash conservation area.

For all of the Nevada proposed zones water is a major concern, therefore (as noted above) BLM should consider alternatives that would require far less water use, such as dry cooled technologies and others, in order to avoid significant impacts to the environment from the proposed development in all of these proposed zones. Moreover, conservation for many species in Nevada may be seriously inadequate at present⁵ and, therefore, the BLM must take this into consideration when assessing the baseline for conservation as well as in developing mitigation strategies in concert with this PEIS process and the development of the zones.

⁵ See, e.g., Greenwald and Bradley, 2008, Biological Conservation, *Assessing protection for imperiled species of Nevada, U.S.A.: are species slipping through the cracks of existing protections?* DOI 10.1007/s10531-008-9407-3

Exclusive Development in Zones vs. Development in Zones and Other Areas

The PEIS must also examine at least one alternative under which BLM would only approve solar projects within the designated zones. The fundamental purpose of designating study zones through this programmatic planning process must be to limit impacts to significant resources and limit sprawl across the landscape. Accordingly, the BLM should consider, and adopt, a policy of only approving new solar development within the designated zones on public lands until those zones are “filled.” To do otherwise would undermine basic planning principles and waste the staff time, money, and energy that the agencies have dedicated to this effort. One exception that could be considered in an additional alternative is to allow approval of a limited number of projects on brownfields or abandoned and former large-scale mining sites or other highly disturbed public lands in areas in proximity to existing transmission lines.

A thoughtful and through comparison of the foreseeable impacts of an alternative that limits solar development to the designated zones will likely show that it is environmentally superior, fully feasible, and will avoid many of the most significant impacts to sensitive resources including rare, imperiled and listed species and their habitats.

In addition, the Center once again urges the BLM to suspend consideration of the so-called “fast track” permits in California and Nevada in particular until this planning process is completed. One of the primary drivers behind the pressure to approve the so-called “fast track projects” is the timing of access to ARRA stimulus funds. Therefore the Center would support efforts to extend deadlines for ARRA funds for solar renewable projects on public lands to accommodate this PEIS planning process. To continue with the approval process for the so-called “fast track” projects truly “puts the cart before the horse” and is likely to result in *de facto* zones being created that do not meet any of the standards that the PEIS process is advocating and will undermining the fundamental purpose of this planning process.

Economic Incentives to Site in Zones

BLM must also insure that fees for the use of public lands for solar energy development as rights-of-way throughout the west adequately reflect the true cost to our public lands from the loss of habitats, movement corridors, and biodiversity. In order to encourage appropriate siting of these projects, the BLM should ensure that there are economic incentives to site industrial-scale solar projects within the SEZs once those areas are identified. The PEIS should consider at least one alternative that imposes substantially higher fees for projects outside of the SEZs—particularly those in in-tact habitat. The planning process will not accomplish its stated purposes if BLM fails to provide appropriate financial and other incentives to site projects in the zones and continues to approve projects outside the zones – increasing industrial sprawl across the landscape.⁶

⁶ The Center encourages the BLM to consider areas that were previously heavily disturbed such as brownfields or former large-scale mining sites and possibly fallowed agricultural areas in the deserts, as potential zones. However, even if these areas are not included in the zones they may provide some of the most appropriate sites for solar development particularly where they are also proximate to existing infrastructure and transmission. Financial

III. Desert Tortoise

As the BLM is well aware, the survival and recovery of the threatened desert tortoise is a key issue that must be addressed in the draft PEIS. Recent population genetics studies have confirmed that, as the 1994 Desert Tortoise Recovery Plan found, the desert tortoise population is distinctly different in each of the Recovery Units.⁷ This finding adds weight to the Recovery Plan's direction that land managers must consider the impacts to desert tortoise survival and recovery on a Recovery Unit basis. Similarly, mitigation measures must be tied to the Recovery Units so that the benefits to the species from mitigation measures are appropriately scaled to the impacts to each Recovery Unit.

As the Center and other conservation groups and scientists have pointed out to the BLM and other federal agencies repeatedly, and most recently in the context of the ongoing Fort Irwin expansion, the risks associated with desert tortoise translocation in general are quite high and the risks are vastly increased by the translocations undertaken in drought years and even more so after several years of drought. As such, while in translocation may prove necessary in order to accommodate some projects, it is largely a misnomer to call these activities "mitigation." While some individuals may survive the translocation, there is little evidence that it has any benefits to the species over the long-term. The PEIS must take this into account when considering the types and scale of mitigation measures that will be needed for impacts to the desert tortoise and its habitat from the designated zones particularly in California and Nevada.

Large scale translocations of desert tortoises have rarely been studied and no long-term studies of large scale tortoise translocations are available in the published literature. The most recent large scale translocation of nearly 600 tortoise from Fort Irwin in the spring of 2008 proved to be little more than a deadly experiment for both translocated tortoises and resident tortoises in the translocation "host" areas. While small scale translocations have had some better success due to the much greater care with which they were carried out including collecting detailed information about the tortoises before translocation, temporary fencing of the translocation site, moving the tortoises in the same geographic configuration as the site that they originally lived in, and providing some artificial burrows (which were in fact used by the tortoises).⁸ While some mortality was noted post-translocation, it was much reduced. In comparison, the 2008 translocation from Fort Irwin was associated with the death of over 250 tortoises including both translocated tortoises and resident tortoises.

We urge the BLM to thoroughly consider these issues regarding translocation which are, of course, in addition to the direct, indirect and cumulative impacts to the tortoise that BLM is well aware that will increase due to development. For example, such impacts include but are not

incentives could also be developed to encourage the re-use of such heavily disturbed areas if they are not included in the SEZs.

⁷ Murphy R.W., K.H. Berry, T. Edwards and A.M. McLuckie. 2007. A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, *Gopherus agassizii*. *Chelonian Conservation and Biology*, 2007, 6(2): 229–251.

⁸ Karl, A.E. 2007. Hyundai Motor America Mojave Proving Grounds Desert Tortoise Translocation Study, 2006 Annual Summary. Pgs. 20.

limited to, loss of habitat, increased roads, increased subsidies and nesting opportunities for ravens, increased subsidies for canids, and increased spread of disease due to disturbance.

IV. Comments on Specific Proposed SEZs

Below we provide some specific comments on the proposed zones in California and Nevada and the new areas identified for consideration as alternatives.

California

Riverside East: The proposed study area in eastern Riverside County should be reduced in size to avoid significant environmental impacts including: impacts to critical habitat, impacts to connectivity and movement corridors for tortoise and other wildlife; impacts to desert washes; impacts to rare plants; impacts to cultural and paleontological resources; and edge effects and other indirect and cumulative impacts to adjacent Joshua Tree National Park. The map submitted with these comments provides an alternative smaller Riverside East zone that should be studied.

Iron Mountain: The proposed study area for Iron Mountain should be eliminated in its entirety. This area is inappropriate for industrial scale solar development that cannot be cured by reconfiguring or reducing the size of this zone. We urge the BLM to consider other areas (such as those in Antelope Valley, Westmoreland, and the Chocolate Mountains) in lieu of the Iron Mountain proposed study area. This area is inappropriate for numerous reasons including, but not limited to, the following: inadequate electrical transmission facilities; occupied desert tortoise habitat and occupied desert bighorn habitat; habitat for several rare plants; lands that are part of the Citizen's Wilderness Inventory; significant cultural resources; and provides critical movement corridors for wildlife and gene flow.

Pisgah: The proposed Pisgah study areas should be scaled back and reconfigured to avoid impacts to rare plants, desert tortoise and the movement corridor in the Cady Mountains between the Ord-Rodman and Superior-Cronese Critical Habitat Units, cultural resources, former Catellus lands donated to the BLM for conservation purposes, and the unique Pisgah lava flows. See Exhibit 1 (map).

Imperial East: Based on our initial review, it appears that the resource conflicts in the proposed Imperial East study area may be able to be avoided through proper siting and mitigated. Flat-tailed horned lizards are known to inhabit this site (a species that has been proposed for listing in the past and will soon be re-proposed for listing in the wake of a successful lawsuit by the Center and other environmental groups). There may also be populations of rare plants on this site that will require appropriate seasonal surveys to identify.

Arizona

Bullard Wash, Brenda, and Gillespie Areas: The Center's initial review of these areas has not identified any substantial biological conflicts or barriers to development of these zones. We look forward to reviewing the detailed site-specific information that will be provided in the

PEIS to determine whether these proposed sites are indeed suitable for industrial scale solar development zones.

Nevada

Millers Study Area: A potential concern with this area is the possible presence of Tonopah milkvetch (*Astragalus pseudiodanthus*) a species that is categorized as G2/S2, globally and state imperiled due to rarity or other demonstrable factors.⁹ Impacts to this species should be included in the environmental impact statement (EIS) and alternatives considered to avoid impacts. Other concerns are impacts to desert bighorn sheep range to the immediate west and south, and use of mountains to the west by prairie falcons.

Gold Point Study Area: As an initial matter, this study zone appears to have few major biological concerns. Desert bighorn sheep are found in the surrounding mountain ranges, and prairie falcons utilize the mountains to the northwest.

Amargosa Valley Study Area: As noted above, the use of water in this study area is of great concern as it lies up-gradient from the Ash Meadows National Wildlife Refuge, a biological hotspot, home to at least 24 plants and animals found nowhere else in the world. Four fish and one plant species found there are currently listed as endangered. The refuge is an outstanding site biological significance under the Nevada Heritage Program. The site is also down-gradient from the Oasis Valley Important Bird Area (IBA) and the impacts to this area from any water withdrawals for solar development could also be severe be evaluated. Desert bighorn sheep habitat occurs to the south, west and northeast and these herds could be adversely affected if water use for solar plants draws down the water table potentially drying up critical local springs and seeps.

The site also contains occupied habitat for the desert tortoise, and is in immediate proximity to the Big Dunes Area of Critical Environmental Concern (ACEC) managed by the Bureau of Land Management, and home to the Giuliani's dune scarab (*Pseudocotalpa giulianii*), large aegilian scarab (*Aegialia magnifica*), and the Big Dune miloderes weevil (*Miloderes* sp (unnamed)). All these species are ranked as G1/S1 - globally and state critically imperiled due to extreme rarity, imminent threats, or biological factors.¹⁰ While outside of the ACEC, the possibility exists for the presence of these species on the study site and a full inventory should be conducted. Because the Amargosa Valley Study Area lies adjacent to Death Valley National Park the BLM must also consider impacts to the park and the potential need for a buffer zone to protect park resources.

Dry Lake Study Area: This area includes occupied desert tortoise habitat and overlies the Apex conservation site, identified as B1 P1 M1 (Outstanding site biological significance, good chance of being immediately threatened, loss or irretrievable degradation of populations could occur within one year) by the Nevada Heritage Program.¹¹ Among the species of concern found

⁹ Nevada Heritage Program, at <http://heritage.nv.gov/lists/coesmera.htm>

¹⁰ Nevada Heritage Program, at <http://heritage.nv.gov/lists/conye.htm>

¹¹ Nevada Natural Heritage Program. 2006. Scorecard 2006: Highest Priority Conservation Sites. Carson City, NV. 57p.

at the Study Area are Mojave gypsum bees (*Andrena balsamorhizae*), a species categorized as G2/S2, globally and state imperiled due to rarity or other demonstrable factors.¹² In addition, desert bighorn sheep range to the immediate north, west and east, and there is documented use of this area by golden eagles. Impacts to these and other species of concern in area should be included in the EIS and avoided.

East Mormon Mountain Study Area: The East Mormon Mountain site includes occupied desert tortoise habitat and is proximate to the Mormon Mesa and Beaver Dam Slopes ACECs, areas designated as critical habitat for the desert tortoise. These tortoise populations have experienced recent declines and are threatened by numerous other activities including grazing, ORV use, and residential development and associated infrastructure. Another concern is the availability of water to support the solar development, including the cumulative impacts from groundwater withdrawals to support community development on nearby privatized lands, and the impacts to tortoise habitat, fish, and water resources from the construction and operation of the proposed Lincoln County pipeline and the resulting impacts to fish and other aquatic resources.

The Study Area also overlies the Toquop Wash conservation site, an area ranked as B1 P1 M1 (Outstanding site biological significance, good chance of being immediately threatened, loss or irretrievable degradation of populations could occur within one year) by the Nevada Heritage Program.¹³ Among the species occurring at the conservation site are: Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii*) a candidate species for listing under the Endangered Species Act; threecorner milkvetch (*Astragalus geyeri* var. *triquetrus*), a species listed by the State of Nevada as “Critically endangered – species threatened with extinction”; sticky buckwheat (*Eriogonum viscidulum*) a species listed by the State of Nevada as “Critically endangered – species threatened with extinction”; straw milkvetch (*Astragalus lentiginosus* var. *stramineus*), a species ranked as T2/S2 (globally and state imperiled due to rarity or other demonstrable factors); and banded Gilia monster (*Heloderma suspectum cinctum*), a species protected in the State of Nevada under Nevada Revised Statute 501.¹⁴ Desert bighorn sheep are found in the neighboring mountain ranges to the north and west.

As a result, as currently configured, industrial scale solar development in this area may have significant and impacts that would be difficult to avoid or mitigate and this area is likely not suitable for a zone.

Delamar Valley Study Area: The largest concern about this site is the availability of groundwater to support solar development in light of a proposal by the Southern Nevada Water Authority to extensively exploit the same groundwater basin for exportation to the Las Vegas Valley.¹⁵ The cumulative impacts from water developments in this basin on vegetation, springs, and animal species will likely be very significant.¹⁶ Desert bighorn sheep are found adjacent to

¹² Nevada Heritage Program, at <http://heritage.nv.gov/lists/coclark.htm>

¹³ Nevada Natural Heritage Program. 2006. Scorecard 2006: Highest Priority Conservation Sites. Carson City, NV. 57p.

¹⁴ Nevada Heritage Program, at <http://heritage.nv.gov/lists/coclark.htm>

¹⁵ Clark, Lincoln and White Pine Counties Groundwater Development Project, Scoping Package, July 2006, at: http://www.blm.gov/nv/st/en/prog/planning/groundwater_projects/snwa_groundwater_project/documents_and_maps.html

¹⁶ Deacon et al. 2007

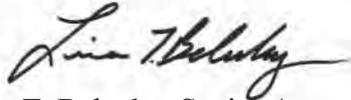
the Study Area to the southwest, and the valley is regularly used by golden eagles. The Study Area is also near the Delamar Mountains Wilderness area and impacts to the wilderness should be addressed in the EIS.

Dry Lake Valley North Study Area: The largest concern about this site is (once again) the availability of groundwater to support the solar plant in light of a proposal by the Southern Nevada Water Authority to extensively exploit the same groundwater basin for exportation to the Las Vegas Valley.¹⁷ The cumulative impacts from water developments in this basin on vegetation, springs, and animal species will likely be very significant. The Eastwood milkvetch (*Asclepias eastwoodiana*) is a species of concern that is found within the Study Area. It is ranked as G2/S2 - globally and state imperiled due to rarity or other demonstrable factors.¹⁸ Desert bighorn sheep are found in the mountains to the west and east of the area.

V. Conclusion

Thank you for the opportunity to provide additional scoping comments for this Programmatic EIS. The Center looks forward to reviewing the Draft PEIS.

Sincerely,



Lisa T. Belenky, Senior Attorney
Center for Biological Diversity
351 California St., Suite 600
San Francisco, CA 94104
(415) 436-9682 x307
Fax: (415) 436-9683

Attachments: (uploaded and sent via U.S. Mail)

Exhibit 1: Map produced by Center for Biological Diversity.

Exhibit 2: Renewable Siting Criteria for California Desert Conservation Area

References: (Sent via U.S. Mail on CD Rom)

Barnett and Pierce, 2009, *Sustainable water deliveries from the Colorado River in a changing climate*, PNAS, www.pnas.org/cgi/doi/10.1073/pnas.0812762106;

¹⁷ Clark, Lincoln and White Pine Counties Groundwater Development Project, Scoping Package, July 2006, at: http://www.blm.gov/nv/st/en/prog/planning/groundwater_projects/snwa_groundwater_project/documents_and_maps.html

¹⁸ Nevada Heritage Program at <http://heritage.nv.gov/lists/colincol.htm>

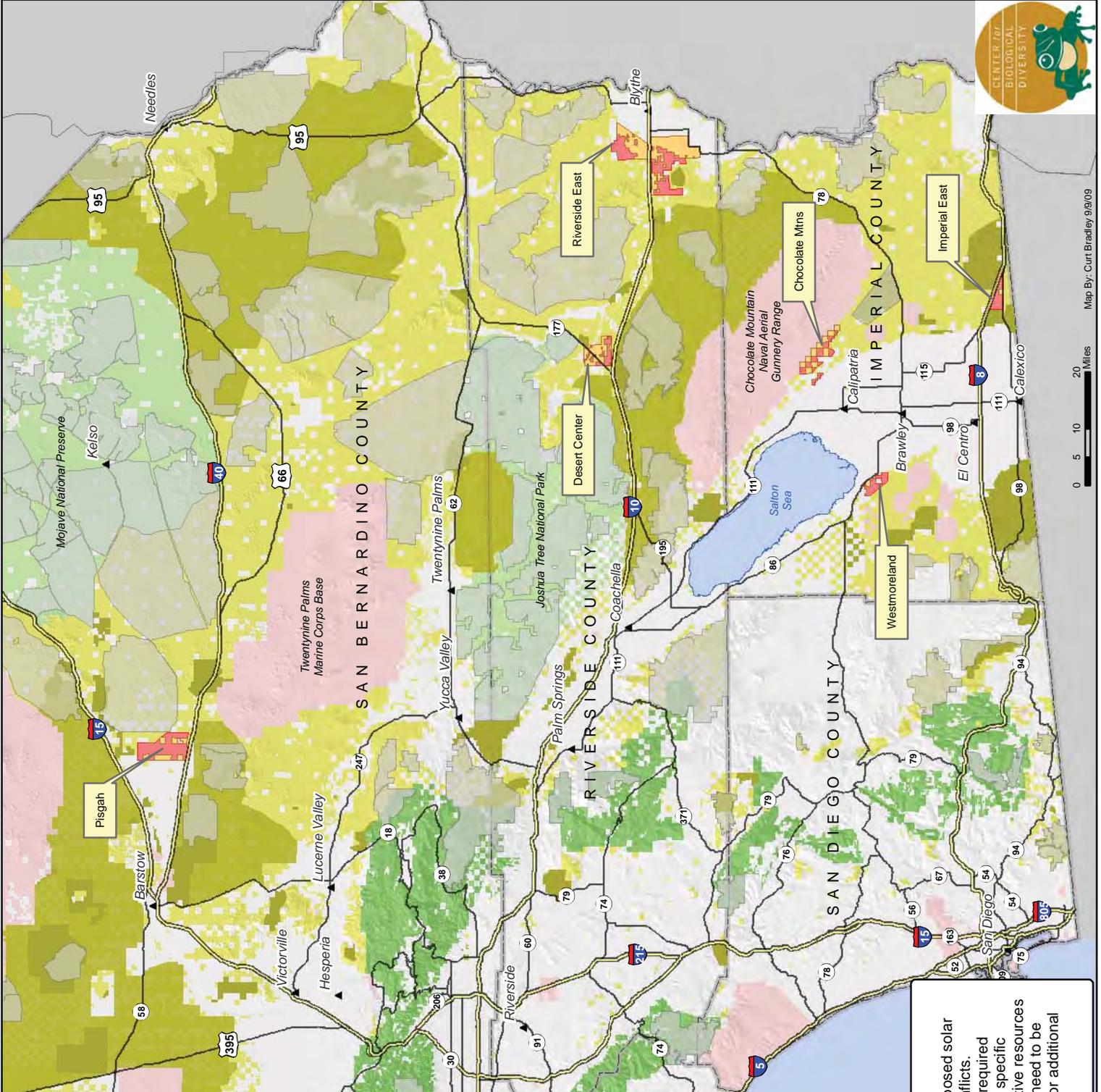
Barnett and Pierce, 2008, *When will Lake Mead Run Dry?* Water Resources Research, Vol. 44, W03201, doi:10.1029/2007WR006704, 2008.

Deacon, James E., Williams, A.E., Williams, C.D., and Williams, J.E.; September 2007, *Fueling Population Growth in Las Vegas: How Large-scale Groundwater Withdrawal Could Burn Regional Biodiversity*, BioScience Vol. 57 No. 8 688-698.

Greenwald and Bradley, 2008, Biological Conservation, *Assessing protection for imperiled species of nevada, U.S.A.: are species slipping through the cracks of existing protections?* DOI 10.1007/s10531-008-9407-3

Karl, A.E. 2007. Hyundai Motor America Mojave Proving Grounds Desert Tortoise Translocation Study, 2006 Annual Summary. Pgs. 20.

Murphy R.W., K.H. Berry, T. Edwards and A.M. McLuckie. 2007. *A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, Gopherus agassizii*. Chelonian Conservation and Biology, 2007, 6(2): 229–251.



Potential Solar Energy Study Areas

- Solar Energy Study Areas (BLM lands)
- Solar Energy Study Areas (private lands)
- Wilderness and Wilderness Study Areas
- Other Conservation Areas
- Land Ownership**
- Bureau of Land Management
- National Park Service
- U.S. Forest Service
- Military
- Private, State, and Other

FEDREZ_Nam	OWN	Acres
Imperial East	BLM	6,285
Imperial East	Private	552
Antelope Valley	BLM	4,040
Antelope Valley	Private	82,379
Chocolate Mountains	BLM	6,370
Chocolate Mountains	Private	7,068
Desert Center	BLM	5,129
Desert Center	Private	8,163
Pisgah	BLM	17,071
Pisgah	Private	5,343
Riverside East	BLM	22,492
Riverside East	Private	29,496
Westmoreland	BLM	4,660
Westmoreland	Private	582
Total	BLM	66,046
	Private	133,583

Important Note:
 Based on currently available data, the identified proposed solar zones have low potential for significant resource conflicts. However, site-specific surveys conducted as part of required environmental reviews for programmatic planning or specific proposed projects in these zones may identify sensitive resources (e.g. rare species, archeological sites, etc.) that will need to be addressed through project redesign, relocation and/or additional mitigation.



Audubon California
California Native Plant Society * California Wilderness Coalition
Center for Biological Diversity * Defenders of Wildlife
Desert Protective Council * Mojave Desert Land Trust
National Parks Conservation Association
Natural Resources Defense Council * Sierra Club * The Nature Conservancy
The Wilderness Society * The Wildlands Conservancy

Renewable Siting Criteria for California Desert Conservation Area

Environmental stakeholders have been asked by land management agencies, elected officials, other decision-makers, and renewable energy proponents to provide criteria for use in identifying potential renewable energy sites in the California Desert Conservation Area (CDCA). Large parts of the California desert ecosystem have survived despite pressures from mining, grazing, ORV, real estate development and military uses over the last century. Now, utility scale renewable energy development presents the challenge of new land consumptive activities on a potentially unprecedented scale. Without careful planning, the surviving desert ecosystems may be further fragmented, degraded and lost.

The criteria below primarily address the siting of solar energy projects and would need to be further refined to address factors that are specific to the siting of wind and geothermal facilities. While the criteria listed below are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. They were developed with input from field scientists, land managers, and conservation professionals and fall into two categories: 1) areas to prioritize for siting and 2) high conflict areas. The criteria are intended to guide solar development to areas with comparatively low potential for conflict and controversy in an effort to help California meet its ambitious renewable energy goals in a timely manner.

Areas to Prioritize for Siting

- Lands that have been mechanically disturbed, i.e., locations that are degraded and disturbed by mechanical disturbance:
 - Lands that have been “type-converted” from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use).¹
- Public lands of comparatively low resource value located adjacent to degraded and impacted private lands on the fringes of the CDCA:²
 - Allow for the expansion of renewable energy development onto private lands.
 - Private lands development offers tax benefits to local government.
- Brownfields:
 - Revitalize idle or underutilized industrialized sites.
 - Existing transmission capacity and infrastructure are typically in place.

- Locations adjacent to urbanized areas:³
 - Provide jobs for local residents often in underserved communities;
 - Minimize growth-inducing impacts;
 - Provide homes and services for the workforce that will be required at new energy facilities;
 - Minimize workforce commute and associated greenhouse gas emissions.
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locations proximate to load centers.
- Locations adjacent to federally designated corridors with existing major transmission lines.⁴

High Conflict Areas

In an effort to flag areas that will generate significant controversy the environmental community has developed the following list of criteria for areas to avoid in siting renewable projects. These criteria are fairly broad. They are intended to minimize resource conflicts and thereby help California meet its ambitious renewable goals. The criteria are not intended to serve as a substitute for project specific review. They do not include the categories of lands within the California desert that are off limits to all development by statute or policy.⁵

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant⁶ populations of federal or state threatened and endangered species,⁷ significant populations of sensitive, rare and special status species,⁸ and rare or unique plant communities.⁹
- Areas of Critical Environmental Concern, Wildlife Habitat Management Areas, proposed HCP and NCCP Conservation Reserves.¹⁰
- Lands purchased for conservation including those conveyed to the BLM.¹¹
- Landscape-level biological linkage areas required for the continued functioning of biological and ecological processes.¹²
- Proposed Wilderness Areas, proposed National Monuments, and Citizens' Wilderness Inventory Areas.¹³
- Wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands.¹⁴
- National Historic Register eligible sites and other known cultural resources.
- Locations directly adjacent to National or State Park units.¹⁵

EXPLANATIONS

¹ Some of these lands may be currently abandoned from those prior activities, allowing some natural vegetation to be sparsely re-established. However, because the desert is slow to heal, these lands do not support the high level of ecological functioning that undisturbed natural lands do.

² Based on currently available data.

³ Urbanized areas include desert communities that welcome local industrial development but do not include communities that are dependent on tourism for their economic survival.

⁴ The term "federally designated corridors" does not include contingent corridors.

⁵ Lands where development is prohibited by statute or policy include but are not limited to:

National Park Service units; designated Wilderness Areas; Wilderness Study Areas; BLM National Conservation Areas; National Recreation Areas; National Monuments; private preserves and reserves; Inventoried Roadless Areas on USFS lands; National Historic and National Scenic Trails; National Wild, Scenic and Recreational Rivers; HCP and NCCP lands precluded from development; conservation mitigation banks under conservation easements approved by the state Department of Fish and Game, U.S. Fish and Wildlife Service or Army Corps of Engineers a; California State Wetlands; California State Parks; Department of Fish and Game Wildlife Areas and Ecological Reserves; National Historic Register sites.

⁶ Determining “significance” requires consideration of factors that include population size and characteristics, linkage, and feasibility of mitigation.

⁷ Some listed species have no designated critical habitat or occupy habitat outside of designated critical habitat. Locations with significant occurrences of federal or state threatened and endangered species should be avoided even if these locations are outside of designated critical habitat or conservation areas in order to minimize take and provide connectivity between critical habitat units.

⁸ Significant populations/occurrences of sensitive, rare and special status species including CNPS list 1B and list 2 plants, and federal or state agency species of concern.

⁹ Rare plant communities/assemblages include those defined by the California Native Plant Society’s Rare Plant Communities Initiative and by federal, state and county agencies.

¹⁰ ACECs include Desert Tortoise Desert Wildlife Management Areas (DWMAs). The CDCA Plan has designated specific Wildlife Habitat Management Areas (HMAs) to conserve habitat for species such as the Mohave ground squirrel and bighorn sheep. Some of these designated areas are subject to development caps which apply to renewable energy projects (as well as other activities).

¹¹ These lands include compensation lands purchased for mitigation by other parties and transferred to the BLM and compensation lands purchased directly by the BLM.

¹² Landscape-level linkages provide connectivity between species populations, wildlife movement corridors, ecological process corridors (e.g., sand movement corridors), and climate change adaptation corridors. They also provide connections between protected ecological reserves such as National Park units and Wilderness Areas. The long-term viability of existing populations within such reserves may be dependent upon habitat, populations or processes that extend outside of their boundaries. While it is possible to describe current wildlife movement corridors, the problem of forecasting the future locations of such corridors is confounded by the lack of certainty inherent in global climate change. Hence the need to maintain broad, landscape-level connections. To maintain ecological functions and natural history values inherent in parks, wilderness and other biological reserves, trans-boundary ecological processes must be identified and protected. Specific and cumulative impacts that may threaten vital corridors and trans-boundary processes should be avoided.

¹³ Proposed Wilderness Areas: lands proposed by a member of Congress to be set aside to preserve wilderness values. The proposal must be: 1) introduced as legislation, or 2) announced by a member of Congress with publicly available maps. Proposed National Monuments: areas proposed by the President or a member of Congress to protect objects of historic or scientific interest. The proposal must be: 1) introduced as legislation or 2) announced by a member of Congress with publicly available maps. Citizens' Wilderness Inventory Areas: lands that have been inventoried by citizens groups, conservationists, and agencies and found to have defined “wilderness characteristics.” The proposal has been publicly announced.

