

Appendix B: Comments Received

Tonopah Solar Energy, LLC proposed Crescent Dunes Solar Energy Project				
Comments from DOE - LGP				
Administrative Draft Environmental Impact Statement				
	Page #	Line #	Reviewer Name	Comment
Comments that Should be Addressed in DEIS, but Can Be Included in FEIS Due to Time Constraints				
	General	N/A	DOE	From 40 CFR 1502.10 (i) – will the required distribution list be included with this document? We need to add DOE stakeholders to the extent they are not already included.
9	General	N/A	DOE	While there is an indication in several places in the document (e.g., Table 2-5, 3-1, 4-25) that no EJ populations are present in the project vicinity and a subsequent conclusion that no impacts will result, there is no data or analysis presented to establish that this is in fact true (nor is there an Appendix where this can be found referenced in the text). This may be controversial in light of the impacts on social and economic resources (indicated on p. xxiv) that will be brought by the workforce (an overall increase of 2%) that will be coming to the area and ‘moving into’ the small communities nearby. An influx of the number of workers identified may have an impact (even if seemingly small and temporary) on local services to the permanent and existing residents of those communities. This should be explicitly discussed in the document. BLM received a comment to this effect and a request for the outright analysis of EJ by the Town of Tonopah and EPA, respectively (table 1-5).
10	2-11; 2-29	20-23; 6-11	DOE	Is this meant to say, that except for the outgoing transmission line to Pole Line Road that the rest of the TL will be constructed in existing ROW? If not, it would be helpful to indicate where the ‘new’ disturbance would/is anticipated to occur along the TL route because it is unclear in the current description.
11	2-32	23-25	DOE	What are the dimensions of the ‘small ditches’ that would be constructed along roads for water run-off?
12	2-40	6-7	DOE	Given that this is an area where recreational off-road vehicle use occurs regularly, there may be more dust deposited on mirrors and thereby an increased need to wash them. While amount of water anticipated during washing activities is indicated on p. 2-40 as 70 acre feet per year, is there potential for there to be more water needed due to fugitive dust from ORV

1-A

1-B

1-C

1-D

1-E

				use in the area? Should a range of water use for mirror washing be anticipated for the project and, as a result, articulated in the document?	
13	2-42	28-29	DOE	Is there a standard or BMP that would be followed in cleaning up (or disposal) of residual HTF from the surface soil after processing? Since the HTF is highly flammable and a strong oxidizing agent, how this will be done is perhaps information useful for purposes of transparency.	1-F
14	2-46	3-12	DOE	Will workers be trained to fight fires that occur on site? The documents discuss plans for an onsite fire protection and suppression capability (for example, there is a good deal on infrastructure design and equipment related to fire suppression), but it is not clear whether there would be a trained fire suppression squad on site at all times, or whether all employees would be trained to fight fires or will the local fire departments be relied upon (thus causing an increased demand on local services)?	1-G
15	2-50	14-15	DOE	This discussion indicated that during initial consultation that no Native American values were identified but there is a comment directing BLM to the Yomba Shoshone Tribe. Perhaps the intention to consult with this tribe as well as the Timbisha Shoshone Tribe would be appropriate here. In table 1-5, BLM received a comment from the Timbisha tribe that the Yomba Shoshone may have an interest.	1-H
	2-46	3-12	DOE	Wildfire prevention and control does not seem to receive sufficient attention in the document. Due to large grading activities, the project may be expected to increase growth of non-native vegetation (e.g., halogeton, Russian thistle, presence of cheat grass in area), thus increasing the potential for wildfires. Wildfire fire potential also could be increased due to heat from the mirrors. Propose considering discussion of this topic further in the FEIS.	1-I
16	3-34; 3-58 – 3-59; 4-20	27-34 29-2 23-30	DOE	Section 101(d)(6)(A) of the National Historic Preservation Act provides that properties of traditional religious and cultural significance to an Indian tribe or Native Hawaiian organization may be eligible for listing in the National Register of Historic Places. There is a possibility that eagle habitation in the vicinity of the project may render the landscape a potential historic property of religious and cultural importance to Indian tribes. If so, impacts to the eagle habitation need to be considered by BLM and SHPO during consultation under Section 106. In the	1-J

				<p>recent, Final Environmental Assessment Proposal to Permit Take as Provided Under the Bald and Golden Eagle Protection Act (http://alaska.fws.gov/eaglepermit/index.htm), the US FWS explains that some Indian tribes find eagles or eagle nests, or both, to be sacred sites. These, and the landscapes and landforms associated with them, could be eligible for listing in the National Register.</p> <p>Given that an impact to Golden eagles is identified in the document, there maybe a reason to believe that Tribes that have a current or historic presence near the proposed site consider eagle habitation (which includes eagles and eagle nests) sacred. DOE suggests consulting with the Yomba and Timbisha Shoshone Tribes to assess the present and historic importance of eagles (particularly Golden) and their nests to these Tribes culture.</p>	
17	4-97	20-21	DOE	<p>There is no discussion of possible impacts related to glare from the mirrors (potentially if one or more becomes misdirected for various reasons) on pilots during training exercises given the presence of the Nevada Training Facility and Air Force base located approximately 40 miles away. DOE suggests consideration of this potential indirect impact of the project on operations based at the DOD facility.</p>	1-K
18	2-11; 2-29	20-23; 6-11	DOE	<p>Is this meant to say, that except for the outgoing transmission line to Pole Line Road that the rest of the TL will be constructed in existing ROW? If not, it would be helpful to indicate where the 'new' disturbance would/is anticipated to occur along the TL route because it is unclear in the current description.</p>	1-L
same as Comment 1-D				<p>What are the dimensions of the 'small ditches' that would be constructed along roads for water run-off?</p>	
same as Comment 1-E				<p>Given that this is an area where recreational off-road vehicle use occurs regularly, there may be more dust deposited on mirrors and thereby an increased need to wash them. While amount of water anticipated during washing activities is indicated on p. 2-40 as 70 acre feet per year, is there potential for there to be more water needed due to fugitive dust from ORV use in the area? Should a range of water use for mirror washing be anticipated for the project