¹⁴ The extent of upland habitat that needs to be protected is sensitive to site-specific resources. For example: the NECO Amendment to the CDCA Plan protects streams within a 5-mile radius of Townsend big-eared bat maternity roosts; aquatic and riparian species may be highly sensitive to changes in groundwater levels.

¹⁵ Adjacent: lying contiguous, adjoining or within 2 miles of park or state boundaries. (Note: lands more than 2 miles from a park boundary should be evaluated for importance from a landscape-level linkage perspective, as further defined in footnote 12).

Thank you for your comment, Hal Romanowitz.

The comment tracking number that has been assigned to your comment is SolarM60264.

Comment Date: September 14, 2009 20:57:13PM
Solar Energy Development PEIS
Comment ID: SolarM60264

First Name: Hal
Middle Initial:
Last Name: Romanowitz
Organization: Oak Creek Energy Systems
Address: 150 La Terraza Blvd
Address 2:
Address 3:
City: Escondido
State: CA
Zip: 92025
Country: USA
Email: hal@oces.com
Privacy Preference: Don't withhold name or address from public record
Attachment: OCES BLM PEIS Comments 20090914.PDF

Comment Submitted:



September 14, 2009

Solar Energy Development PEIS
Argonne National Laboratory
9700 S. Cass Avenue – EVS/900
Argonne, IL 60439

Subject: Public Comment Period for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific programs for Solar Energy Development

Oak Creek Energy Systems, Inc. (Oak Creek Energy) hereby submits its written comments on the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific programs for Solar Energy Development (Solar Energy Development PEIS).

- 1. The Solar Energy Development PEIS should make clear that applications for renewable projects on Bureau of Land Management (BLM) land are first in time, first in right, and will be evaluated on a case by case basis.**

Several wind energy project developers, including Oak Creek Energy, have already submitted applications for Type II Right-of-Way (ROW) Grants for wind energy site testing and monitoring and/or for Type II ROW Grants for commercial wind energy development to be located within the Solar Energy Study Areas. On the Permitting Solar and Wind Projects on Federal Lands Webinar held on August 18th, the BLM indicated that BLM land set aside for priority solar development under the Solar Energy Development PEIS would take priority over wind development on that same land. This new BLM policy will have untold effects on wind energy projects already under development within the Solar Energy Study Areas. In addition to the significant resources spent to date on these wind energy projects which could be lost, prioritizing solar over wind in these Areas could have the net effect of reducing the overall amount of viable renewable energy facilities that could be installed in these Areas. Further, due to the impact of transmission interconnection rules, modest land loss could cause very major loss of transmission interconnection, and a snow balling effect of serious proportions on all the wind energy phases related to that transmission interconnection, and a major decrease in renewable energy generated from such areas. Thus great care in where and how solar is placed with respect to existing wind ROW Applications or Grants is quite critical in impact.

- 2. The Solar Energy Development PEIS should make clear that while solar projects within the Solar Energy Study Areas are appropriate and will be fast-tracked, this should not be to the exclusion of wind energy projects, and further, where appropriate, the most judicious use of the land might include both solar and wind.**



The Solar Energy Study Areas to be evaluated in the Solar Energy Development PEIS overlap prime wind energy development areas. The effective use of appropriate land in these overlap areas can increase the effective utilization of such land by a factor of approximately 2:1 where the wind energy has a relatively small footprint and large energy production, and the solar energy has a much larger footprint, but a comparably large energy production. The two technologies can be mutually compatible, but would require careful coordination of development and project design for the combined project which is best accomplished by a wind design first, and then the solar coordinated in with the wind, mutually by the wind developer. We note that dual use projects are not now accepted by BLM and thus we have planned the future addition of solar into our projects where appropriate.

In a recent study titled “Improved Electrical Load Match in California by Combining Solar Thermal Power Plants with Wind Farms” the USDA – Agricultural Research Service and the National Renewable Energy Lab concluded that:

“The combination of wind farm and solar with storage was the best case for matching the utility load due to high winds in evening when utility load was still high, and further increasing reliability due to clouds blocking sun at some periods.” [Citation: Vick, B.D., Clark, R.N., Mehos, M. 2008. Improved Electrical Load Match in California by Combining Solar Thermal Power Plants with Wind Farms; Proceedings of the SOLAR 2008 Conference, May 3-8, 2008, San Diego, California.]

In a California Energy Commission Study, CEC-500-2007-081-APB, Intermittency Analysis Project, Appendix B, Pages 44, 46, and 48, for example show similar significant benefits to the mixed use of wind and solar.

In order to reach the renewable energy goals established by Congress, as set forth in Title II, Section 211 of the Energy Policy Act of 2005, and in accordance with Executive Order 13212, Actions to Expedite Energy-Related Projects, and the Secretary of the Interior’s Secretarial Order No. 3285 issued March 11, 2009, the federal government needs to consider fast-tracking both solar and wind projects on BLM lands that have both the requisite solar insolation levels of 6.5 kWh/m²/day and requisite wind speeds of 6.5 m/s or better at turbine hub heights, for example, may give the appropriate material increase in effective land use.

Furthermore, the combination of solar and wind, where appropriate, is supported by Section 103 of the Federal Land Policy and Management Act (FLPMA):

“(c) The term “multiple use” means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that



takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output” (emphasis added)

3. The Solar Energy Development PEIS should acknowledge that the National Environmental Policy Act (NEPA) process should feed into the Resource Management Plan (RMP) process, not vice versa.

It is important to note the requirements of Section 102 of FLPMA:

“ . . . (2) the national interest will be best realized if the public lands and their resources are periodically and systematically inventoried and their present and future use is projected through a land use planning process coordinated with other Federal and State planning efforts;

and . . .

(7) goals and objectives be established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law; . . .”

In other words, public lands and their resources must be allocated using the RMP process. NEPA does not allocate public land resources. NEPA is the second tier of an essentially two-step federal land management process. After the RMP process is completed, and the resources allocated based on best and highest use of the land, NEPA can evaluate future activities that are or are not in conformance with the RMP objectives and provisions. NEPA assures that short-term decisions are in conformance with the long-term objectives of the RMP. Therefore, the Solar Energy Development PEIS should acknowledge that BLM land use plans and RMPs need to be updated prior to, or in conjunction with, the NEPA process.

4. The Solar Energy Development PEIS should include water quality standards and state water management program and policies in the Solar Energy Development PEIS analysis and propose methodology to improve management of this important resource.

In order for the BLM to develop a successful programmatic solar energy program covering six different states, the Solar Energy Development PEIS must address how the



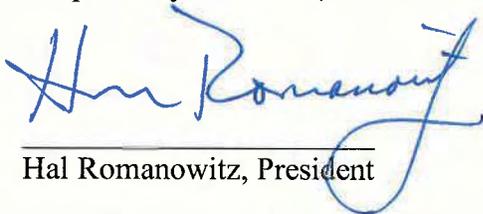
BLM will coordinate water quality issues with the appropriate state agencies who have jurisdiction, planning and control over water quality for projects within the Solar Energy Study Areas. This is an important issue because solar (photovoltaic) uses approximately 0.030 gallons per kilowatt hour (kWh) (source: <http://www.awea.org/faq/water.html>). Management and enforcement of water quality under the federal Clean Water Act (CWA) is delegated to the states. For example, in California, water quality is managed by the California Environmental Protection Agency's State Water Resources Control Board, and in Nevada, water quality is managed by the Nevada Division of Environmental Protection's Bureau of Water Quality Planning.

5. The Solar Energy Development PEIS should allow proponents to develop project –specific and best management practice mitigation measures to address visual impacts

The objective of the BLM's Visual Resource Management (VRM) system is to manage public lands in a manner that will protect the quality of the scenic (visual) values of these lands. BLM is required to identify, inventory, classify and adopt, thru their FLPMA resource management planning process, VRM objectives for planning units within their administrative jurisdiction. The VRM system involves inventorying scenic values and establishing management objectives for those values through the resource management planning process, and then evaluating proposed activities to determine whether they conform to the management objectives. If VRM guidelines and standards for solar energy projects are not specifically included in existing resource management planning documents, BLM should not enforce arbitrary and capricious visual criteria on solar energy projects through the Solar Energy Development PEIS. Solar project proponents should be allowed to develop project-specific and best management practice mitigations to visual impacts, rather than mandated thru the right of way and NEPA permitting processes.

For these reasons, Oak Creek Energy respectfully requests that the BLM consider the above comments and further revise the scope of the Solar Energy Development PEIS.

Respectfully submitted,



Hal Romanowitz, President

Thank you for your comment, MICHAEL OETTINGER.

The comment tracking number that has been assigned to your comment is SolarM60265.

Comment Date: September 14, 2009 21:45:14PM
Solar Energy Development PEIS
Comment ID: SolarM60265

First Name: MICHAEL
Middle Initial: J
Last Name: OETTINGER
Organization:
Address: P O Box 147
Address 2:
Address 3:
City: AMARGOSA VALLEY
State: NV
Zip: 89020
Country: USA
Email: mjoettinger@veawb.coop
Privacy Preference: Don't withhold name or address from public record
Attachment: SOLAR MILL MEET 7-8-09 2.wps

Comment Submitted:

My major comment I'd like addressed is "How close to residential areas is safe?" and "How will the oil loss by vaporization at the swivel joints be mitigated?"

MEETING 8TH OR 9TH JULY, 2009

GOOD EVENING, I'M LED TO UNDERSTAND THAT TONIGHT WE ARE MEETING TO DISCUSS THE PROPOSED "SOLAR MILLENNIUM PROJECT".

I HAVE MANY CONCERNS ABOUT THIS PROJECT AND IT SITING, BUT TONIGHT I'LL STICK TO JUST ONE, PUBLIC HEALTH. I SEE TWO UNADDRESSED ISSUES WITH SOLAR MILLENNIUMS' CURRENT PLAN.

JOBS, CONSTRUCTION, WE'VE ALL READ THE PAPERS AND SEE THE LARGE NUMBERS OF PEOPLE/ JOBS THIS PROJECT IS GOING TO BRING. WHO, HOW, AND WHEN; DIRT WORK IS FIRST FOR LEVELING THE LAND AND BRINGING IN THE GRAVEL TO LOCK IN A DUST BARRIER, CONSTRUCTING PIPELINES, TRANSMISSION LINES, TURBINE BUILDINGS, THE HEAT EXCHANGER, COOLING TOWERS, AND THE COLLECTORS THEMSELVES. THIS WORK WILL BE 24 HOURS A DAY. LOTS OF HEAVY EQUIPEMENT, LOTS OF TRAFFIC.

MY FIRST HEALTH CONCERN, TRAFFIC.

THE PROPOSED SITING WILL HAVE THE POTENTIAL TO USE HWY 373 TO FARM ROAD TO WILLIAMSON TO DESERT SENIOR TO THE SITE, OR WILLIAMSON TO FRONTIER TO THE SITE, OR JUST STAY ON FARM ROAD TO THE SITE. MOST PROBABLY ALL THREE. TO ME THIS IS UNACCEPTABLE. THE ACCIDENT TO SCHOOL CHILDREN OR SENIORS COMING AND GOING FROM THEIR DAILY ACTIVITIES, CAN BE AVOIDED IF WE HAVE THE PROJECTS' CONSTRUCTION ACTIVITIES USE VALLEYVIEW TO FARM ROAD TO THE SITE FOR ACCESS 24 HOURS A DAY.

MY SECOND HEALTH CONCERN, SOLAR RADIATION FROM THE MIRRORS TOO CLOSE TO RESIDENTS.

I AM AFRAID THAT RECEIVING THE EXTRA UV RADIATION WILL CAUSE UNDUE HARDSHIP AND DURESS FROM CONTRACTING CANCER AND BLINDNESS AS A DIRECT RESULT OF THIS PROJECT BEING BUILT ANYWHERE NEAR RESIDENTS' HOMES, SCHOOLS, AND OTHER PUBLIC BUILDINGS AND PARKS.

PAGE 2

I FEAR FOR MY NEIGHBORS, MY ANIMALS, MY FAMILY, MY COMMUNITY, AND MYSELF. MY FEAR IS VERY REAL, I CAN FIND NUMEROUS PAPERS, PUBLICATIONS, AND STUDIES, WHILE CONDUCTING INTERNET SEARCHES FOR SOLAR RADIATION AND HUMAN HEALTH, A COMMON THREAD;

EXCESSIVE ULTRAVIOLET RADIATION EXPOSURE CAUSES MELANOMA, SKIN CANCER, CATARACTS AND OTHER EYE PROBLEMS, AND SURPRESSES THE IMMUNE SYSTEMS OF BOTH HUMANS AND ANIMALS. TWO OF THE MANY PAPERS ARE;

WORLD HEALTH ORGANIZATION FACT SHEET #227, AUGUST 1999.
ULTRAVIOLET RADIATION: SOLAR RADIATION AND HUMAN HEALTH
TOO MUCH SUN IS DANGEROUS.

BROOKHAVEN NATIONAL LABORATORY BNL-79392-2007-CP
SOLAR RADIATION AND INDUCTION OF DNA DAMAGES, MUTATIONS AND SKIN CANCERS BY RICHARD B. SETLOW, JULY 2007

I AM SURE THAT IF PARABOLIC MIRROR BUILDERS WERE ASKED WHAT TIME OF DAY CONSTRUCTION AND MAINTAINENCE OF THE MIRRORS TAKES PLACE THE ANSWER WILL BE AT NIGHT. WHY? SO INJURY TO WORKERS IS AVOIDED.

I CANNOT FIND ANY INFORMATION WHERE ONE OR TWO AXIS PARABOLIC MIRRORS HAVE BEEN STUDIED TO DETERMINE THE NEGITIVE EFFECTS IF PLACED NEXT TO, OR NEAR RESIDENCES, PUBLIC AREAS. NOR CAN I FIND STUDIES EXPLAINING AT WHAT DISTANCE, FROM A PARABOLIC MIRROR, IT IS SAFE. I AM **NOT** A GUINEA PIG.

I SEE AN EXCELLENT OPPORTUNITY FOR THIS PROJECT, COMMUNITY LEADERS, COUNTY, STATE OFFICIALS, BLM, AND IMPACTED CITIZENS, TO TAKE THIS EARLY POINT IN THE PROCESS TO SEE IF WE ALL CAN MEET TO SEE IF THE PROJECT CAN BE MOVED TWO MILES NORTH AT A MINIMUM, THAT BLM ISSUE AN EASEMENT FOR TRANSMISSION AND WATER LINES ACROSS FARM ROAD, AND A HAUL WAY/ CONSTRUCTION ROAD EASEMENT FROM VALLEYVIEW TO THE NEW SITE. THE AREA BETWEEN FARM ROAD AND SOLAR MILLENNIUMS NEW SITE COULD BE FILLED WITH PHOTOVOLTIC (PV) PANELS WITH NON-REFLECTIVE COVERS. MAYBE THE COUNTY OR STATE COULD ADOPT LANGUAGE TO FACILITATE FUTURE PV/ PARABOLIC MIRROR SITINGS.

THANK YOU,
M. J. OETTINGER

Thank you for your comment, MICHAEL OETTINGER.

The comment tracking number that has been assigned to your comment is SolarM60266.

Comment Date: September 14, 2009 21:48:58PM
Solar Energy Development PEIS
Comment ID: SolarM60266

First Name: MICHAEL
Middle Initial:
Last Name: OETTINGER
Organization:
Address: P O Box 147
Address 2:
Address 3:
City: AMARGOSA VALLEY
State: NV
Zip: 89020
Country: USA
Email: mjoettinger@veawb.coop
Privacy Preference: Don't withhold name or address from public record
Attachment:

Comment Submitted:

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED SOLAR MILLENNIUM, LLC, AMARGOSA FARM ROAD SOLAR ENERGY PROJECT, NYE COUNTY, NV. BLM FILE NVN 84359

ATTN: GREG HELSETH, PROJECT MANAGER.

I WOULD LIKE TO SEE THIS APPLICATION FOR A ROW BE DISMISSED ON THE GROUNDS THAT THIS IS IN CONFLICT WITH THE AMARGOSA VALLEY AREA PLAN AND IS A GREAT DANGER TO THE CITIZENS OF AMARGOSA VALLEY. ON MARCH 3, 1999A PARABOLIC MIRROR SOLAR COLLECTION PLANT NEAR DAGGETT, CA. CAUGHT FIRE AND EXPLODED AND BURNED 900,000 GALLONS OF HEAT TRANSFER FLUID. IF IN THIS SITING A FIRE AND EXPLOSIONS OCCURRED, HOW MANY ELEMENTARY SCHOOL CHILDREN WILL BE DEAD? HOW MANY SENIOR CITIZENS WHILE EATING AT THE CENTER? HOW MANY IN CHURCH OR IN THEY'RE BED, WHO LIVE IN THE SUBDIVISION DIRECTLY NEXT TO THIS POTENTIAL CATASTROPHY. THE THERMOIL MSDS SAY'S THE FIRE PERSONEL RESPONDING SHALL WEAR SELF CONTAINED BREATHING APPRATICE. THE HEAT TRANSFER FLUID IS VERY TOXIC. OUR COMMUNITY CENTER, PARK, MEDICAL CENTER, SCHOOLS, SENIOR CENTER AND TWO SUBDIVISIONS ARE WITHIN A MILE AND A HALF OF THE POTENTIAL EPICENTER.

A MAJORITY OF AMARGOSA VALLEY RESIDENTS HAVE OVER THE LAST YEAR AND A HALF, WORKED OR HAD INPUT TO DEVELOP THE AREA PLAN. IT'S BASE IS TO SET A DEFFINITION OF WHAT THE GROWTH OF OUR TOWN SHOULD LOOK LIKE. IT TRY'S TO PROJECT WHAT WE VALUE: CLEAN QUIET LIVING WHERE WE CAN WATCH THE SUNSETS FROM THE FRONT PORCH. NOTHING IN THIS APPLICATION, FOR THIS RIGHT OF WAY, WORKS WITH OUR AREA PLAN. THE LAND SURROUNDING THE PREVIOUSLY MENTIONED SUBDIVISIONS, PARKS, SCHOOLS, CHURCHES, MEDICAL CENTER, LIBRARY, COMMUNITY CENTER, FIRE STATION, AMBULANCE CENTER, CEMETERY, AND SHERIFF SUB STATION, IN THIS APPLICATION, IF ALLOWED WILL NOT ALLOW GROWTH AND RESIDENCES WHERE PEOPLE WANT TO LIVE IN A COMMUNITY, NEAR PUBLIC AREAS. THE PROPOSED PANEL FABRICATION AREA IS DIRECTLY ACROSS FROM THE ELEMENTARY SCHOOL AND PARK, WITH A PREVALING WIND FROM THE SOUTHWEST, HOW MUCH WELDING FUMES, DUST, AND OTHER POTENTIAL HAZARDS WILL STUDENTS, BALL PLAYERS, PICNICERS HAVE TO BREATHE? WELDERS ARE NOT GOING TO STAND IN WATER WELDING, SO WHATS THE DUST CONTROL? A SUFFICANT? WHERE IS THE MSDS?

THE PLAN OF DEVELOPMENT (POD) BY SOLAR MILLENNIUM SAY'S THAT ALL CONSTRUCTION TRAFFIC WILL COME ON FARM ROAD FROM STATE HIGHWAY 373. IN ORDER TO GET TO THE CONSTRUCTION SITE ALL TRAFFIC WILL PASS THE AFFORE MENTIONED PUBLIC SERVICES AND THE ELEMENTARY SCHOOL. HOW MANY INJURED OR DEAD STUDENTS ARE ACCEPTABLE TO THE BUREAU OF LAND MANAGEMENT AND SOLAR MILLENNIUM IF THIS APPLICATION IS MOVED FORWARD?

WATER! HOW MUCH WATER? THIS IS A DESERT. IT'S OUR MOST VALUEABLE RESOURCE.

IF I SOUND HARSH, IT'S BECAUSE I'M SCARED. THIS TYPE OF INDUSTRIAL POWER PLANT DOES NOT BELONG IN OR NEAR A TOWN OF ANY SIZE. LOOK AT ANY PICTURE IN THE SOLAR MILLENNIUM POD, WEB

SITE, AND THERE AREN'T ANY HOMES, OR SCHOOLS NEARBY! WHY? WHY HERE?

I DO HAVE A SOLUTION. HAVE SOLAR MILLENNIUM REAPPLY FOR A ROW, A MINIMUM OF 5 MILES NORTH OF FARM ROAD ALONG VALLEYVIEW ROAD. ALLOW AN EASEMENT FOR WATER PIPELINE AND TRANSMISSION LINES ALONG POWERLINE ROAD NORTH TO THE NEW SITING. APPLICATIONS ARE JUDGED ON "BEST USE" NOT FIRST COME FIRST SERVED AND SOLAR MILLENNIUM SEEMS PREPARED TO GET UNDER CONSTRUCTION QUICKLY. THE TRAFFIC WILL ROUTE ALONG US HWY 95 TO VALLEYVIEW AND INTO THE PROJECT WITH MINIMAL IMPACT. IT'S CLOSER TO THE AREA CURRENTLY STUDIED FOR THE PEIS AND ANOTHER TRANSMISSION LINE.

Thank you for your comment, Jason Lloyd.

The comment tracking number that has been assigned to your comment is SolarM60267.

Comment Date: September 14, 2009 22:52:47PM
Solar Energy Development PEIS
Comment ID: SolarM60267

First Name: Jason
Middle Initial: M
Last Name: Lloyd
Organization: L-C Cattle Company
Address: P.O. Box 352
Address 2:
Address 3:
City: Pioche
State: NV
Zip: 89043
Country: USA
Email: lbarccattlecompany@yahoo.com
Privacy Preference: Don't withhold name or address from public record
Attachment: Jason's solar comment letter.doc

Comment Submitted:

Please see attachment for my comments

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue – EVS/900
Argonne, Illinois 60439

RE: Comments to the Solar Programmatic Environmental Impact Study

To Whom It May Concern:

I am very concerned with the current proposed solar site in Dry Lake Valley North. I am the grandson of Kenneth Lytle, and I run cattle with him on his allotment in this valley. The Simpson allotment and all of the proposed area to the north of it is our entire winter range. If this grazing area is turned into a place for solar development, we lose our entire herd and would be pushed out of business. I am a sixth-generation rancher of Lytle Ranches, and my son would become a seventh-generation rancher. We have been using this valley for over 100 years.

We also own several water rights in this valley and have made many range improvements over the past 100 years. I believe that a developer would have to compensate us heavily if he or she were to choose this area for a solar site because of the recent decision made in the Wayne Hage case. Most importantly, however, would be the valuable loss of vegetation in the area since it represents one of the best white sage locations in the state of Nevada. White sage is a very delicate plant that is easily destroyed and that can not be reintroduced. Once this valuable range is destroyed, it is ruined forever.

The ranchers in this area also contribute significantly to the economic survival of Lincoln County. For over 150 years the ranchers in this area of Dry Lake Valley North have played a big role in contributing to the welfare of this county.

At a recent meeting at the Caliente BLM, ranchers and government representatives met and outlined alternate areas for solar that would have few, if any, impacts on all aspects involved. I urge you to reconsider the areas you have outlined for solar if they affect grazing rights whatsoever. This state needs to keep these grazing grounds intact for the future needs of our country. Everyday, ranchers across the United States are selling out to developers for the huge price tag attached to their lands. The number of ranchers, especially the small rancher, is declining rapidly. Please don't add to this demise.

Sincerely,

Jason Lloyd

Thank you for your comment, Jennifer Godfrey.

The comment tracking number that has been assigned to your comment is SolarM60268.

Comment Date: September 15, 2009 00:00:16AM
Solar Energy Development PEIS
Comment ID: SolarM60268

First Name: Jennifer
Middle Initial: G
Last Name: Godfrey
Organization:
Address: 2954 Shelton Rd
Address 2:
Address 3:
City: Wonder Valley
State: CA
Zip: 92277
Country: USA
Email:
Privacy Preference: Don't withhold name or address from public record
Attachment: sept 14 2009 comments on renewable energy.wps

Comment Submitted:

Thank you for the opportunity to comment. It is attached.

Jennifer G. Godfrey



9/16/2009

(Please do not give out any other identifiable information other than that listed above.)

To those concerned with comments regarding the applications for renewable energy sources in the area east of Twentynine Palms California and south of the eastern portion of the MCAGCC,

I have a land patent. I live underneath the purple-boxed area proposed to be a solar thermal project that is applied for near the same area that has been applied for border as the MCAGCC's "southern expansion area" border. This area is south of the proposed base expansion and is a populated area. There are way too many people living under those proposed project applications and many of them also hold land patents (see attached information re: the USCODE on land patented by the United States Government).

The other projects in the area east of Twentynine Palms would ruin our view and our freedom to have our land and use it as it was chosen for the purpose of peace and quiet. The spoils of energy should be considered much longer than it has and it seems these applications were made in haste and those applicants did not check out landowners and their property rights. In addition, we have water rights to speak about. The Dale Basin Well Owners Association, of which I am a member, will not loose this precious resource because we are working on governing ourselves more and being governed less, as it should be.

There has been some confusion within the San Bernardino County government and its officials that govern property owner's deed information that has, largely, prevented us from any development. This should NOT be happening. Our local government has been largely silent on this issue causing many to be either uninformed of these applications or misinformed. Either way, we need more time.

Thank you for your time, for the extension period for comments and for your part in getting maps and information to our community as limited as it was. We look forward to working with you all to solve the energy problems, just not in my yard unless it is on my roof.

Regards,

Jennifer G. Godfrey
Wonder Valley, Ca.

-CITE-

30 USC Sec. 83

01/08/2008

-EXPCITE-

TITLE 30 - MINERAL LANDS AND MINING

CHAPTER 3 - LANDS CONTAINING COAL, OIL, GAS, SALTS, ASPHALTIC

MATERIALS, SODIUM, SULPHUR, AND BUILDING STONE

SUBCHAPTER II - COAL LAND ENTRIES UNDER NONMINERAL LAND LAWS WITH

RESERVATION OF COAL TO UNITED STATES

-HEAD-

Sec. 83. Homestead or desert-land and other entries

-STATUTE-

Unreserved public lands of the United States exclusive of Alaska
which have been withdrawn or classified as coal lands, or are
valuable for coal, shall be subject to appropriate entry under the
homestead laws by actual settlers only, the desert-land law, to

selection under section 641 of title 43, and to withdrawal under the Act approved June seventeenth, nineteen hundred and two, known as the Reclamation Act, whenever such entry, selection, or withdrawal shall be made with a view of obtaining or passing title, with a reservation to the United States of the coal in such lands and of the right to prospect for, mine, and remove the same. But all homestead entries made hereunder shall be subject to the conditions, as to residence and cultivation, of entries under section 218 of title 43. Those who have initiated nonmineral entries, selections, or locations in good faith, prior to June 22, 1910, on lands withdrawn or classified as coal lands may perfect the same under the provisions of the laws under which said entries were made, but shall receive the limited patent provided for in sections 83 to 85 of this title.

-SOURCE-

(June 22, 1910, ch. 318, Sec. 1, 36 Stat. 583; June 16, 1955, ch. 145, Sec. 1, 69 Stat. 138.)

-REFTEXT-

REFERENCES IN TEXT

The Act approved June seventeenth, nineteen hundred and two, referred to in text, is act June 17, 1902, ch. 1093, 32 Stat. 388, popularly known as the Reclamation Act, which is classified generally to chapter 12 (Sec. 371 et seq.) of Title 43, Public Lands. For complete classification of this Act to the Code, see Short Title note set out under section 371 of Title 43 and Tables.

-MISC1-

AMENDMENTS

1955 - Act June 16, 1955, removed 160-acre limitation on desert entry.

ADDITIONAL DESERT-LAND ENTRY

Section 3 of act June 16, 1955, as amended by Pub. L. 85-641, Sec. 2, Aug. 14, 1958, 72 Stat. 596, provided that: "Any person who, prior to June 16, 1955, made a valid desert-land entry on lands subject to such Act of June 22, 1910 [sections 83 to 85 of

this title], or of July 17, 1914 [sections 121 to 123 of this title], may, if otherwise qualified, make one additional entry, as a personal privilege, not assignable, upon one or more tracts of desert land subject to the provisions of such Acts, as hereby amended, and section 7 of the Act entitled 'An Act to stop injury to the public grazing lands by preventing overgrazing and soil deterioration, to provide for their orderly use, improvement, and development to stabilize the livestock industry dependent upon the public range, and for other purposes', approved June 28, 1934, as amended (48 Stat. 1269, 1272; 43 U.S.C. 315f). The additional land entered by any person pursuant to this section shall not, together with his original entry, exceed three hundred and twenty acres, and all the tracts included within the additional entry authorized by this section shall be sufficiently close to each other to be managed satisfactorily as an economic unit, as determined under rules and regulations issued by the Secretary of the Interior.

Additional entries authorized by this section shall be subject to

all the requirements of the desert-land law."

SUPPLEMENTAL PROVISIONS

Section 90 of this title, act Apr. 30, 1912, ch. 99, 37 Stat.

105, supplements this section by making provisions for the

selection of coal lands by the several States, and for their sale

under the laws providing for the sale of isolated or disconnected

tracts of public lands.

[Home](#) [Search](#) [Download](#) [Classification](#) [Codification](#) [Popular Names](#) [About](#)
Office of the Law Revision Counsel, U.S. House of Representatives

Office of the Law Revision Counsel, U.S. House of Representatives
[Home](#) [Search](#) [Download](#) [Classification](#) [Codification](#) [Popular Names](#) [About](#)

-CITE-

30 USC Sec. 52

01/08/2008

-EXPCITE-

TITLE 30 - MINERAL LANDS AND MINING

CHAPTER 2 - MINERAL LANDS AND REGULATIONS IN GENERAL

-HEAD-

Sec. 52. Patents or homesteads subject to vested and accrued water

rights

-STATUTE-

All patents granted, or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by section 51 of this title.

-SOURCE-

(R.S. Sec. 2340; Mar. 3, 1891, ch. 561, Sec. 4, 26 Stat. 1097.)

-STATAMEND-

REPEALS

Provision of this section, ", or rights to ditches and reservoirs used in connection with such water rights," was repealed by Pub. L.

94-579, title VII, Sec. 706(a), Oct. 21, 1976, 90 Stat. 2793,

effective on and after Oct. 21, 1976, insofar as applicable to the
issuance of rights-of-way over, upon, under, and through the public
lands and lands in the National Forest System.

-COD-

CODIFICATION

R.S. Sec. 2340 derived from act July 9, 1870, ch. 235, Sec. 17,
16 Stat. 218.

Section is also set out as the second par. of section 661 of
Title 43, Public Lands.

-MISC1-

SAVINGS PROVISION

Repeal by Pub. L. 94-579, title VII, Sec. 706(a), Oct. 21, 1976,
90 Stat. 2793, insofar as applicable to the issuance of rights-of-
way not to be construed as terminating any valid lease, permit,
patent, etc., existing on Oct. 21, 1976, see note set out under
section 1701 of Title 43, Public Lands.

SUBMERGED LANDS ACT

Provisions of this section as not amended, modified or repealed
by the Submerged Lands Act, see section 1303 of Title 43, Public
Lands.

[Home](#) [Search](#) [Download](#) [Classification](#) [Codification](#) [Popular Names](#) [About](#)
Office of the Law Revision Counsel, U.S. House of Representatives

Thank you for your comment, Greg Suba.

The comment tracking number that has been assigned to your comment is SolarM60269.

Comment Date: September 15, 2009 01:52:15AM
Solar Energy Development PEIS
Comment ID: SolarM60269

First Name: Greg
Middle Initial:
Last Name: Suba
Organization: California Native Plant Society
Address: 2707 K Street
Address 2:
Address 3:
City: Sacramento
State: CA
Zip: 95816
Country: USA
Email: gsuba@cnps.org
Privacy Preference: Don't withhold name or address from public record
Attachment: CNPS_Solar Energy PEIS.pdf

Comment Submitted:

I am submitting comments on behalf of the California Native Plant Society. Our comments are detailed in the attached file, "CNPS_Solar Energy PEIS.pdf"

Greg Suba

California Native Plant Society

2707 K Street, Ste. 1 • Sacramento, CA 95816-5113 • (916)447-2677 • FAX (916)447-2727

Solar Energy PEIS – Solar Energy Study Areas
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Re: Scoping Comments on the California Solar Energy Study Areas (SESAs) for the Solar PEIS

To whom it may concern:

Please accept and fully consider these comments on behalf of The California Native Plant Society.

The mission of The California Native Plant Society (CNPS) is to increase understanding and appreciation of California's native plants and to conserve them and their natural habitats through education, science, advocacy, horticulture and land stewardship.

CNPS supports renewable energy generation via large-array utility scale projects only when sited on already-disturbed lands, e.g., brownfield and fallow agricultural lands. We oppose the siting of large-array renewable energy projects sited in functionally intact desert areas on public trust lands, especially *as the first option*. Alternative lands where large-array solar projects can provide renewable energy demands while preserving the functional integrity of intact desert ecosystems have been identified and mapped by a coalition of conservation organizations based on the renewable energy project Siting Criteria outlined in Attachment A of our letter. These criteria and the map of identified alternative lands have been submitted to the BLM in a separate SESA PEIS scoping comment letter jointly submitted on behalf of several California-based and national conservation organization, including CNPS.

CNPS makes the following recommendations regarding the scope of the BLM SESA PEIS.

- We recommend that the PEIS review and prioritize the 13 SESAs in order of highest to least ecological impact and remove the SESAs posing the highest ecological threats. CNPS believes the Iron Mountain SESA in California will rank most highly on this list and should be removed from consideration for *any* renewable energy project development. The lands in the Iron Mountain SESA represent a wilderness-locked area where botanical characteristics are largely unknown, and whose access is extremely limited. Development of renewable energy projects in the proposed Iron Mountain SESA would introduce avoidable and immitigable impacts (severing of migration corridors, introduction of invasive plant and animal species into an intact and isolated desert ecosystem) to this area, and would be inconsistent with the Siting Criteria developed by the coalition of desert conservation groups (Attachment A).
- In California, the SESA Programmatic EIS, and the joint state and federal Desert Renewable Energy Conservation Plan will engage in landscape level analysis for siting of renewable energy development in the California desert. This type of comprehensive planning is needed to address management actions that will ensure the long-term conservation of the desert ecosystem. Conservation planning through these two processes must be coordinated to consider **all** project applications, including those currently progressing through entitlement and certification phases outside of the more comprehensive landscape-level planning approaches.

Coordination is particularly important in terms of the areas identified for development and the appropriate mitigation strategies for solar projects. If there are disagreements between BLM, CDFG, and/or other state (or federal) agencies regarding these key issues, they should be resolved at least tentatively in advance (subject to the legal obligations and discretion of each agency) and as promptly as possible. If these questions are not addressed early on, the alternative is an iterative process that could delay projects by years and require substantial revisions to early efforts to respond to later, potentially differing, regulatory processes.

- In addition to addressing the need to preserve landscape-scale functionality of intact desert habitat when siting large-array solar projects, the BLM must also address the need to conserve individual rare, threatened and endangered plant taxa within the 4 California SESAs when developing the SESA PEIS. CNPS recommends the SESA PEIS address project impacts to rare, threatened, and endangered plants within study areas by following policies and guidelines outlined in BLM Special Status Plan Management Manual 6840-1, and BLM Management Manual Supplement H-6840.06, both available on-line via the BLM website (on September 14, 2009) at (respectively):

http://www.blm.gov/ca/pdfs/pa_pdfs/biology_pdfs/SpecialStatusPlantManagement.pdf

and

http://www.blm.gov/ca/pdfs/pa_pdfs/biology_pdfs/6840.06-supplement.pdf.

In particular, CNPS recommends that the SESA PEIS maintain the following BLM policies and guidelines:

1. Federally listed threatened and endangered plant taxa, and those proposed for federal listing will be addressed as per the requirements of the federal Endangered Species Act.
 2. For Candidate Plant Species, the BLM will carry out management, consistent with the principles of multiple use, for the conservation of candidate plant species and their habitats and will ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as Threatened or Endangered. Specifically, the BLM will adopt the guidelines outlined in BLM Special Status Plant Manual Supplement 6840-06 section C.
 3. California State listed plants and CNPS List 1B plants are recognized as BLM Sensitive Plant Species and will be given the same level of protection as Candidate Plant Species and all of the policy statements given for candidate species apply equally to sensitive plant species (cf. BLM Special Status Plant Manual Supplement 6840-06 section C).
 4. The probability of occurrence of rare plants must be considered as High, project's Habitat Disturbance Level within each SESA must be considered as High, and therefore all botanical inventories conducted as part of an environmental review within each SESA must meet a minimum intensity level of Complete as defined in BLM Special Status Plan Management Manual 6840-1 sections III.E.1 and III.E.2.
 5. Many special status plant inventories of public lands conducted to assess the impacts of a project are performed by consultants hired by project proponents. Personnel conducting botanical inventories within SESAs must have strong backgrounds in plant taxonomy, plant ecology, field sampling design and methods, and knowledge of the floras of the area to be inventoried. Such qualifications help to ensure that all special status plants occurring in the area to be inventoried will be located, including those that were not predicted to occur at the start of the inventory. Therefore, botanical survey personnel requirements must meet the qualifications outlined in BLM Special Status Plan Management Manual 6840-1 section III.D.1.
 6. In order for the BLM to adequately determine the quality of such third party inventories, CNPS recommends botanical surveys be conducted as per the CNPS *Botanical Survey Guidelines* and the California Department of Fish & Game *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*.
- CNPS recommends that the SESA PEIS also assess project impacts to plant taxa occurring within California's SESAs that are considered rare within California but more common elsewhere. These taxa represent plants occurring at the periphery of their population ranges and whose genetic stock may represent biological factors critical to a taxon's ability to adapt to changing climatic conditions. These plant taxa are listed as CNPS List 2 plants.

California SESA botanical concerns

The botanical resources of the California Desert Conservation Area (CDCA) are largely unknown as much of the area has not been surveyed floristically. This is especially the case within the Iron Mountain SESA.

Based on botanical information from the California Natural Diversity Database (CNDDDB), and from herbaria specimens, we make the following recommendation regarding the four California SESAs.

Pisgah SESA

We recommend reducing this study area to avoid impacts to sensitive resources. Rare plant issues within the Pisgah SESA include known occurrences of:

Penstemon albomarginatus

Androstephium breviflorum

Castela emory

Iron Mountain SESA

We recommend eliminating this SESA due to the high occurrence of sensitive resources and general inconsistency with our siting criteria. The botanical resources of the Iron Mountain SESA are largely unknown. Rare plant issues within the Iron Mountain SESA include known occurrences of:

Androstephium breviflorum

Eriastrum harwoodii

Riverside East SESA

We believe this SESA should be reduced to avoid impacts to rare plants and other sensitive resources. Rare plant taxa within the Riverside East SESA include known occurrences of:

Cryptantha costata
Proboscidea althaeifolia
Colubrina californica
Senna covesii
Ditaxis californica
Ditaxis claryana
Abronia villosa var. *aurita*
Hymenoxys odorata
Teucrium cubense ssp. *depressum*
Wislizenia refracta ssp. *refracta*
Grusonia parishii
Astragalus insularis var. *harwoodii*
Corypantha alversonii
Castela emoryi

The sand dune habitats at the eastern end of the Eagle Mountains currently support two CNPS listed rare plants:

Cryptantha costata
Eriastrum harwoodii
and one watchlist plant:
Astragalus aridus

Furthermore, the western half of the Iron Mountain SESA is microphyll woodland and represents a transition zone between Mojave and Sonoran ecoregions, and as such represents an ecologically important vegetation community.

Imperial East SESA

Based on currently available information there are few anticipated resource conflicts with this proposed SESA. Local CNPS members are researching the botanical resources within this SESA.

The California Native Plant Society appreciates the opportunity to provide these comments regarding the scoping requirements of the SESA PEIS, and will continue to remain actively involved throughout all phases of the BLM SESA planning effort. Our goal in this regard is to assist the BLM to develop the best possible environmental assessment in a timely manner that provides effective, long-term protective policies for preserving our biological resources in the California Desert while addressing the permitting process for renewable energy projects.

Respectfully,
Greg Suba
Conservation Program Director
California Native Plant Society
2707 K Street
Sacramento, CA 95816



Dedicated to the preservation of California native flora



ATTACHMENT A

**Audubon California
California Native Plant Society * California Wilderness Coalition
Center for Biological Diversity * Defenders of Wildlife
Desert Protective Council * Mojave Desert Land Trust
National Parks Conservation Association
Natural Resources Defense Council * Sierra Club * The Nature Conservancy
The Wilderness Society * The Wildlands Conservancy**

Renewable Siting Criteria for California Desert Conservation Area

Environmental stakeholders have been asked by land management agencies, elected officials, other decision-makers, and renewable energy proponents to provide criteria for use in identifying potential renewable energy sites in the California Desert Conservation Area (CDCA). Large parts of the California desert ecosystem have survived despite pressures from mining, grazing, ORV, real estate development and military uses over the last century. Now, utility scale renewable energy development presents the challenge of new land consumptive activities on a potentially unprecedented scale. Without careful planning, the surviving desert ecosystems may be further fragmented, degraded and lost.

The criteria below primarily address the siting of solar energy projects and would need to be further refined to address factors that are specific to the siting of wind and geothermal facilities. While the criteria listed below are not ranked, they are intended to inform planning processes and were designed to provide ecosystem level protection to the CDCA (including public, private and military lands) by giving preference to disturbed lands, steering development away from lands with high environmental values, and avoiding the deserts' undeveloped cores. They were developed with input from field scientists, land managers, and conservation professionals and fall into two categories: 1) areas to prioritize for siting and 2) high conflict areas. The criteria are intended to guide solar development to areas with comparatively low potential for conflict and controversy in an effort to help California meet its ambitious renewable energy goals in a timely manner.

Areas to Prioritize for Siting

- Lands that have been mechanically disturbed, i.e., locations that are degraded and disturbed by mechanical disturbance:
 - Lands that have been “type-converted” from native vegetation through plowing, bulldozing or other mechanical impact often in support of agriculture or other land cover change activities (mining, clearance for development, heavy off-road vehicle use).¹
- Public lands of comparatively low resource value located adjacent to degraded and impacted private lands on the fringes of the CDCA:²
 - Allow for the expansion of renewable energy development onto private lands.
 - Private lands development offers tax benefits to local government.

- Brownfields:
 - Revitalize idle or underutilized industrialized sites.
 - Existing transmission capacity and infrastructure are typically in place.
- Locations adjacent to urbanized areas:³
 - Provide jobs for local residents often in underserved communities;
 - Minimize growth-inducing impacts;
 - Provide homes and services for the workforce that will be required at new energy facilities;
 - Minimize workforce commute and associated greenhouse gas emissions.
- Locations that minimize the need to build new roads.
- Locations that could be served by existing substations.
- Areas proximate to sources of municipal wastewater for use in cleaning.
- Locations proximate to load centers.
- Locations adjacent to federally designated corridors with existing major transmission lines.⁴

High Conflict Areas

In an effort to flag areas that will generate significant controversy the environmental community has developed the following list of criteria for areas to avoid in siting renewable projects. These criteria are fairly broad. They are intended to minimize resource conflicts and thereby help California meet its ambitious renewable goals. The criteria are not intended to serve as a substitute for project specific review. They do not include the categories of lands within the California desert that are off limits to all development by statute or policy.⁵

- Locations that support sensitive biological resources, including: federally designated and proposed critical habitat; significant⁶ populations of federal or state threatened and endangered species,⁷ significant populations of sensitive, rare and special status species,⁸ and rare or unique plant communities.⁹
- Areas of Critical Environmental Concern, Wildlife Habitat Management Areas, proposed HCP and NCCP Conservation Reserves.¹⁰
- Lands purchased for conservation including those conveyed to the BLM.¹¹
- Landscape-level biological linkage areas required for the continued functioning of biological and ecological processes.¹²
- Proposed Wilderness Areas, proposed National Monuments, and Citizens' Wilderness Inventory Areas.¹³
- Wetlands and riparian areas, including the upland habitat and groundwater resources required to protect the integrity of seeps, springs, streams or wetlands.¹⁴
- National Historic Register eligible sites and other known cultural resources.
- Locations directly adjacent to National or State Park units.¹⁵

EXPLANATIONS

¹Some of these lands may be currently abandoned from those prior activities, allowing some natural vegetation to be sparsely re-established. However, because the desert is slow to heal, these lands do not support the high level of ecological functioning that undisturbed natural lands do.

²Based on currently available data.

³Urbanized areas include desert communities that welcome local industrial development but do not include communities that are dependent on tourism for their economic survival.

⁴The term “federally designated corridors” does not include contingent corridors.

⁵Lands where development is prohibited by statute or policy include but are not limited to: National Park Service units; designated Wilderness Areas; Wilderness Study Areas; BLM National Conservation Areas; National Recreation Areas; National Monuments; private preserves and reserves; Inventoried Roadless Areas on USFS lands; National Historic and National Scenic Trails; National Wild, Scenic and Recreational Rivers; HCP and NCCP lands precluded from development; conservation mitigation banks under conservation easements approved by the state Department of Fish and Game, U.S. Fish and Wildlife Service or Army Corps of Engineers a; California State Wetlands; California State Parks; Department of Fish and Game Wildlife Areas and Ecological Reserves; National Historic Register sites.

⁶Determining “significance” requires consideration of factors that include population size and characteristics, linkage, and feasibility of mitigation.

⁷Some listed species have no designated critical habitat or occupy habitat outside of designated critical habitat. Locations with significant occurrences of federal or state threatened and endangered species should be avoided even if these locations are outside of designated critical habitat or conservation areas in order to minimize take and provide connectivity between critical habitat units.

⁸Significant populations/occurrences of sensitive, rare and special status species including CNPS list 1B and list 2 plants, and federal or state agency species of concern.

⁹Rare plant communities/assemblages include those defined by the California Native Plant Society’s Rare Plant Communities Initiative and by federal, state and county agencies.

¹⁰ACECs include Desert Tortoise Desert Wildlife Management Areas (DWMAs). The CDCA Plan has designated specific Wildlife Habitat Management Areas (HMAs) to conserve habitat for species such as the Mohave ground squirrel and bighorn sheep. Some of these designated areas are subject to development caps which apply to renewable energy projects (as well as other activities).

¹¹These lands include compensation lands purchased for mitigation by other parties and transferred to the BLM and compensation lands purchased directly by the BLM.

¹²Landscape-level linkages provide connectivity between species populations, wildlife movement corridors, ecological process corridors (e.g., sand movement corridors), and climate change adaptation corridors. They also provide connections between protected ecological reserves such as National Park units and Wilderness Areas. The long-term viability of existing populations within such reserves may be dependent upon habitat, populations or processes that extend outside of their boundaries. While it is possible to describe current wildlife movement corridors, the problem of forecasting the future locations of such corridors is confounded by the lack of certainty inherent in global climate change. Hence the need to maintain broad, landscape-level connections. To maintain ecological functions and natural history values inherent in parks, wilderness and other biological reserves, trans-boundary ecological processes must be identified and protected. Specific and cumulative impacts that may threaten vital corridors and trans-boundary processes should be avoided.

¹³Proposed Wilderness Areas: lands proposed by a member of Congress to be set aside to preserve wilderness values. The proposal must be: 1) introduced as legislation, or 2) announced by a member of Congress with publicly available maps. Proposed National Monuments: areas proposed by the President or a member of Congress to protect objects of historic or scientific interest. The proposal must be: 1) introduced as legislation or 2) announced by a member of Congress with publicly available maps. Citizens' Wilderness Inventory Areas: lands that have been inventoried by citizens groups, conservationists, and agencies and found to have defined “wilderness characteristics.” The proposal has been publicly announced.

¹⁴The extent of upland habitat that needs to be protected is sensitive to site-specific resources. For example: the NECO Amendment to the CDCA Plan protects streams within a 5-mile radius of Townsend big-eared bat maternity roosts; aquatic and riparian species may be highly sensitive to changes in groundwater levels.

¹⁵Adjacent: lying contiguous, adjoining or within 2 miles of park or state boundaries. (Note: lands more than 2 miles from a park boundary should be evaluated for importance from a landscape-level linkage perspective, as further defined in footnote 12).

Steve Saway stevesaway@gmail.com
To:Chris_Horyza@blm.gov 07/08/2009 12:31 PM
Cc:
Subject: Gillespie Solar Study Area

Hi Chris,

Thanks again for the update you provided at the last RAC meeting on planning for solar energy development on BLM lands. It was very timely, although I wish the BLM Washington Office solar energy press release had been published prior to the RAC meeting so we could have discussed with you the proposed Arizona Solar Energy Study Areas.

I don't have a detailed map, but from what I can tell using the web site, it appears that the Gillespie solar study area could pose serious multiple use conflicts. Does the area include Agua Caliente Road? I believe that the upcoming Lower Sonoran RMP envisions that Agua Caliente Road will be designated a backcountry byway. As you probably know, it serves as a major recreational gateway to pristine Sonoran Desert public lands that offer a wide range of recreational opportunities, including hiking, hunting, dispersed camping, wildlife viewing, rockhounding, OHV backcountry touring, etc., as well as access to spectacular scenery, including the Gila Bend Mountains, Yellow Medicine Butte, and Fourth of July Butte. This access is important to local rural communities which rely on public lands for recreational opportunities. Also, it appears the Gillespie solar study area includes several OHV routes that lead south from Agua Caliente Road to provide access to the Signal Peak and Woolsey Peak Wilderness areas. I'm concerned that the Gillespie solar study area could jeopardize the public's ability to access spectacular public lands via Agua Caliente Road and connecting OHV routes, mainly west and south of the proposed solar study area. Were recreation and public access thoroughly considered when this area was nominated as a solar study area? Please correct me if I have incorrect information or if these concerns can be mitigated as the planning process moves forward.

Thanks for any clarification you can provide.

Steve

1920 Underwood Road
Holtville, CA 92250

July 13, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 South Cass Avenue
EVS/900
Argonne, Illinois 60439

RE: SOLAR ENERGY

As a resident of Imperial County, California since 1936; a Korean U S Air Force veteran, a member of the California Desert District Advisory Council for the U S Department of the Interior from 1981 through 1989, and a current member of the Imperial County Board of Education, I strongly endorse the use of the area East of Holtville for a Solar Energy Area.

As you already know, we have the most cloudless days of any area in California. The U S Navy brings their Blue Angels Flying Team here each year because of the winter weather being perfect for practicing their various close flying techniques.

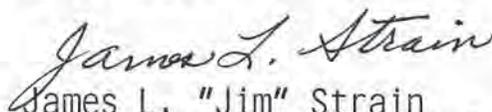
If you contact the Imperial County Board of Supervisors you will find they support development of the area to create jobs.

Imperial County has the highest unemployment of any county in California.

I have been working on a project since 1992 to bring presorted household and office waste to an area several miles North of the proposed solar area. Originally, the Mesquite Regional Landfill was permitted by Goldfields Mining; now the project is owned by the Sanitation Districts of Los Angeles County and they certainly have the full support of the County Supervisors. Future plans are to extract methane gas from the waste for generation of electricity.

Since we already have geothermal production of electricity just North of the area proposed for solar, Imperial County could become the highest producer of "green" energy in the State of California.

Sincerely,



James L. "Jim" Strain
Imperial County Board of Education

Phone: 760-356-2361



MOAPA BAND OF PAIUTES

MOAPA RIVER INDIAN RESERVATION

P.O. BOX 340

MOAPA, NEVADA 89025

TELEPHONE (702) 865-2787

Fax (702) 865-2875

July 28, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

Re: solar energy study area along the southwest boundary of the Moapa River Indian Reservation near the Arrow Canyon Range

Dear Staff:

The Moapa Band of Paiutes has just learned of the solar energy study area on BLM land along the southwest boundary of the Moapa River Indian Reservation near the Arrow Canyon Range. Because of the close proximity of the proposed site to the reservation I think it is important that the Tribe have an opportunity to study this proposal and provide comments to BLM and DOE.

We request an extension of 60 days for the submission of comments on the solar study area and the potential impact to the Moapa Band of Paiutes. The requested extension will give the Tribe the necessary time to evaluate the proposal and determine its impact, if any, on the reservation.

Sincerely,

A handwritten signature in cursive script that reads "Philbert Swain".

Philbert Swain
Tribal Chairman

COMMISSIONERS
 KRISTIN K. MAYES - Chairman
 GARY PIERCE
 PAUL NEWMAN
 SANDRA D. KENNEDY
 BOB STUMP



ARIZONA CORPORATION COMMISSION

ERNEST G. JOHNSON
 Executive Director

Direct Line: (602) 542-0657
 Fax: (602) 542-0765

August 3, 2009

Solar Energy PEIS
 Argonne National Laboratory
 9700 S. Cass Avenue
 EVS/900
 Argonne, IL 60439

Re: Bureau of Land Management Solar Energy Study Areas Selection in Arizona.

Dear Sir or Madam,

The Arizona Corporation Commission has had the opportunity to review the Bureau of Land Management's ("BLM") and U.S. Department of Energy's ("DOE") recently announced Solar Energy Study Areas for Arizona and appreciates this opportunity to provide comment.¹ While we are encouraged that the BLM is moving forward to fast track solar development in Western States, we have concerns regarding the process used to select the Solar Zones in Arizona, and the resulting paucity of Arizona land identified for study.

According to the Solar Energy Study Areas map for Arizona, the BLM has selected to study three areas in our state – one called Brenda totaling 4,321 acres in La Paz County, another named Bullard Wash comprising 8,201 acres in Yavapai County and finally, a third, Gillespie, which takes in 3,970 acres in Southwestern Maricopa County. In all, the Arizona lands under study by the BLM total *16,492 acres*. By contrast, in the state of Nevada, the BLM will be studying seven solar zones totaling *149,375 acres*, *120,584 acres* in three solar zones in New Mexico, and *351,049 acres* in four solar zones in California. The enormous disparity in the number of acres under study between these states suggests that dramatically different criteria for selecting the solar zones must have been used by the BLM.

Indeed, it is clear that the "Study Area" selection process for the three zones identified for study in Arizona relied upon "Low Known Conflict" data prepared by the Arizona Game and Fish Department ("AZGFD"). In reviewing this screen, it closely resembles work undertaken by the AZGFD for the Western Governors Association's Western Renewable Energy Zone ("WREZ") initiative. During that effort, AZGFD recognized that its final

¹ The studies are part of the DOE and BLM Programmatic Environmental Impact Statement being conducted pursuant to the National Environmental Policy Act, regarding solar energy development in the West.

results raised concerns for several Parties involved in the WREZ process and AZGFD agreed to revisit its findings, understanding that the final results may have misrepresented the true scope of lands that would be minimally impacted by solar energy development in Arizona.

We are concerned that BLM's reliance on AZGFD data may have replicated the issues that arose in the WREZ process and unfairly mischaracterized Arizona's solar opportunities. Indeed, if WREZ had utilized the data submitted by the AZGFD, Arizona's depicted solar zones would have been drastically reduced, leading the casual observer to believe that our state is off-limits to solar development. In comparing the wildlife data utilized by each individual state for the WREZ process, it seems clear that the Arizona data used by AZGFD and now the BLM is much broader in scope than that used in other states, effectively screening out larger areas from consideration in Arizona when wildlife screens are in place. The WREZ process ultimately did not include the AZGFD data in arriving at its Qualified Resource Hub Map, and identified more than 18,000 acres of developable solar in Arizona.² Additionally, the National Renewable Energy Laboratories ("NREL") has identified significant solar resources in Arizona,³ and the Arizona Corporation Commission's Renewable Energy Transmission Task Force has chronicled solar and wind zones that are equally plentiful.⁴

In 2007, the Arizona Commission adopted the Renewable Energy Standard ("RES"), which requires our state's regulated utilities to generate at least 15 percent of their total retail sales from renewable energy resources by 2025, a target that will no doubt see several of them building – or purchasing energy from – projects that are constructed in the state of Arizona.⁵ Surrounding states, including California, Nevada, and New Mexico, also have Renewable Portfolio Standards that will necessitate the construction of renewable energy generation on both public and private lands. BLM lands will likely play a significant role in meeting those RPS mandates, and as such, the Commission believes it is in the public interest to include in the BLM's Arizona study areas the widest range of land possible. The Commission respectfully requests that BLM revisit its initial study areas in Arizona, given the wide chasm between the results in Arizona and in other similarly situated Western states. We also request that BLM carefully weigh the comparability of the screens it is relying on to reach its conclusions, so as to not disproportionately favor one state over the other as BLM decides which areas to prioritize for solar development.

Thank you for your consideration of these comments and we look forward to continued constructive interaction with the BLM on these and other issues.

² <http://www.westgov.org/wga/initiatives/wrez/WREZ%20Map%20and%20Tables%20Only.pdf>.

³ http://www.nrel.gov/csp/images/3pct_csp_az.jpg.

⁴ http://www.azcc.gov/Divisions/Utilities/Electric/Biennial/2008%20BTA/042009%20Workshop/ARRTIS_042009_FINAL.pdf.

⁵ It should be noted that a recent depiction by the Southwest Area Transmission ("SWAT") group showing the locations of requests for interconnection to those utilities by numerous proposed renewable energy developments would appear to include a number of projects that also have requests pending for permitting before the BLM. See http://www.azcc.gov/Divisions/Utilities/Electric/Biennial/2008%20BTA/042009%20Workshop/ARRTIS_042009_FINAL.pdf.

Sincerely,



Kristin K. Mayes
Chairman



Gary Pierce
Commissioner



Sandra D. Kennedy
Commissioner



Paul Newman
Commissioner



Bob Stump
Commissioner

cc: Ernest Johnson
Janice Alward
Michael Kearns
Rebecca Wilder
Mike Anable, Office of Arizona Gov. Jan Brewer



BOARD OF SUPERVISORS COUNTY OF INYO

P. O. BOX N • INDEPENDENCE, CALIFORNIA 93526
TELEPHONE (760) 878-0373 • FAX (760) 878-2241
e-mail: pgunsolley@inyocounty.us

MEMBERS OF THE BOARD
LINDA ARCULARIUS
SUSAN CASH
BEVERLY BROWN
MARTY FORTNEY
RICHARD CERVANTES

KEVIN D. CARUNCHIO
Clerk of the Board

PATRICIA GUNSOLLEY
Assistant Clerk of the Board

July 28, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue – EVS/900
Argonne, IL 60439

RE: PEIS Solar Energy Scoping Process

Gentlemen:

The County supports BLM's efforts to more rapidly and effectively move California and other western states toward renewable energy resources and respectfully wishes to make clear its desire to have local interests represented by being integrally involved not only in the planning and environmental review stages involved in the solar process, but in all phases – from inception to completion.

Inyo County requests to participate as a cooperating agency with the BLM in the PEIS process for solar energy development in California. Specifically, Inyo County requests coordination with BLM on this important issue, as provided under FLPMA and NEPA, in order that the County may take an active role with BLM in investigating and shaping future solar development within California.

Specifically, in reviewing the proposed renewable energy study areas, we notice both that there are no areas identified in Inyo County, and that there are areas immediately to the east of the County, in Nevada, that are identified for review. These areas (in western Nevada) end abruptly at the County (and California) border. There are extensive BLM lands in Inyo County that are contiguous with the identified study areas in Nevada and that possess the same excellent renewable energy potential (see two attached maps). Further, in Inyo County, BLM lands surround private, undeveloped lands in the Charleston View area (south and west of Pahrump, Nevada) that would be excellent land on which to locate solar production as well as support operations for solar development both in Inyo County and Nevada.

We request that the BLM review the identified study areas with a view toward expanding them across political boundaries to similar lands in Inyo County. We believe this is important for two reasons. First, it increases the area and effectiveness of the identified study areas. The appropriateness of BLM lands for renewable energy development does not depend on state, county, or other political boundaries. Additionally, including BLM lands that are contiguous with private undeveloped land opens the possibility for

Solar Energy PEIS
Argonne National Laboratory
July 29, 2009
Page TWO

private/public energy partnerships. Certainly, it would increase the likelihood that these private lands could be effectively used for energy generation and, combined with BLM lands, for energy transmission. Second, such energy development could lead to increased economic development and increased tax support for the citizens of any jurisdiction in which the development occurs. Excluding appropriate contiguous lands from study areas because those lands lie across political or BLM organizational boundaries removes an economic opportunity for similarly situated lands and jurisdictions, at no real savings to the study process. This seems neither logical nor fair.

For these reasons, Inyo County requests that BLM expand and modify its renewable energy study areas to include contiguous and appropriate BLM land in Inyo County.

Sincerely,



Supervisor Beverly A. Brown, Chairperson
Inyo County Board of Supervisors

Atch: Map

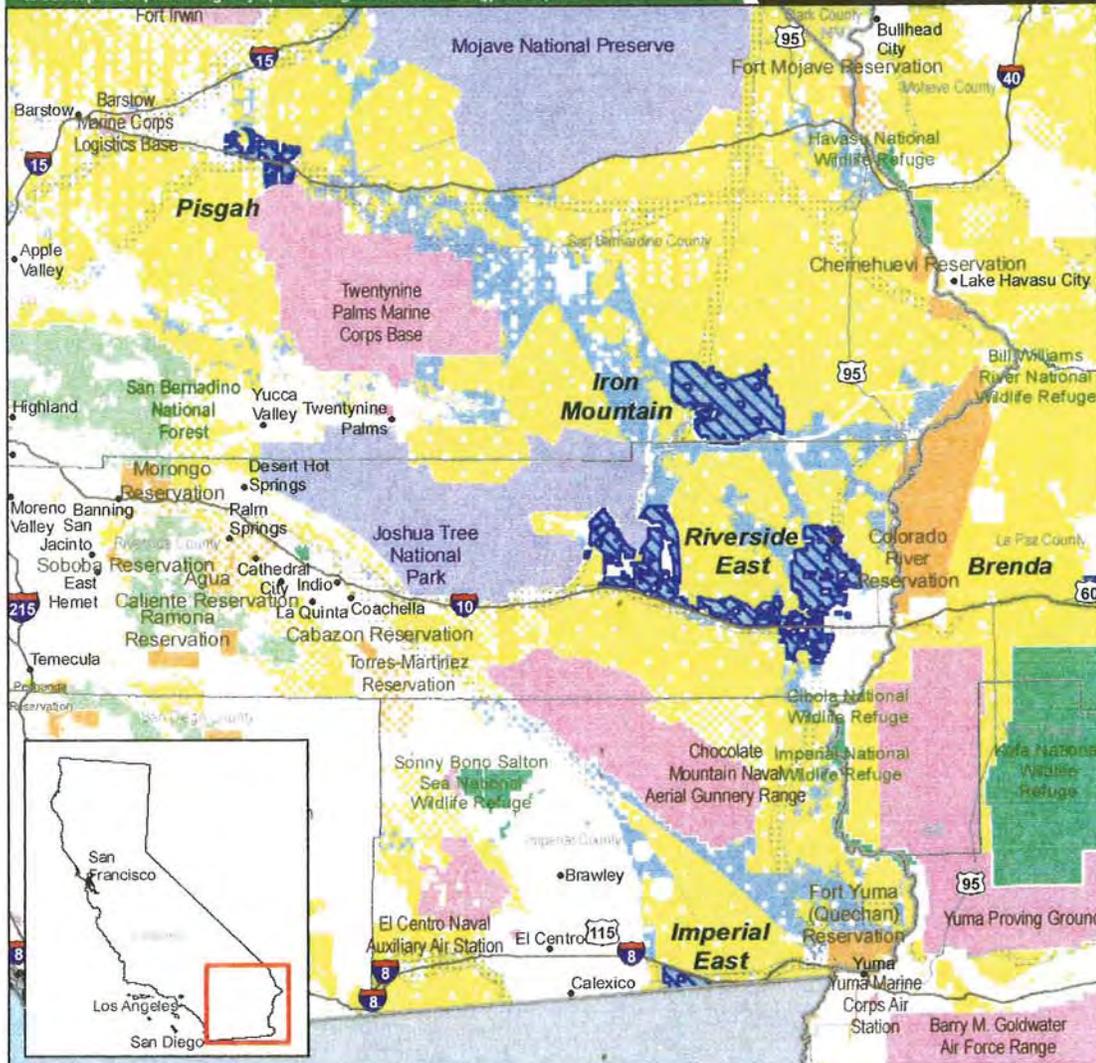
cc: Greg Miller, Renewable Energy Program Mgr., BLM California Desert District
California Energy Commission, Clare Laufenberg Gallardo
Board of Supervisors, Inyo County
Kevin Carunchio, County CAO
Randy Keller, Deputy County Counsel
Doug Wilson, Willdan Associates

Solar Energy Study Areas in California

Map Prepared July 21, 2009

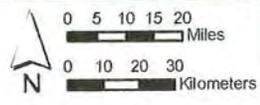


Property of the U.S. Departments of Energy and the Interior
 for Use in Preparation of their Programmatic Environmental Impact Statement
 to Develop and Implement Agency-Specific Programs for Solar Energy Development



Surface Management Agency As of 3/26/2009			
	Tribal Lands		DOD
	NPS		FWS
	BLM		USFS
	OTHER		

- State Line
- County Boundary
- Solar Energy Study Area (As of 6/5/2009)
- Existing Designated Corridor (See Note 2) (As of 7/21/2009)
- BLM Lands Being Analyzed for Solar Development in PEIS (As of 6/5/2009)



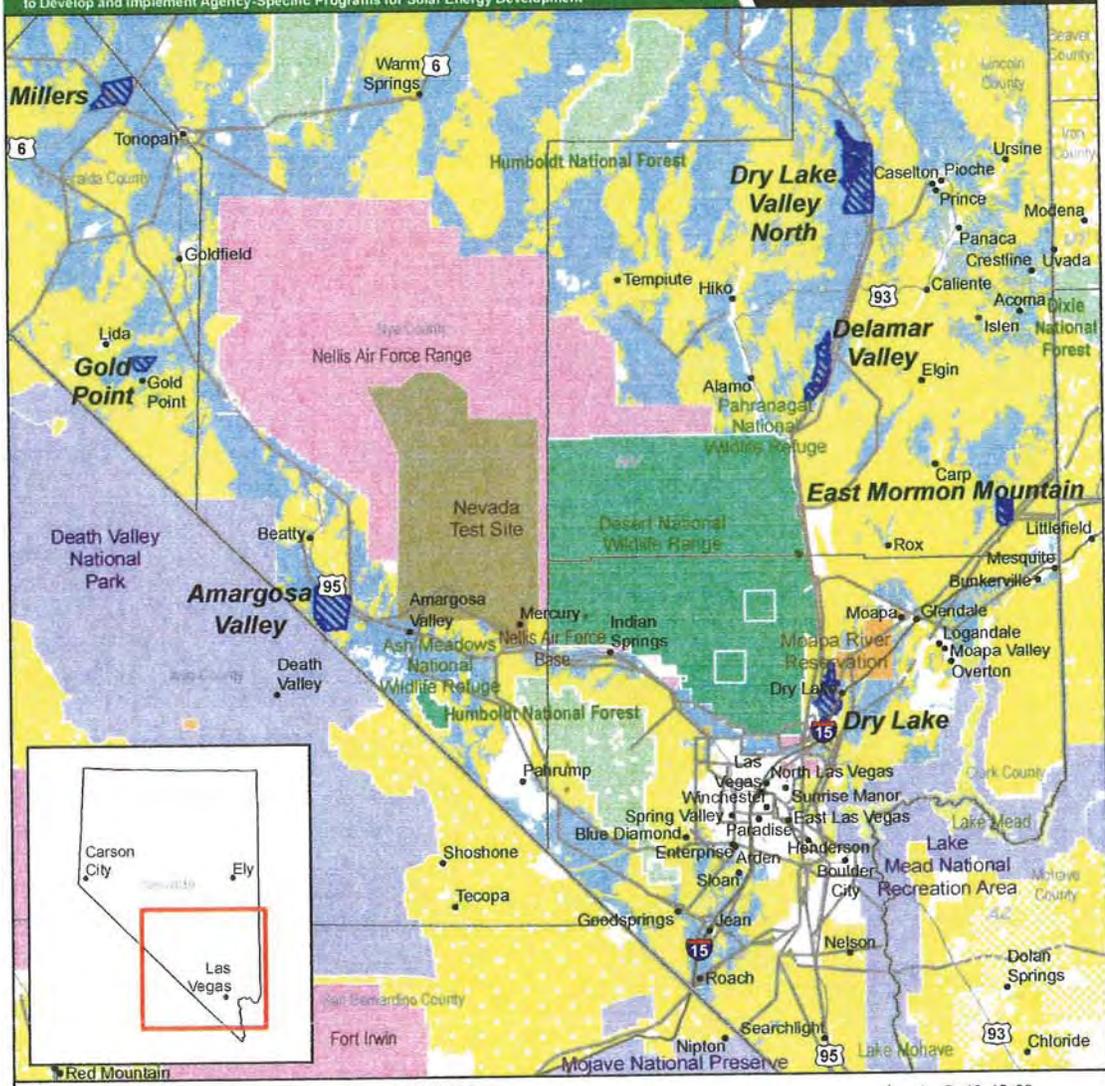
NOTE 1: Revisions to the National Landscape Conservation System included in Public Law 111-11 are not yet reflected in this map.
 NOTE 2: Designated Corridors are developed for federal land use planning purposes only and are not applicable to state-owned or privately-owned land. SO L139

Solar Energy Study Areas in Nevada

Map Prepared June 5, 2009

Argonne
NATIONAL LABORATORY

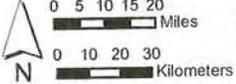
Property of the U.S. Departments of Energy and the Interior
for Use in Preparation of their Programmatic Environmental Impact Statement
to Develop and Implement Agency-Specific Programs for Solar Energy Development



Surface Management Agency
As of 3/26/2009

Tribal Lands	DOD	NPS
BLM	DOE	OTHER
BOR	FWS	USFS

- State Line
- County Boundary
- Solar Energy Study Area (As of 6/5/2009)
- Existing Designated Corridor (See Note 2) (As of 6/5/2009)
- BLM Lands Being Analyzed for Solar Development in PEIS (As of 6/5/2009)



NOTE 1: Revisions to the National Landscape Conservation System included in Public Law 111-11 are not yet reflected in this map.
NOTE 2: Designated Corridors are developed for federal land use planning purposes only and are not applicable to state-owned or privately-owned land. SOL140

RESOLUTION NO. 2009- 29

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF INYO, STATE OF CALIFORNIA, REGARDING COUNTY OF INYO AND BUREAU OF LAND MANAGEMENT (BLM) COORDINATION PROCESS CONCERNING THE SOLAR PEIS TO DEVELOP AND IMPLEMENT AGENCY SPECIFIC PROGRAMS FOR SOLAR ENERGY DEVELOPMENT AND FOR THE PROCESSING OF EXISTING AND FUTURE SOLAR APPLICATIONS

WHEREAS, the Bureau of Land Management (BLM), under the Department of the Interior, and the Department of Energy (DOE) are completing a Programmatic Environmental Impact Statement (PEIS) to analyze, develop, and implement agency-specific programs for solar energy development; and

WHEREAS, the PEIS includes maps depicting solar energy study areas to be analyzed, but none such study areas are located in Inyo County; and

WHEREAS, Inyo County has abundant open space and sunlight and has an interest in being included in, and considered for, analysis for future solar development in California; and

WHEREAS, the BLM is required by law and regulation to coordinate its land use plans with local government agencies, as specified in the Federal Land Policy and Management Act (FLPMA) (42 U.S.C. 1712; 43 C.F.R. 1610.3); and

WHEREAS, these laws and regulations recognize that the primary responsibility for land use planning has traditionally been with the local government, and preserve the local government's role in federal land use decisions; and

WHEREAS, such coordination is a collaborative planning process as defined and mandated in the Inyo County General Plan and must involve government-to-government coordination between the staff of Inyo County and the BLM; and

WHEREAS, by invoking these rights of coordination this Board has determined that Inyo County should be included as an active partner in the Solar PEIS analysis for solar development in California.

NOW, THEREFORE, BE IT HEREBY RESOLVED, that the following legally binding Inyo County General Plan policies are relevant to and govern the coordination process:

- A collaborative planning process is a system where all parties involved come together to gain a better understanding of the environment in which they make and implement plans, to gain a full understanding of each others concerns, and to work together as equals to solve issues of common concern.
- The County shall review the plans of land management agencies, districts, utilities, and Native American tribes for consistency with the General Plan and related planning documents and provide comments and alternative solutions where inconsistencies exist.

Management of federal lands shall include:

- Interconnection or coordination of state, federal, and local facilities and programs when possible.

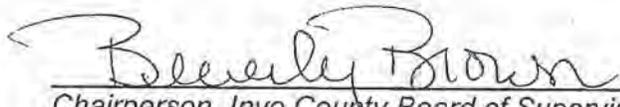
The County shall:

- Work with other government land management agencies to preserve and protect biological resources while maintaining the ability to utilize the natural resources in the County.

BE IT FURTHER RESOLVED, that this Board of Supervisors directs the Inyo County Planning Department to coordinate with the BLM to ensure that all Inyo County General Plan policies and guidelines are adhered to in the Solar PEIS process and to report to this Board the results of coordination so that the Board may determine consistency of the Solar PEIS process with the Inyo County General Plan.

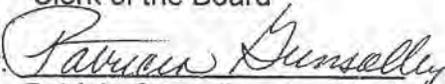
PASSED AND ADOPTED THIS 28TH DAY OF JULY, 2009 by the following vote:

AYES: Supervisors Arcularius, Cash, Brown, Fortney and Cervantes
NOES: -0-
ABSTAIN: -0-
ABSENT: -0-



Chairperson, Inyo County Board of Supervisors

Attest: Kevin D. Carunchio
Clerk of the Board

By: 
Patricia Gunsolley, Assistant

12 AUG 2009

SOLAR ENERGY PEIS COMMENT FORM

COMMENTS:

I WOULD LIKE TO HAVE THE MASON DRAW AREA WITHDRAWN FROM THIS PROJECT. THIS AREA HAS GOOD HABITAT FOR WILDLIFE AND IT WOULD BE A SHAME IF IT WAS DISTURBED OR DESTROYED.

THE AFTON AND RED SAND AREAS MIGHT HAVE A PROBLEM WITH BLOWING DUST IF THE SOIL WAS DISTURBED WITHOUT SOME STABILIZATION DONE TO PREVENT THIS.

PLEASE ADD ME TO THE MAILING LIST.

THANK YOU,

Noel E Cooley

Noel E. Cooley
935 Delta Drive
Las Cruces NM 88001-1422



Rio Grande Water Conservation District
10900 Highway 160 East • Alamosa, Colorado 81101
Phone: (719) 589-6301 • Fax: (719) 589-4331
Protecting & Conserving San Luis Valley Water

August 18, 2009

Solar Energy PEIS
Argonne National Lab
9700 S. Cass Ave.-EVS/900
Argonne, IL 60439

Re: Comments on BLM Solar Power Environmental Assessment

To Whom It May Concern::

The Rio Grande Water Conservation District is organized pursuant to C.R.S. 37-48-101, *et seq.* The conservation and development of the water resources of the Rio Grande and its tributaries is one of the paramount purposes for the District. One specific aspect of your proposal concerning potential solar power opportunities in the San Luis Valley concerns the availability of water resources necessary to permit a solar power initiative to succeed. The District Board of Directors does not have a policy of opposition to solar power. However, we are very aware that some types of solar generation can use significant amounts of water. In fact, we are lead to believe that some solar generation techniques use almost the same amount of water as a coal-fired generation system.

As you know, the State of Colorado is a prior appropriation state. The Federal Government and its agencies have been joined in the State water rights process pursuant to the McCarran Amendment. And, pursuant to that joinder, the Bureau of Land Management has sought and obtained any reserved water rights to which it is entitled. Any water required for solar generation must therefore be acquired pursuant to Colorado law and will be governed by the doctrine of prior appropriation.

The record should be clear that the State of Colorado and its citizens currently fully consume all of the water to which Colorado is entitled under the Rio Grande Compact. Any new depletions, for any

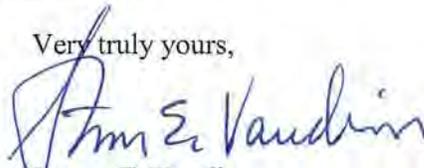
purpose, whether located on private or public land, will require full replacement. In other words, any solar facility requiring a water supply to operate will have to secure that water through purchase of existing water rights and the retirement of existing consumptive uses.

The development of new uses of water in the Rio Grande Basin of Colorado is a zero-sum game. For every acre-foot of new consumption that may occur in the future, an acre-foot of existing consumption will have to be retired. That is true for both surface water sources and groundwater sources. The people of the San Luis Valley, in cooperation with the State of Colorado and the Federal Government, have fought long and hard to protect the water resources of the San Luis Valley and the agricultural economy dependant upon them. If the Bureau of Land Management intends to utilize its properties, which have no water rights associated with them, for the development of solar power facilities it must do so with the clear understanding that it will potentially require the retirement of significant irrigated agricultural acreage in order to provide the necessary water supply. In any analysis you may undertake concerning the impacts of solar power generation you must specifically acknowledge and address that reality.

The Rio Grande Water Conservation District stands ready to work with you as you proceed through this process. However, we cannot provide you assurance that we will automatically be receptive to a federal solar power plan which has the impact of dislocating a significant portion of the Valley's economy.

Please contact me if you would like to discuss this further.

Very truly yours,

A handwritten signature in blue ink that reads "Steven E. Vandiver". The signature is written in a cursive style with a large initial "S".

Steven E. Vandiver
General Manager

cc: Rio Grande Water Conservation District, Board of Directors
David W. Robbins, Esq.

White Sands Ranch
 Bar H W Ranch
 Hal Walker
 1520 Indiana Ave.
 Alamogordo, NM 88310

Solar EIS

To Whom It May Concern;

New Mexico became a territory of the U.S. in 1850. After 62 years of denial, N.M., a stepchild, was admitted into the Union, by ceding 50% of the land area to the U.S. Government. The U.S. Land Office allowed homesteads with only surface rights, on arid alkaline land, and withheld mineral rights. Through various governmental agencies took ownership of 9 (nine) million acres for National Parks and Forrests. More land went for Indian Reservations and the Department of Defense. The State of New Mexico owns 20 (twenty) percent of the remaining land, and 8000 (eight thousand) acres for State Parks. Cities reserve much land for themselves, so you can see private land is scarce

Lack of reliable potable water and droughty seasonal conditions have made an industry using native grasses; a superior cattle feed. This too is lost as Military Installations continue to increase their need for training areas. Vast grasslands are locked into and destroyed by Military Bases. In the Southern portion of N.M. there is White Sands Missile Range; Holloman Air Force Base; MacGregor Range; and the extension by lease to Fort Bliss Army Base, and Biggs Air Force Base, actually in Texas, but they train in N.M. There is no way to clean up the shells, or to reseed the torn up ground from the use by tanks. No one would even suggest that, for fear of being called unpatriotic.

Some ranches were fought over; Prather v. USA. Some were taken with promises of return, MacDonald, Mc Natt, Walters, Pellman, Gilliland, and Oliver, to name a few. Some were taken and the purposes were changed. And as time passed none have been returned, or paid for. Which is another topic. Much money has been invested in improvements such as fences, water wells, pipelines, shelters, troughs and roads used for maintenance. Then there are homes, barns and corrals to consider.

City officials roam into counties to condemn, take and use the already developed water for the citizens, disregarding the primary purpose of water and grass for livestock. All the while, knowing the only productive use of native grass is cattle feed.

Grasses require rain and sunshine to grow. Solar panels shade and destroy grass. Roads displace grass. Wind mills, workmen and equipment impede cattle growth by disturbing habits and habitats. .

Non-native game as Elk from Canada, and Oryx from Africa have been imported and thrived to the point that the hunters can not keep the numbers down, and the cattle allotments have been cut to sustain the elk, to the point where ranchers are systematically ruined financially. If ranchers were given the lease money from the renewable energy companies, they could continue with ranching on a smaller scale

Our country is not only importing energy, it is importing food, minerals and raw material.

In summation, I believe alternative or renewable energy systems should have a place in New Mexico. However, these systems should not be placed in an area so rich in natural resources as the 'Red Sands Area'. Expensive though it maybe, a roof is the very best place.

Thank you for your consideration

Hal Walker Sally Walker
holders of allotments
 07051 07067
 07068 07074

From: Phyl Chisholm [<mailto:tijerasphyl@gmail.com>]
Sent: Wednesday, September 02, 2009 9:00 AM
To: Jorgensen, Lisa
Subject: Solar Farm

A resident of San Louis Valley has told us of plans to establish a huge solar farm in the Valley which would require construction of a huge transmission line diagonally across the Valley. The Valley is unique in so many ways, it is a puzzle why that area has been chosen for the farm, when more than half of Colorado is open land with sunshine and with fewer amenities to be lost? If you keep a tally, please mark down one more vote to put the farm someplace else.

Sincerely/Phyllis Chisholm (former Colorado resident)

A
Hyda



JANICE K. BREWER
Governor

HERBERT R. GUENTHER
Director

ARIZONA DEPARTMENT OF WATER RESOURCES

3550 North Central Avenue, Second Floor
PHOENIX, ARIZONA 85012-2105
(602) 771-8500

August 25, 2009

Mr. Robert Abbey, Director
Bureau of Land Management
1849 C Street NW (WO350)
Washington, D.C. 20240

Re: Notice of Proposed Withdrawal, Solar Energy Study Areas, Arizona

Dear Mr. Abbey:

The Arizona Department of Water Resources (Department) has reviewed the "Notice of Proposed Withdrawal [for solar energy study areas] and Opportunity for Public Meeting; Arizona, California, Colorado, Nevada, New Mexico, and Utah" published in the *Federal Register* June 30, 2009 and we submit the following comments.

Under Arizona law:

"The director [Department of Water Resources] has general control and supervision of surface water, its appropriation and distribution, and of groundwater to the extent provided by this title, except distribution of water reserved to special officers appointed by courts under existing judgments or decrees."

Arizona Revised Statutes § 45-103

The Department of Water Resources is thus the appropriate state authority for the Bureau of Land Management to work with regarding water resources in analysis of the appropriateness of solar energy study areas in Arizona

Based on the map "Solar Energy Study Areas in Arizona (SOL142)" the Gillespie Study Area withdrawal would be located in the Phoenix Active Management Area (AMA). The statutory goal for the Phoenix AMA is to achieve safe-yield by the year 2025. This is to be achieved through increased use of renewable water supplies and decreased groundwater withdrawals in conjunction with efficient water use. Solar energy projects utilizing groundwater in the Gillespie Study Area would be subject to regulatory requirements associated with the AMA, which include provisions found in Title 45 of the Arizona Revised Statutes (ARS), the Arizona Administrative Code Title 12 - Chapter 15, and requirements in the Phoenix Active Management Area, including the Third Management Plan. In general requirements in AMAs will ratchet down through time and a Fourth Management Plan is under development. Because of regulatory

Mr. Robert Abbey

August 25, 2009

p. 2

requirements in the Active Management Areas project applicants will ultimately be required to provide detailed hydrogeologic information to the Department for required permits.

The Brenda and Bullard Wash Solar Energy Study Areas are not in Active Management Areas but we do point out that available hydrogeologic information is limited in those areas. Water use in those areas is subject to a beneficial use standard as identified in ARS Title 45.

The Department suggests that BLM maintain close coordination with the Department during planning for and analysis of solar energy development. Thank you for the opportunity to participate in this process. If you have any questions, please contact Mr. Bill Werner at 602-771-8412

Sincerely,

A handwritten signature in cursive script that reads "Herbert R. Guenther". The signature is written in black ink and is positioned above the printed name.

Herbert R. Guenther

Health Issues Regarding Proposed Concentrating Solar Power Plants in Navajo County

September 10, 2009

Steen Hviid, MS engineer, Noise and Health Committee

Large scale solar power plants have been proposed for Navajo County. The technology chosen is referred to as “power towers”, where a field of mirrors direct sunlight into the top of a central tower. The intense sunlight creates temperatures above a thousand degrees Fahrenheit, which is used to generate steam that runs a steam turbine. The water used to generate the steam is re-circulated, after being cooled. This works very much the same way as a coal or a nuclear power plant, just using solar energy instead of burning coal or uranium.

A number of solar tower plants have been planned worldwide, especially in the Mojave Desert. The first is just now (August 2009) entering operation [Sierra SunTower]. The total lack of commercial scale experience with these plants makes it difficult to identify all health issues for the surrounding community, and there are no studies of actual impact on adjacent residents.

Some issues have been identified:

- Noise from cooling towers (wet and dry)
- Air pollution from cooling towers (wet only)
- Declining water quality
- Glare
- Area lighting
- Dust
- Noise and pollution from cleaning the mirrors
- Emissions from gas fired boiler
- Electrical lines
- Fire protection

Special Population

Navajo County is blessed with some of the cleanest air in the country. For that reason, many people with severe respiratory ailments have settled here, especially in the area around Cedar Hills. Air pollution is thus of a greater concern there than it normally would be.

Cooling Towers

A solar tower plant can use either wet or dry cooling towers, or a hybrid. A 250 megawatt solar tower plant would consume about 2.7 million tons (710 million gallons) of water a year using wet cooling towers. [CSP Water, Appendix A].

Since water is limited in Navajo County, the developer may be required to use dry cooling towers instead. These cost about three times as much to construct, and also cost more to operate [CSP Water].

Wet Cooling Towers

A wet cooling tower evaporates a tremendous amount of water into the air (about 350 gallons per minute for a 50 megawatt plant [Beacon Dry Cooling, Table 4]). This water contains minerals as well as chemicals added to the water, which will become dispersed into the air. Common chemicals include rust inhibitors, scale inhibitors, sulfuric acid, sodium hypochlorite, etc. [Beacon Dry Cooling 5.1]. These chemicals may be problematic in themselves, or combine to form PM10 particles. It may become a nuisance and possibly have direct health effects on nearby residents living downwind. This issue must be looked into.

Wet cooling towers operate by blowing very large amounts of air through the dispersed water, in the same manner as a swamp cooler. The fans are very powerful. One 50 MW solar system (using 20 eSolar towers) would need 3 to 4 tower cells, each with a 125 horsepower motor to run the fan. These very large fans may create a lot of noise, which will be an issue to nearby residents. [CSP Water, Appendix].

Wet (and hybrid) cooling towers require evaporation ponds to disperse of waste water from the cooling towers (blowdown). The presence of stagnant water may be a breeding ground for mosquitoes, which may carry the West Nile Virus.

Dry Cooling Towers

Dry cooling towers evaporate no water, and thus emit no chemicals and no particulates. However, they are much larger and noisier than a wet cooling tower, as they require more air to be moved over a larger area. For a 50 megawatt (20 eSolar module) plant, about 5 fans, each with a 300 horsepower motor is required. [CSP Water, Appendix]. That is 3.6 times as much fan capacity as when using wet cooling towers.

Noise levels for such a set of gigantic fans appear not to be available, but are obviously a great concern.

Declining Water Quality

The proposed project may consume so much water that the Coconino Aquifer becomes contaminated by brackish and/or highly saline water. The Coconino Aquifer is the only

reliable source of drinking water in the area. On the north side of NZ Legacy's property, it is highly saline and undrinkable. [Hydrologic Eval]. The aquifer is also surrounded by undrinkable water in other aquifers, such as the Moenkopi.

With greatly increased water pumping, there is a significant danger of the Coconino Aquifer becoming polluted from the other water sources. Perhaps especially in the area near Woodruff, where saline water may intrude.

Declining water quality is a health hazard, especially in an area with low-income families who can be expected to be extra resistant to drilling new wells or installing costly water treatment equipment, and thus may continue to drink unhealthy water.

Glare Issues

The top part of the tower will be illuminated by sunlight reflected by 10,000 mirrors. This will create a very brightly lit area of the tower [Sierra SunTower].

Residents facing the illuminated side of a power tower may be exposed to a glare nuisance. The California Energy Commission [Ivanpah pg 1-12].mentions that glare is a potential problem affecting traffic on Interstate 15, located over a mile from the closest Ivanpah tower. It would also be a glare nuisance to nearby residents. Not enough information is available to determine a reasonable setback.

The mirror heliostats should not pose a glare problem in normal operation. However, with 10,000 mirrors for each tower, mounted on trackers to follow the sun, breakdowns are likely to be very common. A broken heliostat can point in any direction and become a glare problem to residents and traffic.

Area Lighting

The solar systems may need lighting to do maintenance after sunset, such as washing the mirrors. The impact on the night skies as well as the surrounding area must be minimized, by using downward pointing fixtures, motion detection sensors, etc.

Dust

Dust is a problem during construction and also where large areas have been graded.

The mirror fields will probably require extremely large areas to be graded, with a very large dust problem to follow. As the dust alone can create PM10 particles (particles smaller than ten microns) it is a health concern for all people in the area, and especially our population of respiratory-impaired people. PM10 is a federally regulated pollutant.

Cleaning the Mirrors

The heliostat mirrors must be kept free of dust to reflect the sun optimally. They must be washed on a regular basis, perhaps even daily.

The plant managers may prefer to do this after sunset, possibly at night, which would be a nuisance to nearby residents from noise and floodlights.

The Ivanpah project expects to use diesel powered tractors pulling water trailers. Using their information [Ivanpah], about one or two tractors would be assigned to each 50 MW size power tower plant.

NZ Legacy may choose other types of vehicles, such as multiple ATVs with smaller water tanks in tow.

All these types of vehicles would greatly disturb the peaceful desert, especially at night. Alternative vehicles, such as electric vehicles, must be utilized whenever possible. This will also eliminate any “joyriding.”

The water used will most likely contain a cleaning agent or surfactant, to prevent buildup of mineral deposits on the mirror surfaces. Given the very large area, and the frequency of the washes, the impact of the runoff is a concern. Nearby residents may also be subjected to unwanted smells from the chemicals used – some people in this area live here because they are sickened by minute amounts of chemicals otherwise considered safe.

Emissions from Gas Fired Boiler

Most concentrated solar power projects include a natural gas boiler to start up the plant in the morning and/or as a backup during cloudy periods. Examples of this configuration are the Ivanpah project, Nevada Solar One and Solana project near Gila Bend.

Such a large natural gas fired boiler has its own issues with emissions of small particles (PM10, PM 2.5) as well as nitrous oxides, carbon monoxide, VOCs, etc.

The eSolar system presently favored by the developer does not appear to have such a backup boiler, however we are not certain.

Electrical Lines

The proposed project will need many miles of electrical lines. There will be lines to gather electricity from the individual generators (solar and wind), which typically run at 34,500 volts. Then there will be lines to bring the combined power out to the large 500,000 volt transmission lines that run to the south and west of the project area. These connection lines typically run at 69,000 volts or 115,000 volts. Possibly even higher for a very large project.

Large electrical lines are ugly. They are buried in most cities in the eastern United States, as well as in Europe.

Nearby power lines are a blight on the value of a property, thus all nearby property owners must be compensated.

The health effects from large power lines have been debated since a 1979 landmark study showed that people living near them have a higher risk of cancer. Absolute proof has not been found, which is nearly impossible, but the EPA lists them as a possible carcinogen.

The Cedar Hills/Hay Hollow area is special in this regard, as several people have moved here for health reasons that include sensitivity to electromagnetic fields. This particularly vulnerable population of disabled people would be impacted by siting the connection lines and the major substation south of the project area. They should instead be routed towards the west, along depopulated areas.

It is already standard practice to bury the lines between the wind towers. It was done at the Dry Lake project. It cannot be assumed that NZ Legacy's projects will follow custom, however, this must be mandated.

Fire Protection

Fire protection is an issue for wind farms and solar systems, in particular during the construction phases. During operation, fires are mostly related to vehicle fires and lightning strikes on wind farms. The fire issues for solar farms need further investigation.

A report from Riverside County [Wind Monitoring] states that there have been 6 fires within wind farms over two years, although there have been years with fewer incidents.

The nearest fire departments to the project area are in Holbrook and Snowflake. There is no fire department in Woodruff. These fire departments are too far away to be effective. The project must thus include its own form of fire service.

This could include:

- Fire breaks around all buildings, wind turbines, transformers and other structures
- All service vehicles equipped with a portable fire extinguisher
- One fire fighting vehicle on site, perhaps including a water truck

References

Beacon Dry Cooling

FPLE – Beacon Solar Energy Project Dry Cooling Evaluation, Worley Parsons Group, 2008

CSP

Concentrating Solar Power: Energy from Mirrors, U.S. Dept. of Energy/NREL, 2001

CSP Water

Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation, Report to Congress, U.S. Dept of Energy, 2009

Hydrologic Eval

Phase 1 Evaluation of Hydrogeologic Conditions in Vicinity of NZ Properties Navajo and Apache Counties, Arizona, Errol L Montgomery and Associates, Inc. 2003

Ivanpah

Ivanpah Solar Electric Generating System, Application for Certification (07-AFC-S), Preliminary Staff Assessment, California Energy Commission, 2008

Sierra SunTower

Sierra SunTower – A New Blueprint for Solar Energy, eSolar, 2009

Solana

Solana Generation Station Project, Abengoa Solar, 2009

County Stipulations

Following is a list of appropriate stipulations the county can use to limit health impact from solar towers. More restrictions may be needed, as there are a lot of unknowns with this new technology.

- No solar tower may be erected closer than 2 miles from any residence, due to many unknowns, such as glare and noise. After 2 years of full operation, this setback may be re-evaluated.
- A noise limit of 5 decibels above ambient levels, measured at the property lines. A waiver may be granted, provided affected property owners all sign a written consent stating that they are aware of the proposed development and that they consent to allow noise levels to exceed the maximum limits allowed.
- Best management practices must be utilized during and after construction of solar installation to minimize dust and particle emissions, which include:
 - All traffic is limited to established roadways.
 - All construction sites will be watered sufficiently so that no visible dust plumes leave the project site.
 - Vehicle speeds will be limited to 20 mph within the construction site.
 - Wind erosion control techniques, such as wind brakes, water and vegetation will be used in all construction areas until the soil is stabilized or covered with vegetation.
 - Construction equipment will use low sulphur, low aromatic diesel fuel.
 - Construction equipment will be maintained in top service condition to limit emissions.
 - Construction equipment will be shut down to avoid excessive idling emissions.
- Cleaning of the heliostat mirrors cannot take place after 8 pm or before 6 am. Any lighting used must minimize glare onto adjacent properties, and be directed downwards at any time. The vehicles and machinery must be very low noise, such as electric, natural gas or gasoline powered light trucks, etc. ATVs, tractors and other noisy equipment cannot be used.
- Battery powered vehicles, such as golf carts, should be used to transport maintenance crews within the facility, where feasible. Under no circumstances may ATVs or other off-road equipment be used.

- Heliostat mirrors that are broken must promptly be set in a horizontal state to prevent glare problems to neighbors.

This list may need modification after a few years of experience with this new technology.

Insufficient information is available to determine appropriate setbacks to account for glare, incidental noise, dust, fumes (including particulates) and nighttime maintenance. The needed setbacks are likely to be substantial.

The Solana project has 1000 ft. to 2000 ft. setbacks, but that is for a solar trough type plant, which does not have the same glare issues as a power tower [Solana]. And it has not yet been built.

The first phases of these plants must be located far away from any residence, so operational experience can be safely obtained. Residents should not be used as guinea pigs with experimental technologies.

Re:BLM study Area Industrial Scale Solar Siting

September 1, 2008

I would appreciate it if our public lands were protected from development of any kind.

I anticipate most greatly the setting of "precedence" through "NEED" under the guise of "green" energy. Hurrying under pressure from federal and state energy mandates, will make it more difficult or impossible in the future to mitigate applications for development of *any and every* kind on our gorgeous public lands. There is valuable "productivity" in the presence of sheer space alone. All environments are home to something unique and critical to the earth's well being. The SLV is an internationally recognized migratory flight path that deserves vigorous protection. Ignoring the entire picture will gloss over *serious predictable consequences* to the environmental/socio-economic of communities affected

Solar development- on a utility scale basis: disrupts the landscape, denies access and develops access where none was, while changing the shade/sun/water cycle so critical to many of the areas being "scoped". Thousands of solar panels precede the problem of removal of *obsolete panels-which are toxic*-and presently non-recyclable.

Solar is most effective *close to its source of consumption*-Utility scale and/or personal panel placement. ALL of Colorado (Western United States) has great solar potential and large tracts of degraded personal, communal right of way and industrial land, vast buildings with roofs- all perfect for local utility scale and distributive solar development.

Utility scale solar energy development is presently tied into transmission line development extending the initial impact zone. Visually disrupted views and auditory space, migratory and native bird threats (we are home to many large raptor species, cranes, geese, owls and other water birds vulnerable to electrocution). Public discussion and input has been rushed, unbalanced, fractured and *token* considering the potential environmental/socio-economic impacts to the valley's lifestyle choices and fragile ecosystems involved.

The *economic benefit to communities* -particularly the individuals whose *property values will plunge*- and those economic and lifestyle ventures dependent on a "non-industrialized ambiance" such as tourism, recreation, and wildlife, have not been thoroughly processed and *solidly mitigated to the benefit of those most closely affected*. Much falls under "eminent domain." *Property devaluation is pervasive*-eventually affecting local tax based services, schools, business and quality of life. One of the reasons that we seem to be under scrutiny for development is our pervasive low land "value" yet-utility solar is *not a provider of a significant amount of long-term local jobs, or stated property tax benefits that will off-set the predictable issues outlined*.

All industry-solar included-require some water-if only to wash panels free of dust (which is plentiful in many of the scoped regions.) Other utility solar scale technologies that provide energy storage-utilize the equivalent water consumption to present agri-business-BUT-utilize it *12 months out of the year-instead of just three*.

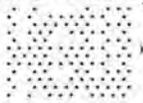
Unregulated or legal changes in regulations of water use-make sunny, arid climates very vulnerable to continuing water issues that devastate the local eco-systems. The San Luis Valley is already struggling with this issue. Another "layer" of industrial usage permits would be paradoxical under the guise of "green", potentially drilling into the aquifer *just as the state engineer is denying further drilling permits* for the present agricultural industry. Water is closer to life than energy-this is a **SERIOUS** potential future issue.

I acknowledge that the energy industry/energy consumer is at a crossroads-under the time limit of legal change in Colorado-to increase "green energy consumption and development by 10%. We are also at high risk to move fast and in the "path of least resistance and cost" *costing our future generations dearly*. We **KNOW** this-the technology is new-but the pitfalls are predictable.

Let us NOT repeat history-please. Uphold public lands for public enjoyment, open space, environmental sanctity and eco-system balancing. There are *viable alternatives!*...including increased consumer responsibility towards conservation. *Thank-you for your time and attention to this matter.*

Sincerely!
Claire Barker, Mosca, Colorado
719-378-2024

Howard G. Wilshire



5472

3727 Burnside Road, Sebastopol, CA

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue
EVS/900
Argonne, IL 60439

RE: PEIS, Solar Energy Development

Much of the public lands under consideration by this PEIS for solar development have been variously disturbed by prior human activities, which is used as an excuse to renew the disturbances. Many such lands are in the process of natural recovery from human impacts—for example, lands disturbed by Patton's military maneuvers in 1942-43 have been in process of recovery for nearly seven decades.

The actions considered will not only undo all of nature's efforts, but will be far worse than any prior damages. The current deplorable practices of the solar industries are scorched earth practices in which the land is completely stripped of vegetation, and much of the soil biota destroyed. Even armored divisions of Patton crunching across the desert did not accomplish such wholesale destruction.

Extreme modifications of the land as done for solar installations inevitably spread the damage to unused adjacent lands by wind and water erosion, and sediment deposition.

Solar panels for large centralized photovoltaic installations are getting cheaper, but are at best 10% efficient in converting solar to electrical energy. Solar thermal installations are comparably inefficient, and require even more water than photovoltaic plants. All grid-connected solar developments require conversion of DC to AC for transmission on the existing grid, entailing a 23% loss of energy—plus another 15-17% loss in transmission. Solar panels degrade over time, beginning with an almost instant loss of 2-3% of output, followed by anywhere from 0.5 to 3% annual degradation of energy output. For a 20% efficient panel, a 3%/year loss of output reduces the output to 11.5% in 20 years.

The materials for these installations will need to be replaced over relatively short periods of time. It is certain that some, if not many, such installations will be abandoned. Guaranteed (bonded) reclamation of such sites must be a front-end cost for approving any installation. This should include putting up the money, prior to development, sufficient to pay for restoration of the land to an ecologically functioning state. The lessons from inadequate bonding of mining and wind energy enterprises must be employed, and all routes of escape, like corporate bankruptcy, from the obligation to restore the land should be closed.

There is a more-than-ample supply of platforms for solar installations that do not require any additional land consumption, and have minimal transmission requirements: roof-top developments in urban areas. These avenues should be explored before any centralized power plants in remote areas are considered.

Sincerely,

A handwritten signature in cursive script that reads "Howard Wilshire". The signature is written in black ink and is positioned above the typed name and address.

Howard Wilshire Ph.D. (Geology)
3727 Burnside Rd.
Sebastopol, CA 95472



P. O. Box 617
Lake Hughes, CA 93532

10 September 2009

B.L.M. Solar Energy Development
Draft Programmatic EIS Comments
9700 South Cass Avenue EVS/900
Argonne, IL 60439

Dear Sir or Madam,

Our group is comprised of residents representing the Lakes and Valleys Communities of Leona Valley, Green Valley, Lake Hughes, Lake Elizabeth, Acton, and Three Points. Insofar as renewable energy concerns us, we question the effects of high voltage transmission lines traversing our area. The focus of our attention rests in the violation of viewshed; violation of local landscapes, including farms; sensitive forests and deserts; flyways, riparian and other bird and animal habitats; violation of private property rights that eminent domain makes available; and violation of a sense of safety due to the nature of electricity production and transmission that make fire a danger to public health, and suppression all but impossible. We are not opposed to renewable energy projects, but question the far-reaching and permanent effects of such an ambitious national program to support utility-scale solar development on public land.

We have several concerns regarding applications to your agency, for use of public land, numbering more than one hundred-fifty, that will require approximately one million acres. Renewable electricity generation on a scale of this magnitude will obviously have multitudinous and irreparable adverse effects on delicate desert environments, as well as residents who reside within proximity and directly adjacent to proposed projects, and who also face loss of property values and potential loss of livelihood and revenue from tourism when desert vistas and mountain views are filled with reflective solar facilities and transmission lines. Aside from the destruction of desert habitats and effects on landowners, our national security could be threatened. The possibility of major service disruption from terrorist attack, fire, earthquake, and other natural events is increased as a result of placing major power line corridors, miles wide, through vast expanses of open land. Also, many residents, who own property distant to projects, will find themselves adversely affected when these large, multiple route transmission lines are built through their rural communities, on their land, in order to transport electricity to large population centers.

Listed below are our concerns regarding effects of development on desert environments, wildlife, water quality and supply, air quality, transmission lines, effects of solar facilities on local and distant populations, and discussion of mitigation.

HABITAT

- If, in fact, the Bureau of Land Management allows utility-scale solar facilities on hundreds of thousands of acres of public land, it is akin to scraping clean and fencing hundreds of thousands of acres of desert habitats that can never be restored, much like primeval forest once cut can never be "primeval" again.
- Fencing of solar facilities, building roads and transmission lines will transect enormous portions of habitat, and impede movement of wildlife who travel through "wildlife corridors" that, according to the Western Governors Association, have never been adequately mapped. There is concern that this transection will further isolate interconnected habitats, and create "islands" of parkland and protected areas that will reduce biodiversity.
- Clearing of desert vegetation can invite invasive species that can escape developed areas and spread and further disturb sensitive desert species.
- Human presence also brings with it the possibility of introducing domestic animal species and attendant human-adapted species, such as ravens, that prey on or displace native wildlife.
- There is real possibility for toxic substances, such as herbicides, pesticides, rodenticides, cleaning agents, dust control agents, and other hazardous materials to affect areas, people, and wildlife beyond facility boundaries, as well as water and air quality.
- There should be no allowance of incidental take permits for state or federal threatened or endangered species.
- How does noise affect wildlife? Sound produced by construction, operational, and maintenance activities, and buzzing of power lines could disturb people and animals.
- Detailed and frequent monitoring of facilities' operations that have potential to pollute habitats, air, and water should be required and the cost borne by the utility owners.
- Will hundreds of thousands of acres of solar panels or parabolic troughs increase desert temperatures and contribute to global warming?
- Consider the cumulative impacts of solar, wind, and transmission line projects; mining claims; oil leases, and military base expansions.

WATER

- Desert wildlife is dependent on surface water, springs, seeps, creeks, wetlands, and seasonal streams. Little, if any, rainfall percolates downward to reach the water table. Pumping on utility scale or by cumulative numbers of smaller operations will cause groundwater depletion and loss of surface water that would be devastating to fish, plants, riparian communities, birds reptiles, mammals, and microscopic organisms living in the desert soil, causing collapse to ecosystems that depend on these resources.

- Depletion of surface water will contribute to wind erosion and air quality problems, placing more particulate matter into the air.
- There should be no allowance or compromise for downstream or groundwater or surface water pollution. Also, cumulative effects of surface and groundwater pollution from mining, ranching, oil pumping, off road use, and other activities allowed by the BLM should be factored into the PEIS.
- Prolonged drought and drought caused or compounded by climate change should be addressed when considering water sources for solar facilities on public lands.
- Public water rights associated with Federal Lands need to be preserved.
- The B.L.M. must ensure that water sources on public lands are not degraded. They must not be fenced or otherwise blocked from use by indigenous wildlife. Additionally, any proposed solar facility that will cause adverse changes to groundwater and surface water that affects private property owners' water availability should not be approved.
- Restrict placement of solar facilities to areas directly adjacent to sources of water that are transported from outside the area via aqueduct or pipeline, so no groundwater pumping need occur, or require water to be hauled via truck tanker. (This can offset the benefit of renewable energy, when truck trips are factored in.)

TRANSMISSION LINES

- First of all, transmission lines besmirch vast desert vistas, suburban and rural landscapes, and mountain views, all of which are "endangered" in Southern California. These diverse landscapes are part of our cultural heritage. Visions of open spaces of the West do not include 500KV transmission lines, or any other large transmission lines, or energy related structures. There is cultural value to the viewshed. Views need to be protected.
- There are several risks to transporting energy across deserts and mountains of Southern California, one of which is placing lines across the San Andreas Rift Zone, and other fault zone areas. The PEIS should consider earthquake risk in placement of facilities and transmission corridors; power lines downed by earthquake also pose extreme fire hazard.
- Additional fire hazard is expected during Santa Ana wind events, and it is noted that line faults occur more frequently during high winds and cause larger fires than those ignited by other sources. At least three of the hugely devastating fires in San Diego County in October, 2007 were caused by downed transmission lines. Transmission towers and lines on public lands must be required to allow for wind loading that will withstand the strongest of the Santa Ana windstorms.
- Transmission line tower structures should be engineered and tested to withstand the strongest of historical wind events.
- Transmission lines should not cross land that possesses multiple risk factors, i.e., major earthquake faults, forested hillsides and mountains that have high fire, wind, and flood risks.
- Fire suppression is dangerous, difficult, and nearly impossible in areas of downed power lines, increasing the risk of loss to desert habitats that may never recover; loss of infrastructure; and loss of private property. Frequently, cost of loss is transferred to property owners, ratepayers, or taxpayers for fire suppression, and increased insurance premiums create additional burdens. BLM should calculate fire suppression costs into lease or right-of-way permits.

- Terrorist plots to disrupt major power sources and transmission seem more likely in remote areas, especially if major trans-state corridors are established.
- Placing facilities closer to end-users would eliminate the need for expanding major transmission corridors and reduce the probability of major service disruption.

AIR QUALITY

- Studies indicate that the desert is valuable as a carbon sink. Will the large-scale removal of vegetation required for solar plants seriously reduce this value? Evaluation of the cost/benefit of this loss should be weighed against the value of the so called renewable energy produced. Assure that loss of a project's carbon dioxide sink's capability will be completely offset and produce a clear net carbon dioxide reduction benefit. Monitor, and review in an ongoing way, a solar plant's carbon footprint.
- Nearly all of the areas included in the West Mojave Plan have recorded concentrations of pollutants in excess of national and state ambient air quality standards for PM₁₀ and a variety of others. In addition, the presence of numerous new dirt roads will invite vehicle trespass that would compound the problem of particulates in the air. Construction and maintenance activities will cause serious air quality issues for wildlife and human inhabitants of the desert. Vast amounts of water will be required to subdue dust.
- Consider all impacts of air pollution, including drift from other areas as total to that area, regardless of the source, when evaluating solar projects. Do not allow subtraction of transported ozone in determining attainment and non-attainment areas.
- Refuse multi-source projects that use a small portion of solar energy production to facilitate approval and then use natural gas or some other greenhouse gas producing fuel to make electricity. Solar plants should be one hundred percent solar-only, and should only be considered for facilitated permit processes.

PRIVATE PROPERTY RIGHTS

- It is well established that property values are reduced when solar or wind energy projects are built near farms and rural communities. Consider the costs to communities' private land owners; land value they may never recover. Many may lose their livelihoods, especially if private recreational areas adjacent to BLM are overshadowed by thousands of acres of solar panels and transmission lines.
- Guarantee incorruptible, unbiased appraisal of private land, if no other alternative exists to avoid incursion of facilities or transmission lines onto private land.
- Eminent domain is forced upon property owners; construction of power lines bisect property, creating loss of privacy, roads, noise, soil erosion, discharge of pollutants, disturbing and harassing wildlife.
- Consider the effects of mass construction on local areas' infrastructure, i.e., roads, schools, housing, health care, firefighting and law enforcement personnel. Certainly, there may be short term benefits to local businesses, but "boom and bust" cycles leave behind ghost towns.

MITIGATION

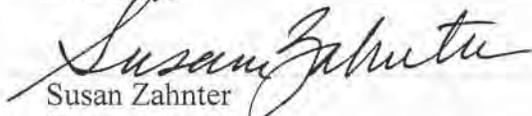
- How is it possible to mitigate, via land swap, one million acres? There is not enough habitat to consider even a 1:1 trade. Please do not consider only monetary benefit to the B.L.M. and utility scale corporations when determining a project's viability. It is desirable that trade in kind would have first priority in areas that are impacted, even those distant to projects because of transmission issues, rather than monetary compensation for habitat loss. Too often trades are made that do nothing to assuage the impact on local areas and residents that bear the brunt of projects for the "greater public good." Mitigation, whether land swap or monetary compensation, should remain local.
- Use already degraded land--abandoned mining claims, closed military bases, former nuclear test sites, saline infiltrated agricultural acreage, oil fields, areas close to water-providing infrastructure, or areas under already existing large transmission corridors for siting solar projects. Encourage policy that would make energy production local--to reduce the need to scrape and fence off deserts and place long transmission lines across our western landscapes. There would be no need to allow utility scale projects on public lands if the solar potential of rooftops, parking lots, city buildings, and industrial areas near end-users were fully utilized.
- Limit projects to areas listed above and require projects to meet cost/benefit criteria.
- Require fair and independent appraisal of private property directly affected by projects approved by the B.L.M. If a property owner protests the price for property taken, require a fair process or forum for resolving dispute that will assign the burden of protest on the project applicant.
- Continue open public forums for each project, throughout the entire permitting process. Do not allow fencing around solar projects, or water sources.
- Prioritize an "environmentally superior" project option or mitigation.
- Terminate Rights Of Way, and immediately suspend operation for projects that fail to properly monitor and limit pollutants, violate wildlife activities, and otherwise fail to adhere to project plans and requirements.
- Require bonding for each solar facility, with each bearing its own cost, in order that the project areas may be restored when age or other circumstances require decommissioning, at no immediate cost to the public.

In conclusion, we respectfully request that the Bureau of Land Management heed our concerns. Our own experience reveals that a major power producer, using eminent domain in our community to build transmission lines, has ignored people's vehement protest and run roughshod over property rights of our residents. They have improperly assessed land values, harassed wildlife, ignored procedures designed to protect wildlife, and improperly built roads on private and public land in violation of a legal ruling. Unfortunately, we do not expect utility companies using B.L.M. land to behave differently. Please ensure that project requirements are met throughout the building stage and beyond.

Other public and private utilities seek additional corridors through our mountain and valley communities, even before the B.L.M. considers approving numerous solar energy plants. Placement of transmission corridors through our mountain and desert areas ruins western vistas, reduces property values, increases fire risk, hampers fire suppression, and destroys habitat.

Responsible energy development favors policy that places sources of energy production closest to end-users. This would reduce the need for huge utility scale projects and thousands of miles of transmission lines that have the capacity to change or destroy sensitive desert and mountain habitats forever. Property rights would be maintained, viewshed would be maintained, as would the safety and security of animals and humans, without tremendous environmental cost. How can using a million acres of desert land be considered "green?"

Sincerely,

A handwritten signature in cursive script that reads "Susan Zahnter".

Susan Zahnter
Community Liason
Responsible Energy Development

CITY OFFICES:
6136 ADOBE ROAD
TWENTYNINE PALMS, CA 92277
(760) 367-6799
fax (760) 367-4890
www.ci.twentynine-palms.ca.us



COUNCIL MEMBERS
Joel Klink, Mayor
Steve Flock, Mayor Pro Tem
John E. Cole
Jim Harris
Steve Spear

CITY MANAGER
Michael Tree

September 1, 2009

RE: Comments for the Department of the Interior and Department of Energy regarding Solar Programmatic Environmental Impact Statement

To whom this may concern,

The City of Twentynine Palms would like to take this opportunity to comment on the study being prepared by the Department of Energy and Bureau of Land Management, regarding the development of several large solar energy projects being proposed near our community. Twentynine Palms recognizes the need to move toward clean, renewable energy sources and wants to encourage responsible, environmentally sensitive planning for such development.

Twentynine Palms is a small desert community that relies heavily on the tourist dollars of those visiting the Joshua Tree National Park and other tourist sites including the Mojave National Preserve and the Amboy Crater. Specific sites such as the "Riverside East" area border Joshua Tree National Park and thereby directly affect our community. Other potential sites, including "Iron Mountain", span large areas between Twentynine Palms, the Arizona border to the east, and the Mojave National Preserve to the north. Industrialization of this pristine desert region will result in diminished scenic views and may have significant impacts on our local tourism economy.

In addition to potential negative impacts to our local economy, there are several other areas of concern with respect to these large scale solar developments. These include:

- The immense swaths of land that must be used for their development and the respective environmental damage that will result.
- The loss of beautiful desert vistas and cultural identity.
- The destruction of wildlife corridors and habitat.
- The devastating effects that may be felt on economic development, especially with respect to the tourism industry along transmission corridors.
- The immense quality of life issues that will result from the placement of transmission lines through and near the community.

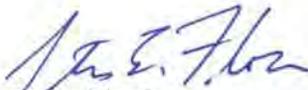
- The potential limits placed on future transportation corridors.
- Water usage as it relates to our area's overall water supply and quality.
- Potential negative impacts on aviation from our local and regional County airports.
- Potential negative impacts relating to the mission of the Twentynine Palms Marine Corps Air Ground Combat Center (MCAGCC) including its inability to expand and potential limits regarding training and aviation.

Finally, Twentynine Palms would like to thank the Department of Interior and the Department of Energy for this opportunity to provide comments on these agencies Solar Programmatic Environmental Impact Statement (PEIS). Please feel free to contact us with any questions you may have concerning the comments made here.

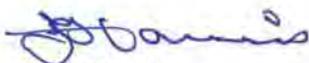
Sincerely,



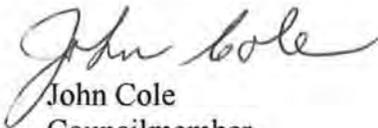
Joel Klink
Mayor



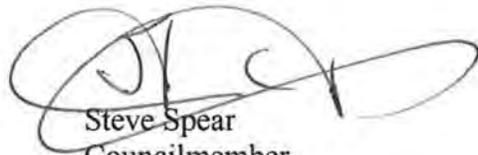
Steve Flock
Mayor Pro Tem



Jim Harris
Councilmember



John Cole
Councilmember



Steve Spear
Councilmember

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

SEP 08 2009

Solar Energy PEIS Scoping
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, IL 60439

Subject: Notice of Availability of Maps and Additional Public Scoping for the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications in Six Western States

Dear Sir/Madam:

The U.S. Environmental Protection Agency (EPA) has reviewed the June 30, 2009 Notice of Availability (NOA) of Maps and Additional Public Scoping for the Programmatic Environmental Impact Statement (PEIS) to evaluate solar energy development in six western states, including Arizona, California, Colorado, New Mexico, Nevada, and Utah. Our review was conducted pursuant to Section 309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) NEPA implementing regulations (40 CFR Parts 1500-1508).

The Department of Energy (DOE) and the Bureau of Land Management (BLM) propose to prepare an Environmental Impact Statement (EIS) to develop and implement agency-specific programs that would facilitate environmentally responsible utility-scale solar energy development. The NOA informs the public of the availability of the solar energy study area maps and solicits public comments on environmental issues, existing resource data, and industry interest in the solar study areas. Previously on July 17, 2008, EPA submitted comments on the May 29, 2008 Notice of Intent (NOI) to prepare an EIS. EPA Region 8 also submitted comments on that NOI on July 7, 2008.

As part of the Solar PEIS, BLM and DOE propose to conduct in-depth environmental analyses of 24 solar energy study areas for the purpose of determining whether such areas should be designated as Solar Energy Zones (SEZs), locations that are best suited for large-scale production of solar energy. The solar energy study areas were identified based on preliminary results of California's Renewable Energy Transmission Initiative (RETI), the Western Governor's Association Western Renewable Energy Zone and Transmission (REAT) Study, and existing BLM resource information. The BLM and DOE are requesting information and comments on the potential for significant resource impacts within the solar energy study areas and the economic viability of solar energy development within these areas.

As stated in our July 17, 2008 letter, EPA supports increasing the development of renewable energy resources, as directed by the Energy Policy Act of 2005. Using renewable energy resources such as solar power can help the nation meet its energy requirements while reducing greenhouse gas emissions. We believe that the programmatic EIS is the appropriate venue to identify mitigation measures and approaches that are designed to minimize adverse impacts to sensitive resources in the surrounding landscape. We encourage BLM and DOE to draft a programmatic document that will result in the successful and environmentally-responsible development of solar resources within the six states. With that in mind, we would like to offer some additional suggestions for your consideration.

EPA recommends that the PEIS include a detailed description of each of the solar energy study areas and describe how these particular study areas were selected. We recommend that the PEIS provide an overview of the selection process, and include links to any studies, references, databases, or maps that were utilized in the selection process. The references and Internet links should be organized in a consistent format for each of the states and placed in an appendix. This information will provide a well-documented resource for state and federal agencies as well as the public. If this information is properly catalogued, the reader will be able to refer to it and determine if the most recent data has been used. If BLM and DOE determine that more accurate information on a particular topic is expected in the near future, we recommend they note that accordingly.

It is our understanding that the PEIS will also address existing and future solar energy development applications on BLM-administered lands outside the 24 solar energy study areas. We recommend that the PEIS also provide detailed information on these lands, including the most up-to-date sources of information on critical habitat, endangered species, wildlife corridors/crossings, and water resources. Maps that show the habitat corridors and presence of threatened and endangered species throughout the six states should be referenced and included in the appendices, if possible. This will provide the public and the decision makers with an excellent resource for detailed information in these areas.

EPA recommends that the maps presented in the PEIS clearly and accurately illustrate the current boundaries of State Parks, National Preserves, National Wildlife Refuges, National Parks, and National Monuments, including the Catellus lands.¹ The Catellus lands contain more than 600,000 acres located between the Mojave National Preserve and Joshua Tree National Monument Park and serve as an important linkage protecting wildlife corridors and ecological processes. The maps should also show existing habitat corridors and areas where threatened and endangered species may be present, especially if they are located in close proximity to the solar energy development areas.

¹ Senator Diane Feinstein has expressed an interest in incorporating the Catellus lands into a national monument. The national monument designation would ensure that hundreds of thousands of acres between the Joshua Tree National Park and the Mojave National Preserve are protected in perpetuity. The Catellus lands were previously donated to or purchased by the Department of the Interior for conservation.

We encourage BLM and DOE to be as transparent and direct as possible within the PEIS, particularly with regards to conducting environmental reviews in compliance with state (e.g. California Environmental Quality Act - CEQA) and federal (NEPA) requirements. It is our understanding that future installations located in the SEZs will tier to the PEIS. Consequently, any criteria that will be used in identifying the appropriate level of NEPA analysis (EIS or Environmental Assessment) for these installations should be discussed within the PEIS. This will enable the public and the decision makers to be more fully informed about the overall process.

EPA is concerned about the magnitude of potential impacts associated with multiple large-scale installations in the desert Southwest, and how the BLM and DOE plan to evaluate these impacts, given the uncertainty of the number and scale of projects. Given the large number of solar applications, it seems probable that direct and indirect impacts associated with the ever-increasing number of projects may be more severe than initially recognized. We strongly recommend that BLM and DOE commit to monitoring impacts on an on-going, continuous basis and use this information to inform or guide the decision-making process with respect to the number of projects that will be permitted within the SEZs. This decision should be contingent on the future condition of the natural resources.

A rigorous monitoring program is essential, as is a firm commitment to collect unbiased data, and to monitor continuously for the duration of the projects. The monitoring program should include a comprehensive analysis of baseline data in all solar energy study areas. A uniform set of baseline data should be collected within each of the study areas and evaluated prior to the development of large-scale installations in that area. We recommend the collection of baseline data be initiated as soon as possible and suggest that the BLM and DOE consider engaging the U.S. Geological Survey (USGS) to collect water quality and water monitoring data. The USGS also has substantial expertise with biological monitoring, including desert tortoise research, and may be able to offer additional expertise in that area as well.

EPA is particularly concerned about water consumption associated with solar energy projects in the desert. Large-scale solar installations that utilize wet-cooling may require significant water resources. Solar installations that utilize dry-cooling require much less water—up to 90 percent less. We recognize that wet cooling technology has performance advantages over dry cooling, especially in arid regions, and may be less expensive; however, due to the general scarcity of water in the region, the large number of solar project applications submitted to BLM, and the ever-increasing demand for this commodity, EPA is concerned about the depletion of this resource, particularly in desert regions. EPA recommends that the PEIS compare the water demands of various solar thermal technologies and discuss power demands associated with moving the water needed for each technology. The PEIS should also address the potential benefits of requiring solar thermal companies to utilize technology that will minimize water use, such as dry cooling rather than wet cooling, and to implement water conservation measures that will reduce water demands. Water saving strategies can be found in the EPA's publications *Protecting Water Resources with Smart Growth* at www.epa.gov/piedpage/pdf/waterresources_with_sg.pdf, and *USEPA Water Conservation Guidelines* at www.epa.gov/watersense/docs/app_a508.pdf.

The PEIS should also evaluate the life cycles of various solar energy technologies in order to identify impacts that may result from the pursuit of one technology versus another. Such an evaluation should discuss the impacts associated with obtaining, processing, and transporting the raw materials needed for each technology. In addition, the life cycle analysis should address future dismantling of the assemblies and material recovery for reuse and/or recycling.

If there are locations within SEZs that are suitable for other types of renewable energy development (e.g., wind, geothermal), we urge BLM and DOE to consider which energy source has the potential, at each such location, to generate the greatest amount of power with the least environmental impact. For example, if the location of an SEZ overlaps an optimum location for wind energy development, consider whether the development of solar energy at that location would likely result in greater or lesser adverse environmental impacts than would be expected from the generation of the same or greater amount of power from wind energy at that location. We urge BLM and DOE to ensure that the outcome of the Solar PEIS does not discourage or preclude the development of other renewable energy sources in locations where such development may be more appropriate, in terms of efficiency and relative environmental impacts, than development of solar energy.

Although we support BLM and DOE in their efforts to identify the SEZs, we also recognize that there are other alternatives and venues that may be preferable from an ecological perspective. For example, the EPA has worked closely with the DOE's National Renewable Energy Laboratory (NREL) to develop maps² showing contaminated lands and mining sites with renewable energy generation potential. These maps were developed in conjunction with the *RE-Powering America's Land: Renewable Energy on Contaminated Land and Mining Sites* program,³ which was launched by the EPA Office of Solid Waste and Emergency Response (OSWER) in September 2008. Under this initiative, EPA is taking a multi-pronged approach⁴ to encouraging reuse of EPA tracked lands⁵ into clean and renewable energy production facilities. EPA has developed a Renewable Energy Interactive Mapping Tool⁶ that utilizes Google Earth to display these sites. We estimate that there are approximately 480,000 disturbed and contaminated sites and almost 15 million acres of potentially contaminated properties across the United States. Many of the contaminated properties are suitable for renewable energy development and have existing transmission capacity and infrastructure in place, as well as adequate zoning. We strongly encourage BLM, DOE, and other interested parties to pursue siting renewable energy projects on disturbed, degraded, and contaminated sites, before considering large tracts of

² To develop the maps, EPA and NREL collected renewable energy resource information and merged it with EPA and state data on contaminated lands and mining sites across the country. The mapping analysis applied basic screening criteria, such as distance to electric transmission lines, distance to roads, renewable energy potential, and site acreage in order to identify EPA tracked lands that might be good candidates for solar, wind, or biomass energy production facilities.

³ For additional information on EPA's RE-Powering America's Land, please use the following weblink: <http://www.epa.gov/renewableenergyland/index.htm>

⁴ See Internet site: http://www.epa.gov/renewableenergyland/docs/repower_contaminated_land_factsheet.pdf

⁵ EPA tracks abandoned mine lands, Brownfields, Resource Conservation and Recovery Act (RCRA) sites, Federal Superfund Sites, and Non-Federal Superfund Sites.

⁶ See Internet site: http://www.epa.gov/renewableenergyland/mapping_tool.htm. Open the Renewable Energy Interactive Map (KMZ) to launch the Renewable Energy Mapping Tool. More detailed information on the EPA tracked sites is available at: http://epa.gov/renewableenergyland/maps/ocpa_renewable_energy_data.xls.

undisturbed public lands.

To that end, we note that the BLM Arizona State Office recently issued a call for proposals⁷ for the National System of Public Lands Restoration Design Energy Project, funded under the Department of Interior's American Recovery and Reinvestment Act (ARRA) of 2009. Implementation of this initiative will result in the identification of disturbed or previously developed sites within the National System of Public Lands in Arizona that, after remediation or site preparation, can be made available for renewable energy development or generation. EPA Region 9 submitted an initial list of sites for consideration on August 28, 2009.

Another alternative that deserves further consideration is residential and wholesale distributed generation in urban areas. Distributed generation is the use of small-scale power sources on-site that can also supply energy to a utilities distribution center. Examples include solar photovoltaic (PV) systems mounted on rooftops, commercial warehouses, or parking lots. Systems can range up to several megawatts and are typically located near load demand. Because such systems are typically built on existing structures, they cause fewer environmental impacts than large-scale installations. Installing units on rooftops in urban areas also eliminates the need to build new transmission lines. Distributed generation offers several other benefits including: reducing generation costs by reducing line losses through the transmission and distribution system; reducing congestion; reducing peak demand loads; enhancing the efficiency, reliability and operational benefits of the distribution system; and improving the overall security of our energy supply.

Wholesale distributed generation is gaining popularity in California as the cost of PV systems continues to decrease. The California RETI has determined⁸ that there is tremendous potential (up to 27,500 MW) associated with the development of small-scale (1-20 MW; less than 160 acres) PV facilities located near existing substations. On June 18, 2009, the California Public Utilities Commission approved⁹ Southern California Edison's plan to install scores of 1-2 MW PV grid-connected systems (up to 500 MW) on the rooftops of commercial buildings across Southern California. In another recent decision,¹⁰ the California Energy Commission denied an application for a 100-megawatt (MW) natural gas-fired peaker plant in part because rooftop solar PV could potentially achieve the same objectives for comparable costs. EPA recommends that distributed generation be evaluated further because it would avoid most of the environmental impacts associated with the development of large-scale installations in the desert. EPA recommends that the PEIS discuss the feasibility of using residential and wholesale distributed generation, in conjunction with increased energy efficiency and conservation, as an alternative within the alternatives analysis.

⁷ See notice at Internet site: http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs.Par.82107.File.dat/External-Call-for-submissions_June30.pdf

⁸ See RETI Phase 1B Report at Internet site: <http://www.energy.ca.gov/2008publications/RETI-1000-2008-003/RETI-1000-2008-003-F.PDF>

⁹ See press release at Internet site: http://docs.cpuc.ca.gov/word_pdf/NEWS_RELEASE/102580.pdf

¹⁰ See article at Internet site: http://www.cadesertco.org/Natural_Gas_&_Electricity_Journal_2009_August.pdf

We appreciate the opportunity to provide comments on the preparation of the PEIS and look forward to continued participation in this process as more information becomes available. When the Draft PEIS is released for public review, please send one hard copy and one CD to the address above (mail code: CED-2) at the same time it is officially filed with our Washington D.C. Office. We also request that you send additional hard copies and CDs to the following reviewers: Mr. James Hanley, EPA Region 8; Ms. Sharon Osowski, EPA Region 6; and Ms. Elaine Suriano, EPA HQ. If you have any questions, please contact me at (415) 972-3545 or mcperson.ann@epa.gov.

Sincerely,



Ann McPherson
Environmental Review Office

Cc: Lisa Jorgenson, Department of Energy
Linda Resseguie, Bureau of Land Management
Elaine Suriano, Environmental Protection Agency, OFA Headquarters
James Hanley, Environmental Protection Agency, Region 8
Sharon Osowski, Environmental Protection Agency, Region 6

September 11, 2009

**Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Ave. - EVS/900
Argonne, IL 60439**

**IE: THE MORONGO BASIN, SPECIFICALLY THE WONDER VALLEY AREA
EAST OF TWENTYNINE PALMS, NORTH/SOUTH OF STATE HIGHWAY
62.**

**Moved to the area in 1992 from a large urban city for the PEACE AND QUIET,
SPECTACULAR NIGHT SKYS AND THE BEAUTIFUL UNTOUCHED DESERT
SCENERY AND HABITAT.**

**The rewards of outstanding wildflowers and Southwestern desert life continue to
enrich our lives.**

**Living in a NATURAL MIGRATION for Birds, documented, from Osprey in 1995,
Snowy Owl 1998, Great & Snowy Egret 2001 & 2009 and many, many more not
expected to be seen in an Arid environment. Three Whooping Cranes, believed,
were spotted early this month.**

**Lest not forget our nesting Burrowing Owls (protected). Also Kangaroo Rats
(protected), Kit fox, Mountain Lion, Desert Tortoise (protected), Regal Horned
Lizard and many other Reptiles and Amphibians. Since 1992, the Coyote still
travels west in the morning, returning at dusk. The balance of Nature.**

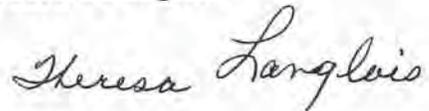
**Transmission/distribution of energy would be either above or below ground. Any
type of disturbance effects the Habitat in which they exist. For every action, there is
a re-action. As we continue these disturbances, we push and destroy these habitats.
The human population will see more mountain lions, coyotes, bears and sidewinders
in and near our homes. Living with the Desert, not changing the Desert allows for
this balance.**

Nothing shows any benefits to our area from this project. Power is for Metropolitan areas that do not control their growth and continue trying to take our Water and Dump their trash in our areas. In the early years, Mono Lake had been drained because Los Angeles needed water. Only now is it beginning to recover and the habitat is responding. If the power requirement is needed in Metropolitan area find a spot in THEIR own County, remove whatever is in their way, and build it there.

To date, I'm still sicken by the sight of the Windmills in the Palms Springs area that has taken over the landscape. The beautiful view of the Mountain is GONE!

Thank you for listening.

Theresa Langlois

A handwritten signature in cursive script that reads "Theresa Langlois".

**PO Box 178
Twentynine Palms, CA 92277**



Board of County Commissioners

Lincoln County, Nevada

P.O. Box 90 – Pioche, Nevada 89043

Telephone (775) 962-5390

Fax (775) 962-5180

COUNTY COMMISSIONERS

Paul Mathews, Chair

Bill Lloyd, Vice Chair

Ronda Hornbeck

George T. Rowe

Ed Higbee

DISTRICT ATTORNEY

Gregory J. Barlow

COUNTY CLERK

Lisa C. Lloyd

September 8, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue, EVS/900
Argonne, IL 60439

RE: Comments to Solar Energy Study Area Maps and Related Scope of Solar Energy PEIS

To Whom It May Concern:

Pursuant to the Bureau of Land Management's (BLM) offer and Lincoln County's agreement to participate as a Cooperating Agency in preparation of the Solar Programmatic EIS, I am writing to convey the County's comments on the Solar Energy Study Areas, and the scope of the Solar Energy PEIS. Lincoln County requests that the acreage of the Dry Lake Valley North Solar Energy Study Area be reduced significantly. Through review of maps on the BLM/DOE website for the Solar PEIS, Lincoln County has determined that the Dry Lake Valley North Solar Energy Study Area is many times larger than that approved on March 2, 2009, by the Board of Lincoln County Commissioners for recommendation to the BLM. Through consultation with grazing permittees and local BLM staff, the area identified by the County and recommended to the BLM sought to avoid and minimize direct impacts to public land grazing allotments and related indirect impacts to private-land base properties. The 49,775 acre area identified on the Argonne National Laboratory map entitled "Solar Energy Study Areas in Nevada" as Dry Lake Valley North is far in excess of the area identified by Lincoln County; and, if developed for solar energy, will result in unacceptable adverse impacts to the range livestock industry in Lincoln County.

Accordingly, Lincoln County requests that the total area of the Dry Lake Valley North Solar Energy Study Area, be redefined to including only the following areas (all contained within the Ely Springs Cattle grazing allotment):

T 1S, R64E, Sections 1, 2, 11,12, 13, and 14;
T 1S, R65E, Sections 6 (portions of), 7, 8 (portion of), 17 (portion of) and 18;
totaling approximately 5,760 acres.

It is imperative that the Dry Lake Valley North Solar Energy Study Area be confined to the Ely Springs Cattle grazing allotment, as this was the only allotment within the Dry Lake Valley area where existing private land is located and upon which the owner supports solar energy development. It is also crossed by existing approved electrical transmission corridors; and in which the owner of said private land and the Ely Springs Cattle grazing permit indicated to Lincoln County a desire that the above-described public lands be analyzed for solar energy development within the Solar PEIS.

Lincoln County further requests that the area identified for solar energy development within Delamar Valley be limited to 5,760 acres located immediately north and northwest of the Delamar Lake (dry). This request is also consistent with the March 2, 2009 recommendation of the Board of Lincoln County Commissioners, regarding the size and location of solar energy study areas in the County. Development of solar energy projects in this limited area and location will serve to greatly minimize impacts to public land grazing within Delamar Valley. Accordingly, Lincoln County requests that the total area of the Delamar Valley Solar Energy Study Area be redefined as including only the following areas (all contained within the Buckhorn grazing allotment):

T6S, R63E, E1/2 Section 33, Section 34
T7S, R63E, E/1/2 Section 21, Sections 3, 4, 9, 10, 15, 16, 22;
totaling approximately 5,760 acres

Limitation of the Delamar Valley Solar Energy Study Area to the aforementioned area will serve to minimize impacts to public land grazing operations and related water improvements. This area is also adjacent to or crossed by existing and proposed electrical transmission lines and a Lincoln County maintained dirt road.

In addition, Lincoln County requests that the East Mormon Mountain solar energy study area be reduced from 7,148 acres to 3,780 acres, to avoid key grazing areas within the Gourd Spring Allotment. Specifically, through recent consultation with the grazing permittee, Lincoln County has determined that redefinition of the East Mormon Mountain solar energy study to the following areas will serve to minimize impacts to public land grazing within the Gourd Spring Allotment:

T11S, R69E, Section 13, E1/2 Section 24, Section 36
T11S, R70E, Section 18 (excepting that portion within the ACEC), Section 19, Section 20 (excepting that portion within the ACEC), Section 29 (excepting that portion within the ACEC), Section 30 (excepting that portion within the ACEC), Section 31 (excepting that portion within the ACEC); totaling approximately 3,780 acres.

In addition to minimizing impacts to public land grazing within the Gourd Springs Allotment, these lands enable immediate access to existing and proposed high-voltage electrical transmission lines; are accessible by an existing north-south dirt road; and

would minimize solar project related crossings of the Toquop Wash. They would also effectively link the existing Toquop Energy Project site (T11S, R69E, Section 36), which has been identified by BLM for disposal with areas recommended by Lincoln County for solar energy development.

On behalf of Lincoln County, Nevada, I would appreciate your immediate action in order to redefine the Dry Lake Valley North, Delamar Valley and East Mormon Mountain Solar Energy Study Areas as described above. I would further appreciate being advised at the earliest convenience of the BLM/DOE decision to redefine these areas as described above. The Lincoln County Commissioners have been contacted by various grazing interests in these areas expressing concern over the size of the currently defined Dry Lake Valley North, Delamar Valley, and East Mormon Mountain Solar Energy Study Areas. The Board of Lincoln County Commissioners wishes to immediately reassure permittees in these areas as to the limited extent of the Dry Lake Valley North, Delamar Valley and East Mormon Mountain Solar Energy Study Areas to be analyzed by BLM/DOE in the Solar PEIS as proposed above by the County.

With regard to the scope of the Solar PEIS, Lincoln County encourages a bounded analysis of generic solar project specific impacts and identification of related specific Best Management Practices and mitigation measures. Lincoln County believes such a level of generic project site specific analysis is required to enable timely post PEIS approval of land use authorizations filed by solar developers. In completing said generic project site specific analyses, Lincoln County further encourages BLM to consider the excellent comments to the Solar PEIS provided by the N-4 Grazing Board, particularly regarding early and continued involvement of impacted grazing permittees to identify and quantify impacts and to identify feasible measures to mitigate impacts. Further, Lincoln County requests that the Solar PEIS define the specific procedures by which "future projects should be permitted more quickly and at a lower cost". (Qs & As: BLM Solar Programmatic Environmental Impact Statement (PEIS), Page 6, Question 22). For example: would this expedited process involve conduct of NEPA Sufficiency Analyses in lieu of additional EA or EIS level analysis? Finally, Lincoln County requests continued input and involvement in developing specific future projects, regardless of which process is used, and whatever may come beyond the current PEIS development.

Your consideration of these important requests is greatly appreciated.

Sincerely,

A handwritten signature in blue ink that reads "Paul Mathews". The signature is written in a cursive, flowing style.

Paul Mathews
Chairman

202-429-3945

July 31, 2009 2:37 PM

Linda Resseguie, Bureau of Land Management

Subject: Programmatic Environmental Impact Statement for Solar Energy Development (PEIS)

Dear Linda Resseguie, Bureau of Land Management,

Dear Ms. Resseguie,

Renewable energy, including solar power, will be an important part of America's clean, sustainable energy future. Along with state and private lands, our public lands have a role to play, but renewable resource development is not appropriate everywhere on the public lands, and development that does occur on the public lands should take place in a responsible manner.

The industrial nature of solar energy projects makes choosing the right places for development critical. Prioritizing development in the best places will both speed construction of good projects by limiting conflicts, as well as preventing damage to sensitive wildlands, wildlife and other resources.

I applaud BLM's identification of Study Areas and urge the agency to work through the public process to designate them. I recommend that BLM:

- * Adjust the boundaries of the Study Areas to exclude Citizens' Proposed Wilderness areas, crucial wildlife habitat and migration corridors, and other sensitive lands and resources;
- * Make clear what existing transmission capacity and other infrastructure is available to support these study areas; and
- * Ensure that there are multiple opportunities for the public to learn about and provide input during this process.

I do not need a reply from this agency. Thank you for your consideration of these comments.

Sincerely,



QUECHAN INDIAN TRIBE

Ft. Yuma Indian Reservation

P.O. Box 1899
Yuma, Arizona 85366-1899
Phone (760) 572-0213
Fax (760) 572-2102

September 3, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S Cass Avenue – EVS/900
Argonne, IL 60439

Re: Quechan Indian Tribe's Comments on Programmatic Environmental Impact Statement for Solar Energy Development

Dear Solar Energy PEIS Team,

Thank you for notifying us of the preparation of a Programmatic Environmental Impact Statement for the six southwestern states. Portions of BLM lands currently being analyzed for solar development fall within the traditional land area of the Quechan Indian Tribe. In addition, the Tribe has federal reserved rights in the waters of the Colorado River and is concerned about impairment of the quantity and quality of the water resources.

I. Cultural Resource Impacts

The Tribe's concerns regarding cultural resource protection and preservation must be taken into consideration by the United States. This is especially true when projects are proposed within the Tribe's traditional land area. In cases like this, where proposed projects are likely to affect cultural resources, the federal government has an obligation under existing resource protection laws, and pursuant to its trust obligation to the Tribe, to gather accurate information about the location of cultural resources so that it can make a fully informed decision, and then to adequately protect those cultural resources from harm.

The Quechan people and their ancestors have inhabited the area surrounding the confluence of the Colorado and Gila Rivers for centuries. The Indian Claims Commission found that the Quechan Tribe's historic lands extended well beyond the boundaries of the present day Fort Yuma Indian Reservation and includes certain lands to the north and west of the Fort Yuma Indian Reservation that fall within the solar energy study areas. *See* 8 Ind. Cl. Com. 111, 130 (Sept. 30, 1959).

The Quechan Tribe, who was here prior to the arrival of the Spaniards or Europeans, had several villages scattered throughout what is now Arizona and California. The traditional land area of the Tribe encompasses the lands from Blythe, CA into Mexico and from Gila Bend, AZ to Ocotillo, CA. It is within this geographic area that resources were utilized and the Tribe lived. Plants, animals, landforms, water, and cultural resources must all be considered as they are all used together to tell the history of the Quechan Tribe.

The area is rich in cultural resources that could be impacted by large-scale solar development projects. BLM's 2008 Final Environmental Impact Statement for the Yuma Field Office Resource Management Plan noted that over 4,300 archaeological sites have already been documented within BLM's Yuma Field Office planning area (which overlaps in part with the solar planning area). See page 3-58 of the BLM FEIS. This is especially impressive given that only 16% of that planning area has been surveyed for cultural resources, according to BLM's FEIS. Thus, there could be tens of thousands of additional resources that exist in the area and a portion of these could be impacted or permanently destroyed by new solar development projects. This highlights the importance of comprehensive surveys for resources, and appropriate protection measures, prior to any authorization for new development.

Having participated in numerous discussions for proposed solar projects, the Quechan Tribal Council along with the Quechan Cultural Committee has become aware of some of the problems these projects present.

Long-term loss of vegetation, habitat, and soil are of concern due to the need for a level project area. The potential destruction of traditional plant gathering areas and clay sources located within the project areas is quite concerning to the Tribe. The potential for animals of traditional importance to the Tribe to leave the area due to loss of habitation is also concerning. The projects also could result in a visual blight on the landscape. Moreover, given the size and scope of these projects, a significant amount of land will be disturbed for construction and operation – resulting in significant potential for permanent loss of cultural resources that exist within the Tribe's traditional area.

Due to each solar project having the potential to encompass several thousand acres, we are requesting that the clustering of these projects be prohibited, and that the projects not be located within the Tribe's traditional area that is rich in cultural resources. We are also requesting that any large-scale, centralized solar projects be placed on lands that have already been heavily disturbed, such as abandoned farm land. As mentioned previously, the Tribe has a large traditional land area with an extensive network of cultural resources and Traditional Cultural Properties (TCPs) located within. With each project the Tribe faces the loss of their culture as impacts to cultural resources affiliated with the Tribe, as well as the spiritual landscapes in which they are located, are impacted.

The Tribe is not opposed to solar energy development in general. However, the Tribe would like to recommend that BLM and other federal agencies consider the use of local

homes and buildings for the placement of solar panels. If each home, business and abandoned building were outfitted with solar panels, the need for large substations would be drastically reduced, thereby reducing the destruction of the Tribes' traditional homeland, the loss of animal habitat, and the need for water that is already at its capacity.

To alleviate the potential for impacts to cultural resources and/or spiritual landscapes we request to be consulted with at the inception of the project, prior to any plans being finalized. Experience has shown us that once the plans for a project are in place people are less open to discussing suggestions from us for mitigation. By contacting and consulting with the Tribe when the project is first proposed, it is our hope that we will be able to work through any potential concerns during the planning process.

II. Traditional Cultural Properties (TCPs) – Indian Pass

The Tribe is aware of numerous applications for solar development within or nearby the area known as Indian Pass, which is a Traditional Cultural Property area that is considered sacred to the Tribe. The Tribe opposes solar development in areas that have been identified as specific TCPs of the Tribe, such as Indian Pass.

The Indian Pass area is rich in cultural resources including a complex trail network, which includes the Xam Kwatcham trail that begins at Avikwame, in southern Nevada, and extends to Avikwalal, on the International Border. This trail is an integral part of the Tribes' creation story and contains both a physical and spiritual component. The surrounding area also includes significant cultural resources such as intaglio sites, desert pavement features, including cleared areas and rock alignments, and artifact scatters.

BLM must not allow the analysis in the programmatic impact statement to focus exclusively on archaeological site impacts, while failing to fully address impacts to resources such as cultural landscapes and TCPs. Cultural landscapes and TCPs, like Indian Pass, can not be piecemealed and need to be considered in their entirety. The focus should be on protection and preservation of the cultural significance of the area, not just its archaeological resources. It is also important to note that the introduction of any new element to this cultural landscape affects the significance of the property, which is why it is equally important to limit effects to the areas and not just to archaeological remains.

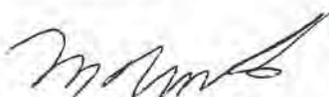
III. Water Resource Impacts

The Quechan Tribe's Fort Yuma Reservation was established at its current site in 1884, which gave the Tribe, under federal law, reserved rights to water in the Colorado River with a priority date of 1884. See *Arizona v. California I*, 376 U.S. 344 (1964); *Arizona v. California II*, 460 U.S. 605 (1983); *Arizona vs. California* (consolidated decree), 126 S. Ct. 1543 (2006). Pursuant to the 2006 Supreme Court decree, the Tribe has diversion rights of 71,616 acre-feet per year in California and diversion rights of 6,350 acre-feet per year in Arizona. These rights have a priority date of 1884.

The federal government must not approve projects that lack adequate water rights or that will result in any impairment to the Tribe's reserved water rights. In addition, the Tribe is also concerned that the proposed large-scale utility solar projects will have negative impacts on the quality of water in the Lower Colorado River Basin. In reviewing the potential impacts to environmental and cultural resources, the cumulative impacts of the solar projects must be considered.

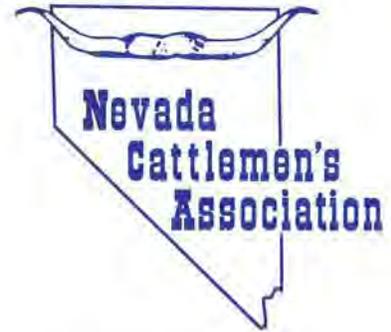
Thank you for your consideration to the Tribe's comments. I look forward to meeting with officials at the local BLM offices to discuss the Tribe's concerns in more detail. If you have any questions, please do not hesitate to call me at (760) 572-2423.

Sincerely,



Mike Jackson, Sr.
President, Quechan Indian Tribe

cc: Senator Dianne Feinstein
Ken Salazar, Secretary of the Interior
Rahm Emanuel, White House Chief of Staff
Valerie Hauser, Advisory Council on Historic Preservation
Nancy Brown, Advisory Council on Historic Preservation
James Peterson, Deputy State Director – Senator Dianne Feinstein
Charlotte Hunter, BLM California State Office
Rolla Queen, BLM California State Office
Michael Taylor, BLM Arizona Deputy State Director
Linda Resseguie, BLM Arizona State Office
Eddie Arreloa, BLM Arizona State Office
Vicki Wood, BLM El Centro Field Office Manager
Carrie Simmons, BLM El Centro Field Office
Chris Dalu, BLM Palm Springs/South Coast Field Office
Bridget Nash-Chrabaszcz, Quechan Historic Preservation Officer
Dave Singleton, Native American Heritage Commission
Frank Jozwiak, Quechan Indian Tribe Attorney



September 11, 2009

Solar Energy EIS
Argonne National Laboratory
9700 South Cass Avenue - ENV/900
Argonne, Illinois 60439

Re: Comments Regarding the Solar Programmatic Environmental Impact Study (Solar PEIS)

Good Day:

The Nevada Cattlemen's Association (NCA) is a non-profit organization representing Nevada livestock producers. We strive to protect the future of agriculture for our industry and our rural communities. Our membership includes cattle & sheep operations, agricultural businesses and folks interested in agriculture, open spaces and rural family living.

The state of Nevada is unique, i.e., over 88% of our lands are considered "public lands" and are managed by the Bureau of Land Management (BLM). Our public lands are managed under the multiple use concept. In addition to ranching & mining, our public lands are used and enjoyed by: sportsmen, wildlife & wildlife habitat advocates, OHV users and a multitude of other outdoor enthusiasts.

As proposed, the development of solar powered utility plants within the Solar Development Analysis Area or specific Solar Energy Study Areas (Delamar Valley, Dry Lake Valley North, and East Mormon Mountain) will result in serious impacts to the public lands grazing permittees and other current public lands users.

Since the 1850's, grazing livestock on public lands has been an essential part of Nevada ranching operations and our rural culture. The ranching industry is an integral part of the well being of Nevada's public lands and surrounding rural communities.

Nevada Cattlemen's Association supports the Solar Energy Study Areas approved by the Lincoln County Commission. The board's decision was based on input of affected public lands grazing permittees and other public lands users.

Recognizing that many potential impacts may occur within proposed project areas, the Nevada Cattlemen's Association supports the requiring a Preliminary Environmental Impact Statement (PEIS). These include potential AUM's loss, impacts to native vegetation, invasive weeds, and public land access. The NCA believes it is imperative that the PEIS contain a commitment to a "no net loss" of AUM's on grazing allotments where solar facilities are developed.

Range improvements are critical to grazing operations on public lands. These improvements include seedings, fencing, gates, cattle guards, corrals, chutes, wells, reservoirs, pipelines, tanks, troughs, and roads. In order to maintain a viable ranching operation, all range improvements within the project area must be identified and mitigated; therefore the permittee should be included in discussion involving any livestock improvements. If range improvements *will* be impacted, a mitigation plan should be developed with the input of the BLM and permittees.

Along with AUM's, ecosystem health, and range improvements, public land access is also an important aspect of your evaluation in the PEIS. Open access to public lands is essential to maintaining multiple use principals. We feel it is important that the PEIS identify all public lands access routes within or adjacent to the project areas. Any impacted access areas should be mitigated in order to ensure no loss of access to currently accessible public lands.

The association feels that the process used to approve the site-specific developments is unclear, and would like to have the process and means by which affected parties can provide input during that process be explained.

Thank you for the opportunity to comment on this most important issue. If you have questions regarding any of the topics or concerns raised in this letter please feel free to contact the association office at 1-775-738-9214 or via email nca@nevadabeef.org.

Best Regards,



Dan Grafian
President, Nevada Cattlemen's Association

CC: Governor Jim Gibbons
Senator Harry Reid
Senator John Ensign
Congressman Dean Heller
Congresswoman Dina Titus
Congresswoman Shelley Berkley
Bob Abbey, Director, Bureau of Land Management
Ron Wenker, State Director, Bureau of Land Management
Victoria Barr, Manager, Caliente BLM Field Office
Paul Mathews, Chairman, Lincoln County Commissioners
Jeff Fontaine, Nevada Association of Counties



BIGHORN-DESERT VIEW WATER AGENCY
A PUBLIC AGENCY

622 S. JEMEZ TRAIL, YUCCA VALLEY, CA 92284 (760) 364-2315 FAX (760) 364-3412

September 14, 2009

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue -EVS/900
Argonne, IL 60439

Subject: Scoping Comments on the Solar Energy Study Areas for the Solar PEIS

Thank you for providing an extension to the comment period for public responses to Solar Energy Study Areas for the Solar PEIS to September 14, 2009. According to maps prepared July 21, 2009 for the U.S. Department of Energy and Interior it appears that "light blue" lands, in the area of Johnson Valley, exist within the Bighorn-Desert View Water Agency service area (see attached maps) and these "light blue" areas are identified as "BLM lands being analyzed for Solar Development in PEIS".

We were alarmed to discover the California Energy Commission CREZ Refinement Matrix is silent regarding water resource availability and impacts related to the development of utility scale solar fields (see attached letter). It is our understanding that utility scale solar fields require large amounts of water for operation and maintenance and with limited groundwater supplies these projects could be considered unsustainable over time. The Bighorn-Desert View Water Agency service area is not built-out, and some groundwater sub-basins are in overdraft now. In fact, the agency is aggressively pursuing artificial recharge facilities to percolate entitlements from the State Water Project to better manage the local resources into the future for our customers.

Bighorn-Desert View Water Agency perceives that groundwater resources tapped for large utility scale solar energy development is not a beneficial use of the public trust resource managed by BDVWA for the citizens of this community. It is simply a trade, green power in exchange for groundwater depletion.

We respectfully request that the "light blue" areas be reevaluated in light of the lack of groundwater resources and be dropped from the study and off the associated maps.

Sincerely,

A handwritten signature in blue ink that reads "Marina D. West".

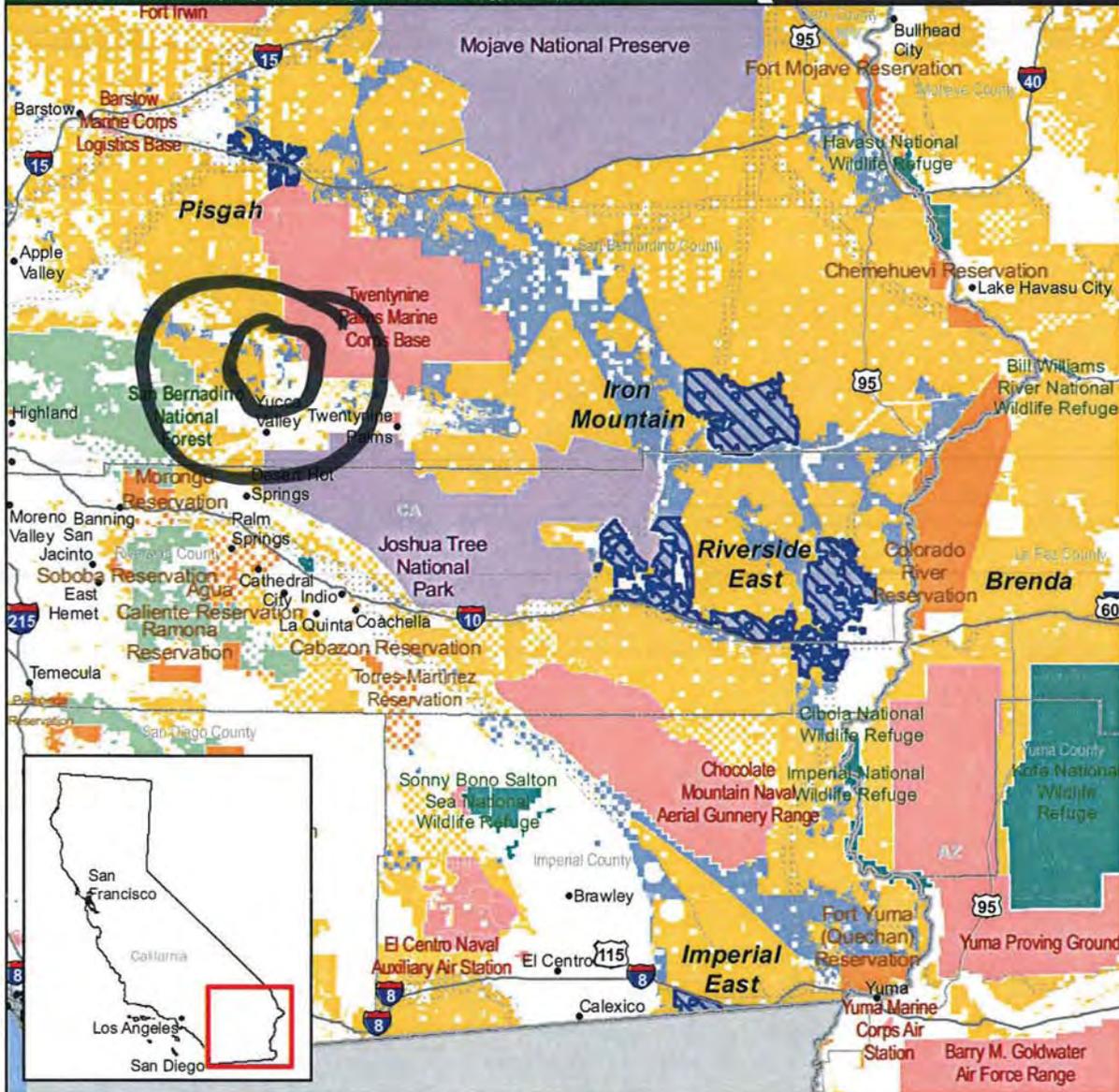
Marina D. West, PG
General Manager

Solar Energy Study Areas in California

Map Prepared July 21, 2009



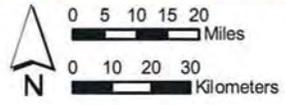
Property of the U.S. Departments of Energy and the Interior for Use in Preparation of their Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development



Surface Management Agency
As of 3/26/2009

Tribal Lands	DOD	NPS
BLM	DOE	OTHER
BOR	FWS	USFS

- State Line
- County Boundary
- Solar Energy Study Area (As of 6/5/2009)
- Existing Designated Corridor (See Note 2) (As of 7/21/2009)
- BLM Lands Being Analyzed for Solar Development in PEIS (As of 6/5/2009)



NOTE 1: Revisions to the National Landscape Conservation System included in Public Law 111-11 are not yet reflected in this map.
NOTE 2: Designated Corridors are developed for federal land use planning purposes only and are not applicable to state-owned or privately-owned land. SOL139



Areas within Bighorn Desert View Water Agency boundaries - Johnson Valley service areas

**COPY FOR YOUR
INFORMATION**

United States Department of the Interior

NATIONAL PARK SERVICE

1849 C Street, N.W.

Washington, D.C. 20240

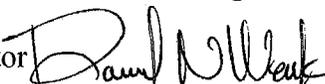
SEP 14 2009

IN REPLY REFER TO:

N40(2301

Memorandum

To: Director, Bureau of Land Management

From: Acting Director 

Subject: Supplemental Scoping Comments for the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development [74 FR 37051 (June 30, 2009)]

The National Park Service appreciates the opportunity to provide supplemental scoping comments on the Solar Energy Development Programmatic Environmental Impact Statement and has set forth its detailed comments in the Attachment. The NPS also appreciates being accorded cooperating agency status on this important PEIS. In this capacity, the NPS will use its expertise in evaluating potential impacts and in identifying needed mitigation at the regional and local levels related to park air, water, biological resources, soundscapes, night skies, viewsheds, and cultural resources.

Overall, the NPS supports the concept of establishing solar energy study areas to aid in the review of utility-scale solar energy projects. As the Bureau of Land Management examines the merits of siting solar energy projects within the 24 solar energy study areas, we ask that it also evaluate the potential impacts that such projects could have on adjacent units of the National Park System and other special status lands, such as National Trails, National Historic Sites and Landmarks, and National Natural Landmarks, and identify needed mitigation measures to protect them.

At present, it appears that the current direction of the PEIS would create competing policies and/or procedures for a national solar energy development framework. We recommend that the Bureau evaluate the potential environmental consequences of such a dual approach in the PEIS. As part of such an analysis, we recommend that the benefits of adopting a single set of procedures be examined under which all solar projects, including those within and outside of the solar energy study areas, will be treated in a consistent manner.

The need for such an examination in the PEIS is underscored by the fact that over 150 solar energy projects have been proposed on BLM lands throughout the southwestern United States. While some of these projects are contained wholly or partially within the solar energy study areas, the vast majority of these projects are not. In its *Federal Register* notice, the Bureau states that, "Applications received after June 30, 2009 for lands inside the solar energy study areas will be subject to the Record of Decision (ROD) for the Solar PEIS and any alternative procedures

developed by BLM for non-competitive and competitive processes.” All applications received for lands outside of the solar energy study areas will be processed under the BLM’s current procedures.” As a result, it appears that the Bureau plans to have 2 processes and potentially 2 levels of resource protection with respect to the permitting of solar energy projects, including their related ancillary facilities, on BLM-managed lands.

We also recommend that the BLM evaluate the sustainability of developing various solar energy technologies in the study areas. For example, it would be useful to examine whether the use of water-cooled technology in water scarce desert regions is a sustainable practice. Such an evaluation may reveal that water may be a more critical constraint affecting the deployment of water intensive solar technology than either the availability of land or the intensity of sunlight.

Finally, it would be helpful if the BLM would clarify how the in-depth environmental analyses of the solar energy study areas will be handled, especially with regard to cumulative impacts. Accounting for cumulative impacts will need to include impacts from other renewable energy projects in the surrounding area too. In addition, potential impacts from applications that were filed prior to June 30, 2009, need to be analyzed in the PEIS as part of the cumulative effects analysis. Having the results of such a comprehensive, cumulative analysis will be beneficial in helping to guide future decisions as to the optimal mix of appropriate solar technologies on BLM-managed lands. Our understanding is that the goal is to optimize energy production in a way that protects the environment, which includes the protection of park units and other special status areas.

For additional information, please do not hesitate to contact me or Dan McGlothlin, with the NPS Water Resources Division, at 970-225-3536, or at Dan_McGlothlin@nps.gov. I have asked Dan to work with your staff to formalize our role and responsibilities as a cooperating agency in the PEIS effort.

Attachment

cc: Linda Resseguie, BLM Washington Office

ATTACHMENT

National Park Service Comments on the Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development

I. Comments on Specific Solar Energy Study Areas

The NPS recommends that the PEIS include an evaluation of the potential impacts to units of the National Park System and special status lands and needed mitigation measures to protect them.

Amargosa Valley (NV)

The Amargosa Valley study area is located in the Amargosa Desert of southern Nevada in an area where solar potential is high, but water is extremely scarce, and requirements to reduce the amount of water consumption are warranted. The NPS possesses the most senior groundwater water right in the Amargosa Desert hydrographic basin, for Devils Hole, a detached unit of Death Valley National Park. The Nevada State Engineer recently determined that only 7,000 acre-ft per year of groundwater is available for development in the Amargosa Desert hydrographic basin (Ruling 5992) and that current groundwater withdrawals, approximately 15,000 acre-ft per year, exceed the amount of groundwater available for development by about 8,000 acre-ft per year. Numerical groundwater modeling suggests that current levels and locations of groundwater pumping in Amargosa Desert will lower the water level in Devils Hole, and impact the sensitive water resources protected by this water right. Therefore, a solar energy project within the Amargosa Desert that proposes the use of groundwater under an existing water right could face possible curtailment.

Currently, a 500 MW water cooled facility in the Amargosa Desert hydrographic basin proposes to use about 6,000 acre-ft per year of water, or about 85% of the total that is available for use in the basin. The proposed facility is outside the Amargosa Valley solar energy study area but within the Amargosa Desert water rights administration area. Thus, one wet cooled facility outside of this study area could require curtailment of nearly all other water use in the basin and would likely preclude the development of any other solar energy project in the basin, including within the Amargosa Valley study area. The BLM and project proponents need to be aware of these potential operational risks when permitting water intensive solar projects in the Amargosa Desert hydrographic basin. The cumulative effects of all proposed solar energy projects in a region need to be evaluated, whether or not they are within a solar energy study area.

Dry Lake and East Mormon Mountain (NV)

Solar projects in the Dry Lake and East Mormon Mountain study areas have the potential to pose significant impacts to groundwater resources in Lake Mead National Recreation Area.

Concentrated solar power projects proposed for the Dry Lake and East Mormon Mountain study areas in southern Nevada will likely be competing with Las Vegas and other groundwater developers in the area for limited supplies of groundwater in the basins north of Lake Mead NRA. The search for water to satisfy the demand for any proposed wet-cooled concentrated

solar power projects is likely to target groundwater from the regional carbonate-rock aquifer, which also discharges naturally at several large springs within Lake Mead NRA. These springs provide critical habitat for a small number of threatened species and therefore are very important to the park to protect against future impairment.

Potentially complicating the appropriation of a sufficient amount of new water rights for solar projects in these study areas is a 2002 order (Order 1169) by the Nevada State Engineer that currently holds in abeyance all pending applications and any new filings for the appropriation of groundwater from the carbonate-rock aquifer system in several surrounding basins until further studies are completed to evaluate the effects of pumping existing water rights on the carbonate-rock aquifer in these basins. Additionally, 2001 and 2002 rulings (Rulings 5008 and 5115) by the Nevada State Engineer have established a precedent that they may be reluctant to grant new water rights for water-cooled power plants in southern Nevada. Assuming any solar project developers secure new or existing water rights from the carbonate-rock aquifer for their proposed project, it is critical that individual and cumulative effects to groundwater resources in the hydrologically-connected basins north of Lake Mead NRA are evaluated in the PEIS process for all reasonably foreseeable projects proposing to use groundwater from this regional aquifer.

Riverside East (CA)

The Riverside East study area is located near the southeastern boundary of Joshua Tree National Park. Utility scale solar energy development in this study area has the potential to directly impact park resources. Specifically, such development could change the biological corridors, hydrology, and soil movement within and between the Eagle Mountains, Pinto Basin, and Coxcomb Mountains – all within the park.

Solar projects in this area have the potential to pose significant impacts to limited groundwater resources in the Chuckwalla Basin and surrounding hydrologically-connected basins. Concentrated solar power would compete with the proposed Eagle Mountain pumped storage project and a proposed landfill for limited groundwater supplies in the Chuckwalla Basin. These two projects are proposed at the former Eagle Mountain mine site situated between the southeastern boundary of Joshua Tree National Park and the western extent of the solar energy study area. The pumped storage project alone is currently estimating that it will require over 20,000 acre-feet of groundwater from the Chuckwalla Basin to fill two surface reservoirs in order to initiate hydroelectric power generation, and will require approximately 2,000 acre-feet annually to replenish reservoir losses due to evaporation and leakage.

Permitting of wet-cooled concentrated solar power projects within this study area could pose additional impacts to groundwater resources in the Chuckwalla Basin and surrounding basins like the Pinto Basin, which is located in the park. The Pinto Basin is located immediately up gradient of the Chuckwalla Basin and is known to be hydrologically connected to the Chuckwalla Basin. As a result, it is critical that individual and cumulative effects to groundwater resources in the Chuckwalla Basin and other hydrologically-connected basins are evaluated in the PEIS process for all reasonably foreseeable projects proposing to use

groundwater as part of their operation, including solar, the proposed pumped storage and landfill projects.

The areas along the southeastern portion of Joshua Tree National Park are known bighorn sheep habitat. Research has been conducted, but not yet published, regarding the herd around the Eagle Mountain and Mine areas which concludes that this population is healthy and in good standing. There is also a well-known bighorn sheep corridor between the Coxcomb Mountains and the Cottonwood area, through the Eagle Mountain and Mine areas. Potential development in these areas should be evaluated for its effect on bighorn sheep habitat and bighorn sheep movement patterns.

Solar energy development in the Riverside East study area has the potential to impact several rare and endangered plants occurring in or near Joshua Tree National Park and listed on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants:

- A new species of *Mentzelia* was discovered in the southern portion of the Coxcomb Mountains within Joshua Tree National Park. Solar energy development in the Riverside East study area has the potential to isolate this portion of the habitat in the park from Palen Dry Lake, Chuckwalla Valley, and the neighboring Sonoran desert mountains.
- The sand dune habitats at the eastern end of the Eagle Mountains currently support two CNPS listed rare plants (*Cryptantha costata*, *Eriastrum harwoodii*), and one watchlist plant (*Astragalus aridus*). This is the only place these plants occur in Joshua Tree National Park. Development in the western portion of the Riverside East study area could directly impact the quality of habitat for these species, which require fine sand, by altering the natural hydrology and sedimentation processes in the area.
- There are known populations of the following CNPS listed species within the footprint of the Riverside East study area: *Colubrina californica*, *Senna covesii*, *Ditaxis californica*, *Ditaxis claryana*, *Abronia villosa* var. *aurita*, *Hymenoxys odorata*, *Teucrium cubense* ssp. *depressum*, *Wislizenia refracta* ssp. *refracta*, *Grusonia parishii*, *Astragalus insularis* var. *harwoodii*, *Corypantha alversonii*, and *Proboscidea althaeifolia*. Potential impacts and opportunities for mitigation need to be evaluated with respect to these species in the PEIS.

Pisgah (CA)

Solar energy development in the Pisgah study area has the potential to impact several rare and endangered plants occurring on the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants:

- *Penstemon albomarginatus*, a CNPS List 1B.1 species, is an extremely rare plant; the only other known population is near Primm, NV, an area also under consideration for solar energy development.
- *Androstephium breviflorum* and *Penstemon albomarginata*, CNPS listed plant species, occur in the study area.
- *Castela emoryi*, CNPS List 2.3, may be impacted by development in the Pisgah, Riverside East, and Iron Mountain study areas.

Development in the Pisgah study area may directly and negatively impact the habitat and population of a newly described species of lizard (*Uta pisgahensis*) which was discovered to exist in the footprint of this study area.

It is important to note that the Pisgah study area includes lands that were purchased and transferred to BLM for the sole purpose of conservation. BLM should consider excluding these lands from the study area.

Iron Mountain (CA)

The Iron Mountain study area is only a portion of a much larger area under consideration for solar energy development near northeastern portion of Joshua Tree National Park. Not included in this study area is an additional 60,000 acres being considered for solar energy development adjacent to the northeast corner of the park, near the Coxcomb Mountains. The combined effects of solar energy development on public lands within and outside the study area adjacent to the park have a high potential to directly and negatively impact park resources in Coxcombs. For this reason, we suggest there should be a reduction in the acreage currently under consideration for solar energy development near the northeast corner of the park.

Solar energy development in the Iron Mountain study area has the potential to impact rare and endangered plants occurring within or near Joshua Tree National Park and listed on the CNPS Inventory of Rare and Endangered Plants:

- *Androstephium breviflorum*, a CNPS List 2.2 species, exists within and near the Iron Mountain study area. This plant occurs in low numbers in sporadic populations, including a few within the boundary of Joshua Tree National Park. Loss of any populations within this region will impact the long-term viability of these populations and may cause its extirpation within the park.
- *Eriastrum harwoodii* is found within the study area; this is a CNPS List 1B.2 species.

Red Sand (NM)

The Red Sand study area is located immediately adjacent to White Sands National Monument. The dunes of White Sands National Monument are maintained by the presence of a perched aquifer. Throughout the dunes, groundwater is present only 18-36 inches below the surface. The dunes wick water up to their crest, with moisture present immediately below the surface at the tops of the dunes. This high water table holds the dunes together, preventing them from rapidly eroding. If the perched aquifer were to decline, it is likely that the dunes would blow away over time, leading to the destruction of the monument's primary resource.

We do not currently fully understand the hydrogeology and whether or not the perched aquifer may be related to the deeper aquifers of the Tularosa Basin. Thus, we are very concerned about the potential for this perched aquifer to be disrupted through the development of groundwater resources outside the monument within the Tularosa Basin.

We suggest that for any PEIS alternative analyzing the use of surface or ground water, the environmental document should quantify the amount of water necessary, and from where it would be obtained. Presumably, water for this development would come from groundwater sources since we are not aware of any surface water resources in this area. It is unknown at this point how the development of groundwater resources immediately outside of White Sands National Monument would affect the perched aquifer inside the park. Even if the development were to utilize surface water, it could still affect groundwater by reducing the amount of infiltration available. In addition, groundwater in this area generally has extremely high total dissolved solids. These solids also may affect the feasibility of using groundwater for cooling.

We recommend that the PEIS fully examine the use of air cooling technology for concentrating solar development to avoid the need for vast amounts of groundwater. If the PEIS analysis indicates the need for significant water resources in this area, then we request that a project-specific study of the hydrology of the area be completed, with particular focus on how the development of water resources could affect White Sands National Monument. The NPS could assist BLM in this analysis to better understand the underground hydrology of the Tularosa Basin, and how solar energy development projects may affect White Sands National Monument.

We also recommend that the bureau include a visual analysis in the PEIS to indicate whether or not development associated with a solar energy field would be visible from White Sands National Monument. Depending on how facilities are sited, it is very possible that it may be visible from the park's National Register-listed visitor center. Thus, impacts to this historic resource should be considered. Depending on what is proposed, the facilities could also be visible from locations along the park's Dunes Drive. In addition, because of the proximity to White Sands, we also request that BLM carefully consider the impacts that solar energy development in the study area may have on night lighting and on natural soundscapes.

We do not anticipate that the other study areas (Mason Draw), as depicted on the BLM's June 5, 2009, map, would have any impacts to White Sands National Monument. These areas are outside of the Tularosa Basin and are in a separate hydrological unit.

Wah Wah (UT)

The Wah Wah study area is located in the Wah Wah Valley approximately 50 miles southeast of Great Basin National Park, and 20 miles northwest of Milford, in Beaver County, Utah. Great Basin National Park is located in the Snake Range of Nevada and adjacent to Snake Valley, in Baker, Nevada. The Wah Wah Valley lies up gradient of Snake Valley and interbasin movement of ground water from Wah Wah Valley is toward Snake Valley. The search for water to satisfy the demand for any proposed solar power projects in Wah Wah Valley and adjacent valleys is likely to target groundwater from the regional carbonate-rock aquifer known as the Great Salt Lake Desert Ground-Water Flow System.

Solar power projects proposed for the Wah Wah study area will likely be competing with Las Vegas, Central Iron County Water Conservancy District, and Beaver County for a limited supply of groundwater in the regional system. Groundwater plays an important role in maintaining the

features and ecology of Lehman Caves and water-dependent resources including streams and springs located on the eastern side of Great Basin National Park in Snake Valley. The principal effect of ground water withdrawals in Wah Wah Valley and adjacent valleys is a reduction in the quantity of subsurface outflow to Snake Valley, or alternatively, reversal of subsurface flow from Snake Valley toward these valleys, potentially reducing or eliminating spring and stream discharge.

Assuming any solar project developers secure new or existing water rights within the regional aquifer system for their proposed projects within the study area or adjacent valleys, it is critical that individual and cumulative effects to groundwater resources in the hydrologically-connected basins near Great Basin National Park are evaluated in the PEIS process for all reasonably foreseeable projects proposing to use groundwater within the regional aquifer.

II. Resource-Specific Comments

Water

As the BLM proceeds with its analysis and permitting of utility-scale solar energy projects, it is important to consider the potential impacts on water resources for all proposed projects located in the vicinity of units of the National Park System. With this in mind, as noted in the NPS's initial scoping comments on this PEIS effort, we urge the BLM to consider possible cross-boundary or even regional impacts associated with large-scale solar projects.

The PEIS should carefully consider the findings of existing studies on water use for solar energy projects. The interdependence of energy production and water use is well documented by the Department of Energy. A report prepared by the Department of Energy (Source: Report to Congress titled Concentrating Solar Power Commercial Application Study: Reducing Water Consumption of Concentrating Solar Power Electricity Generation) states that water consumption in the Mojave Desert is an issue with concentrating solar projects because areas of the Mojave where the sun is most intense are the same areas where water is scarce.

The PEIS should consider the establishment of programmatic water-use policies to encourage the maximum conservation of water by solar energy projects in water-limited areas, including the study areas within the Mojave Desert. A model for such an approach is the policy of the California Energy Commission regarding the use of fresh water for power plant cooling. The CEC policy reflects a desire to minimize the consumptive use of fresh water for power plant cooling, and use of such water is approved "only when it is demonstrated that the use of other water supply sources or other methods of cooling would be environmentally undesirable or economically unsound." The PEIS should also consider whether "once-through" cooling systems are appropriate in water-limited areas, including the study areas of the Mojave Desert.

Trails

The NPS Intermountain Region, National Trails Office co-administers with the BLM the following two National Historic Trails that have the potential to be impacted by the proposed

solar energy development sites that are presented in the Solar Energy PEIS: El Camino Real de Tierra Adentro National Historic Trails in New Mexico, and the Old Spanish Trail, which traverses the states of Colorado, Nevada and Utah. Congress designated these trails to identify and protect “the historic route and its historic remnants and artifacts for public use and enjoyment” (National Trails System Act, P.L. 90-543, as amended).

The types of resources that have the potential for being impacted by proposed solar energy development are trail remnants and associated archaeological sites, structures, buildings, natural landmarks, and the general cultural landscape. Trail remnants can be obvious swales, and ruts, subtle changes in elevation and/or vegetation, or alignments that have no obvious surface indications. Adverse impacts to the trails and associated cultural resources could include, but are not limited to, blading, trenching, vehicular traffic, and subsequent maintenance and repair of infrastructure. Adverse impacts to the setting could include visual impacts from the solar fields and from associated transmission lines, roads, and other ancillary development. We encourage BLM to carefully consider potential impacts to these National Trails in the alternatives developed for the PEIS.

General Biologic Resources

In addition to formally listed Threatened and Endangered (T&E) species, other rare or imperiled species and biological communities should be evaluated in the PEIS. For example, we suggest that BLM obtain lists of such species and communities from the various State Natural Heritage programs in each of the six states encompassing solar energy study areas. Maintenance of habitats for T&E or rare or imperiled organisms or groups is increasingly important under climate change response scenarios.

We also suggest that the PEIS analyze “footprints” of project infrastructure and support infrastructure (e.g., roads, transmission lines), how they are designed, placed, constructed and operated for their potential influence on:

- Establishment and spread of non-native species.
- Long-term recovery potential of soils, aquifers, species and biological community structure and function when infrastructure is removed and/or operations cease.
- The movement, migration, or dispersal of organisms, seed, or pollen (particularly for rare species) among habitats and/or populations or meta-populations.
- Influences on the behavior of organisms and on regional foodweb structure.

In addition, we recommend that the PEIS:

- Review potential impacts at multiple spatial scales and multiple levels of resource organization.
- Include analysis of new infrastructure and changes to existing infrastructure and related traffic patterns and land use changes.

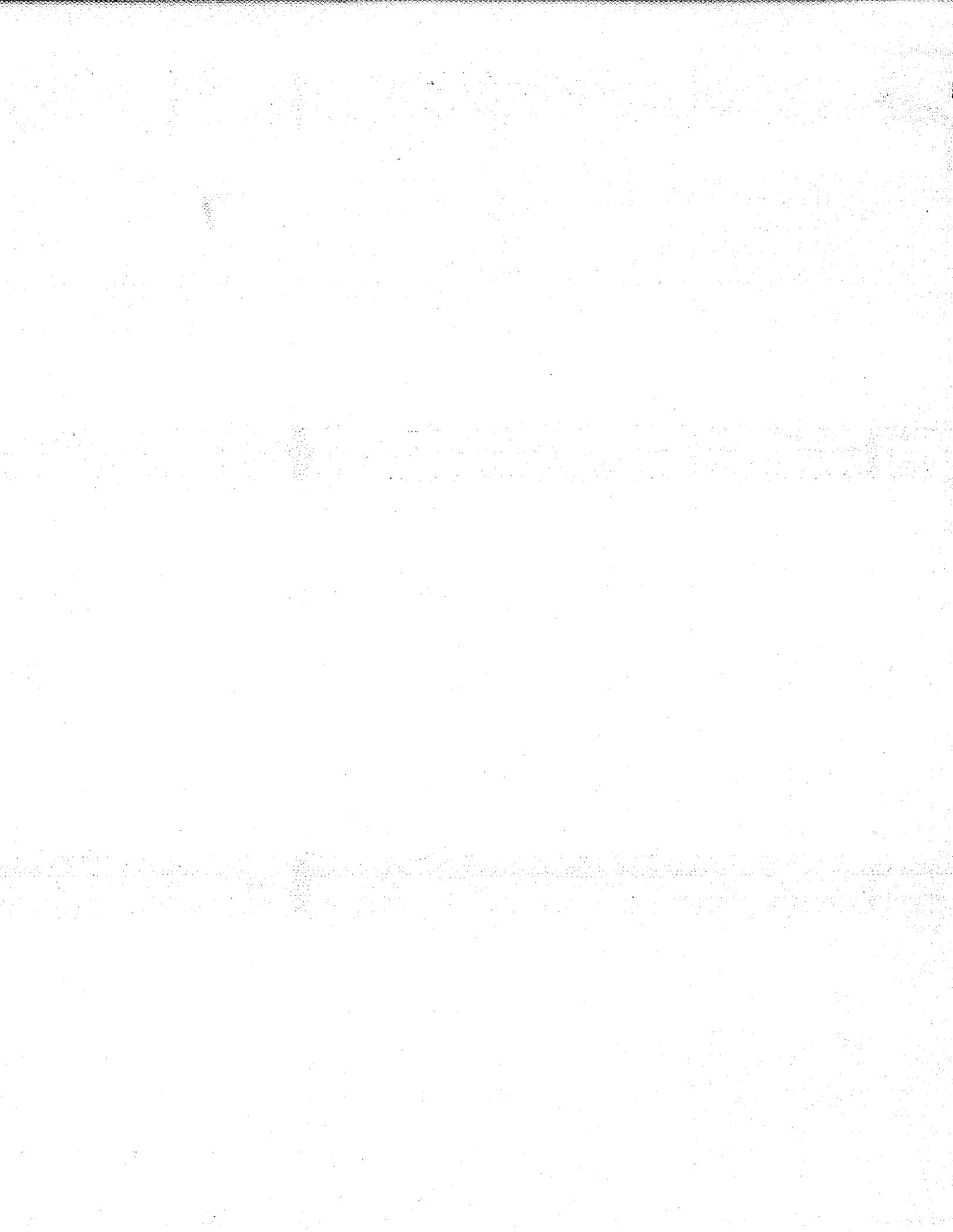
Cultural Resources

We recommend that the PEIS contain an analysis of prehistoric east/west trail networks that supplied coastal and Colorado River trade items to the greater region. There is also a potential for direct impacts to General Patton's WWII training areas, and Metropolitan Water District aqueduct resources, however, the NPS does not maintain, nor have jurisdiction over these areas. Additionally, in reference to lands not in the Riverside East solar energy study area, CREZ 38 lands, north of the Joshua Tree National Park boundary, lie within a known ecological linkage, as studied and designated in SouthCoast Wildlands report, "A Linkage Design for the Joshua Tree - Twentynine Palms Connection, December 2008." Other known linkages were recently published on a CEC map, dated 7/14/2009.

III. Information for BLM to consider and use in the draft PEIS

Three of the four California solar energy study areas, plus one in Nevada, are located on or within 10 miles of the boundary of Joshua Tree and Death Valley National Parks. The eastern Riverside study area will completely surround one of Joshua Tree National Park's unique mountain ranges; the Iron Mountain study area is within 10 miles of the same mountain range in Joshua Tree National Park; and the Amargosa Valley study area in Nevada is very near the boundary of Death Valley National Park.

The Amargosa Valley study area consists of approximately 32,000 acres of pristine habitat. The Eastern Riverside study area encompasses approximately 406,000 acres, over half of which is directly bordering Joshua Tree National Park on pristine habitat; the Pisgah study area consists of approximately 28,000 acres of pristine habitat; the Iron Mountain study area contains approximately 113,000 acres of pristine habitat.



SPORTSMEN FOR **Responsible Energy Development**

September 14, 2009

Sent via US Postal and

Electronically sent via: linda_resseguie@blm.gov and lisa.jorgensen@go.doe.gov

Solar Energy PEIS
Argonne National Laboratory
9700 S. Cass Avenue—EVS/900
Argonne, IL 60439

RE: Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications.

Dear Solar PEIS Project Team,

Please accept the following comments from Sportsmen for Responsible Energy Development (SFRED). Led by Trout Unlimited, National Wildlife Federation and Theodore Roosevelt Conservation Partnership, SFRED is a coalition of more than 500 businesses, organizations and individuals working together to promote and support responsible energy development in the Rocky Mountain West.

We appreciate this opportunity to submit these comments on the Department of Interior's and the Department of Energy's extended public scoping on the Notice of Availability of Maps and Additional Public Scoping for Programmatic Environmental Impact Statement to Develop and Implement Agency-Specific Programs for Solar Energy Development; Bureau of Land Management Approach for Processing Existing and Future Solar Applications.

The use of solar energy for the production, transmission and/or conservation of energy in the United States has many positive attributes and all three organizations support the initiative by the BLM and the DOE to define and facilitate environmentally suitable and appropriate lands for development, to examine and mediate potential environmental challenges and impacts of solar development, and to identify stipulations and restrictions for solar development. All three nonprofit conservation organizations have concerns with potential environmental issues, existing resource data analysis, and how the BLM will address existing and future solar energy development applications on BLM-administered lands.

Background

Trout Unlimited (TU) is one of the largest private non-profit conservation organizations dedicated to conserving, protecting and restoring North America's trout and salmon fisheries and their watersheds. Established in 1959, TU has more than 155,000

members nationwide supporting the mission for the protection of coldwater fisheries. TU recognizes that the value of public lands is unparalleled in providing habitat to coldwater fisheries, drinking water and wildlife habitat. TU's conservation program recognizes the importance of protecting public lands for the survival and restoration of wildlife and fisheries. And finally, TU believes that actions taken on public lands are ultimately reflected in the quality of fish and wildlife habitat and populations.

As an organization, the National Wildlife Federation (NWF) represents the power and commitment of four million members and supporters joined by affiliated organizations in 47 states and territories and the District of Columbia. NWF and its affiliates have a long history of working to conserve the wildlife and wild places in the West. Many members of NWF and its affiliates use the lands and resources that will be impacted by utility-scale solar energy generation facilities constructed on federal public lands.

Theodore Roosevelt Conservation Partnership (TRCP) is a national non-profit conservation organization dedicated to guaranteeing every American a place to hunt and fish, particularly on public lands. TRCP accomplishes its goal three ways: 1) Ensuring access to public lands, 2) ensuring adequate funding for natural resource agencies, and 3) helping to conserve fish and wildlife habitats. TRCP has formed, with various partners, a Fish, Wildlife, and Energy Working Group, comprised of some of the country's oldest and most respected hunting, fishing, and conservation organizations. TRCP is working hard to ensure that the development of oil and gas resources on public lands in the West is balanced with the needs of fish and wildlife resources, but is concerned that the rapid pace of energy development may be precluding BLM from managing these resources as required by the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. § 1701 et seq.

Collectively, these three organizations have formed a partnership referred to as SFRED. The goal of SFRED is to promote responsible energy development, be it renewable or nonrenewable, in a manner that reflects the use of balance and conservation on our public lands that sustain some of the cleanest water, healthiest habitats and finest fishing and hunting in North America. We remain committed to develop renewable energy resources in a pragmatic and thoughtful comprehensive planning approach utilized to reduce the impacts that may occur on these valuable and irreplaceable public lands. We seek not to repeat the same mistakes that were made in developing traditional energy resources. Sportsmen support responsible energy resource development on public lands. Future energy development on public lands—including renewable energy development—must consider the many uses and values of public lands to Western landscapes, local economies and local communities.

SFRED has become a participating voice in the effort to push for responsible development of our nation's renewable energy resources. The lack of consideration for the long-term and cumulative effects on groundwater, surface waters, wildlife habitats (including sensitive desert ecosystems), and prized hunting and fishing grounds prompts our efforts for change. Our comments will reflect these concerns and suggestions for the BLM to incorporate into their policies and mitigation strategies for facilitating environmentally sensitive and responsible solar energy facilities on BLM lands.

Discussion of Scoping Extension

With the extension of public scoping in March 2009 and again in July 2009, additional information was made available that assists with evaluating the intent and content of the Solar PEIS. We sincerely appreciate and applaud the administration for extending the public comment period and providing additional information for which to offer scoping comments. However, please note that the availability of the maps depicting the boundaries of the solar energy study areas to be analyzed only provides a large scale view of the collective six states and specific areas in each state were not made available. It would be helpful to include in the Draft PEIS each individual states' solar energy locations, complementing this information with land status descriptions, acreages, land use planning status, agency management status, and any environmental issues.

This same concern exists about lack of access to more detailed information on each of the 24 study areas in these six states. The June 2009 US Dept. of Interior News Release (*Secretary Salazar, Senator Reid Announce 'Fast-Track' Initiatives for Solar Energy Development on Western Lands*; June 29, 2009) discusses the evaluation of the environmental and resource suitability for large-scale solar energy projects on BLM lands. Simultaneously, the permitting of a number of solar power projects are being expedited through the Dept. of Interior and it is assumed these projects are outside of the 24 study areas. We suggest that the data retrieved through the 24 study area initiative and the newly permitted solar energy projects be incorporated into the Solar PEIS discussion and analysis. Moreover, selection of the Solar Energy Study Areas (SESAs) needs clarification. In its "Qs and As" document, BLM purported to identify the criteria that were used to identify and select SESAs.¹ In fact, different states used different criteria as was made clear during a teleconference held on August 24, 2009 by BLM officials.² We recognize that there may be important regional differences, such that one single set of criteria might not be sufficient for all states identifying SESAs. Nonetheless, we do believe that all states should use a consistent set of core criteria and that BLM is obligated to explain why each of those criteria was included. Further, we believe that BLM needs to make public all the criteria used by each state along with explanations for inclusion of non-core criteria. All of these criteria must be publicly applied to the SESAs that have been proposed, using maps and links to GIS data. The same criteria should also be applied to the additional SESAs considered as alternatives in each state. All of this information must be included in the Draft PEIS.

Specifically, we have concerns regarding the inclusion of sensitive fish and wildlife habitats within the SESAs in some states. For example, the recent letter submitted by the BLM New Mexico State Office recommending the elimination of the Mason Draw and Red Sand SESAs because of recently-discovered conflicts with wildlife habitat underscores the need for a closer examination of the habitat criteria employed to designate SESAs. Our own review of habitat data from the Colorado Division of Wildlife

¹Qs & As: *BLM Solar Programmatic Environmental Impact Statement (PEIS)*, available on-line at: http://www.doi.gov/news/09_News_Releases/SolarEnergyQA.pdf.

² For example, some state BLM offices eliminated lands from SESAs if there is a pending application for a solar right-of-way. Other offices did not. Some state BLM offices excluded sensitive wildlife habitat only if the lands are protected by a binding memorandum of understanding or other legal obligation that precludes development.

(CDOW) indicates that all four of the SESAs in Colorado occur on Winter Range³ for big game, including pronghorn, elk, and mule deer. Two of the four SESAs overlap with Pronghorn Severe Winter Range.⁴ Three of the four SESAs in Colorado overlap with Elk Severe Winter Range. Lands in the Los Mogotes East SESA provide vital habitat for both pronghorn and elk during Colorado's worst winters. The inclusion of these habitats for important wildlife species in the SESAs raises serious questions regarding whether the SESAs truly represent the lands "most suitable" for renewable energy development.

The Notice of Availability states that the SESAs are being evaluated "for the purpose of determining whether such areas should be designated as Solar Energy Zones" that are intended to be "specific locations determined best suited for large-scale production of solar energy." Once the zones are designated as "best suited" in the PEIS, the BLM should give full force to those designations by limiting applications to these areas.

In the interim, it certainly does not seem prudent to continue the permitting process for the 158 active solar applications covering 1.8 million acres without knowing the full environmental effects such massive surface disturbance has in these landscapes. We suggest a temporary moratorium on any project that impacts sensitive wildlife, plants, or water resources until the full analysis can be assessed.

In the interim, it does not seem prudent to continue the permitting process for the 158 active solar applications covering 1.8 million acres without knowing the full environmental effects such massive surface disturbance has in these landscapes. We suggest a temporary moratorium on any project that impacts sensitive wildlife, plants, or water resources until the full analysis can be assessed.

Discussion of Alternatives

Three alternatives have originally been identified for evaluation in the Notice of Intent for the Solar Energy PEIS: the no action alternative, the proposed action, and the limited development alternative proposed by BLM only (excluding DOE). However, only two are now being considered due to the inclusion of the analysis of study areas to the PEIS.

- **No Action Alternative.** There is very little discussion on the No Action Alternative except to state that the BLM would continue to evaluate solar energy projects on a case-by-case basis. Based on the increased level of interest and applications for solar development on public lands coupled with the challenge of transmission access, it appears that this alternative should include an evaluation of the results of delaying land use plan amendments affecting the solar development on BLM lands.

It would be very useful to complement the West-wide maps provided in this scoping statement with a state-by-state discussion of solar development projects

³Winter range is defined by CDOW as that part of the overall range where 90% of the individuals are located between the first heavy snowfall and spring green up during the average five winters out of ten.

⁴Severe Winter Range is that part of the winter range where 90% of the individuals are located when the snow pack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten.

and implications occurring on public lands in each of the six states. Including such information in the Draft PEIS would provide a more thorough understanding and a descriptive comparison of actions needed and the impending analysis agencies would need to initiate. In addition, a Reasonable Foreseeable Development (RFD) scenario should be conducted under the No Action Alternative as part of the current level of activity that would be conducted despite No Action.

- Proposed Action. The proposed action has been described as developing and implementing agency-specific programs that would facilitate environmentally responsible utility-scale solar energy development. It would also include programs that describe policies and mitigation strategies related to solar energy development in the six state study area. Finally, the proposed action indicates that the BLM would amend individual land use plans to adopt the new solar program.

We feel that the proposed action does not offer enough depth in the analysis based on the increased undertaking of the 24 study areas and a significant increase in the permitting of projects on public lands. Nor is there any discussion for analysis of the transmission and access challenges for getting solar energy to the market.

Further, any RFD scenario discussion should include the potential for land use conflicts among other renewable resource entities (such as wind or geothermal) for more than the proposed 20-year study period. While updates to land use plans would occur within the 20-year time frame, we feel projection analyses should be conducted for longer time periods, based on the impacts that such development might permanently have on the resource. In addition, the life of a solar project (despite technological updates) has an indefinite life, and this should be considered in the RFD.

Request for Additional Alternatives

The results of the above discussion indicate that realistically only one alternative exists at this time. We feel additional alternatives should be brought forth that include a conservation protection alternative, an alternative that evaluates different levels of development, perhaps different types of leasing opportunities, the inclusion of various restrictive stipulation scenarios, or the implementation of smaller scale (acreages on public lands) projects, to name just a few.

Equally important should be the inclusion within the PEIS of analysis of all electricity generation options with particular emphasis on wind, geothermal, and nuclear in any of the developed alternatives and the transmission access web that would be needed for such a diverse infrastructure of projects. Finally, all alternative analyses must include the extractive end of energy development such as natural gas, oil shale, uranium, and coal.

BLM's Programmatic Goals & Cumulative Impact Analysis

The BLM has identified four programmatic goals for the Solar PEIS. Those goals include:

- Establish a Solar Energy Development Program
- Identify BLM-administered lands suitable for utility-scale solar development
- Consider the need for additional transmission corridors crossing BLM-administered lands
- Amend BLM land use plans in the six-state area to address solar energy development

In addition to those four goals, evaluation must be included that considers cumulative effects and impacts to the environment. These cumulative impacts should include assessing the increase in solar energy development based on long range forecasts and the cumulative impacts from other renewable and nonrenewable resource development.

The point of the cumulative impact analysis is to provide "sufficient [information] to alert interested members of the public to any arguable cumulative impacts involving [] other projects." *Coalition on Sensible Transportation v. Dole*, 826 F.2d 60, 71 (D.C. Cir. 1987). The Solar PEIS must, therefore, analyze in detail the nature and extent of the combined impacts of multiple federal and non-federal energy development activities. See *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988) ("...perfunctory references do not constitute analysis useful to a decision-maker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts"); *Earth Island Institute v. U.S. Forest Service*, 351 F.3d 1291, 1306-07 (9th Cir. 2003) (cumulative impact analysis violated NEPA when FEIS did not assess the role of foreseeable future projects on remaining suitable spotted owl habitat in a nearly home range core area within close proximity to the project's area); *NRDC v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988) (agency failed to consider cumulative impact, as defined in the CEQ regulations, of simultaneous development in the region of species, particularly whales and salmon, that migrate through the difference planning areas, when it considered only the effect on the species within the planning area rather than the interregional effects.).

"Evidence is increasing that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time." Council on Environmental Quality, *Considering Cumulative Effects Under the National Environmental Policy Act* (1997) at 1. This is particularly true with regard to special status wildlife and big game species. For example, research shows that sage-grouse populations decline when cumulative impacts of development negatively affect reproduction or survival. See e.g., Aldridge, C. L., and M. S. Boyce, *Linking occurrence and fitness to persistence: habitat-based approach for endangered greater sage-grouse*. *Ecological Applications* 17:508-526 (2007).

TRCP is most concern with the pace and scale of development on public lands managed by BLM. In light of the foregoing, at a minimum, the agencies should consider in the Solar PEIS the impact of large scale solar development in the context of the following ongoing energy initiatives:

-

- Wind Energy Development. Information available at <http://windeis.anl.gov/>
- Energy Transmission Corridors. Information available at [http://corridoreis.anl.gov/documents/docs/Energy_Corridors_final_signed ROD 1 14 2009.pdf](http://corridoreis.anl.gov/documents/docs/Energy_Corridors_final_signed_ROD_1_14_2009.pdf)
- Oil Shale and Tar Sands Development. Information available at http://www.blm.gov/wo/st/en/prog/energy/oilshale_2.html
- Traditional Onshore Oil and Gas Development. (Notably there has not been a sound programmatic EIS development for traditional oil and gas development in at least 3 decades).

Based on above information, whether these PEIS's will be updated or amended within a similar time frame as the Solar PEIS, it might be appropriate to coordinate with these PEIS project teams based on the projected increased land use for various rights of ways, surface impacts, and other extractive surface and subsurface uses of BLM lands.

In addition, each PEIS program that is under construction or being proposed will require the amendment of BLM land use plans or USFS land management plans. Coordination and consultation among the various PEIS programs underway provides for a more efficient and cost-saving approach to updating multiple land use plans simultaneously.

SFRED Recommendations for Renewable Energy Development

SFRED has developed a set of principle recommendations for renewable energy development that have gained considerable national support. These recommendations were developed because fishing and hunting on public lands is a way of life for people in the West. For generations, people have used public lands to learn about fish and wildlife, to camp, to stalk trout and hunt elk. Our efforts have focused on defining a better way to ensure fish, wildlife, air and water resources on public lands are sustained while our nation's varied resources are developed to meet our country's needs. Sportsmen are relying on America's leaders to develop a new future for energy development and to do it without repeating mistakes of the past. We ask that you include these recommendations in the ongoing PEIS development.

1. Hunters and anglers should have a voice in the decision-making processes for renewable energy development on public lands. Open processes that encourage public input on important decisions, such as siting of renewable energy projects and transmission lines, are essential.
2. Roadless backcountry lands should be protected from the impacts of renewable energy development. Already-disturbed lands—where existing energy infrastructure might already be in place—should be prioritized for development of renewable energy.
3. Important and fish and wildlife habitat must be adequately protected. Grouse habitat, trout streams, deer and elk winter range, migration corridors, and fragile riparian habitats should not be unjustly sacrificed for renewable energy development projects.

August 11, 2009

RECEIVED
LAS CRUCES DISTRICT OFFICE

Bill Childress, District Manager
Jim McCormick, Assistant District Manager
Bureau of Land Management
Las Cruces District Office
1800 Marquess
Las Cruces, NM 88005

2009 AUG 28 PM 1:33
LAS CRUCES, NM 88005

RE: 03009 portion of EIS/ Solar zone study

Gentlemen:

We are in receipt of the notification of July 27, 2009 indicating that the Butterfield Trail Ranch allotment known in BLM files as the Lazy E allotment, 03009, has been included in a township for consideration (T023S, R003W) for a potential solar energy project. The section that affects the noted permit, Section 31, is of great concern to us and we ask that this letter be added to the record for the purposes of the EIS process.

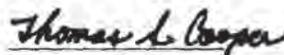
As you are aware, the Lazy E allotment with recent year EQIP project help has dramatically improved its water distribution system. The adequate supply of water from this effort will allow the ranch to adhere to its plan of attempting to have more or less 70% of the ranch cattle free during the monsoon season. This approach has and will greatly improve grama grass and other warm season grass production during the important period of time when rainfall and summer temperatures combine to replenish turf.

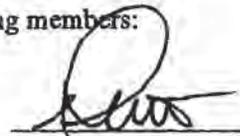
The ranch ownership submits to the BLM that section 31 of the noted Township is arguably one of the best examples of healthy and robust black grama stands in the arid Southwest today. The management approach that the ranch is using in the monsoon season has and will continue to support the vitality of that turf into the future. Because of adequate water supplies, the ability to concentrate cattle on tabosa bottoms elsewhere on the ranch during the monsoons will allow the absence of cattle on this gramma grass in this pasture and in this particular section. This is particularly important during the physiological periods of root extension and or pre-senescence when energy is being used and or translocated in the plants.

Please recognize the importance that we should all place in this approach to grazing and particularly on this area of the turf on the Lazy E allotment. This is an area that is probably as reflective of pristine Chihuahuan grassland of 100 years ago as any example in the Desert Southwest. If it is absolutely necessary to maintain a 36 section footprint for such a study, please look elsewhere where creosote and or mesquite cover dominates the community regime. This section needs to be maintained under this management scheme for the benefit of every aspect of land stewardship.

Sincerely,

Butterfield Trail Ranch LLC owners and managing members:


Thomas S. Cooper


Stephen L. Wilmeth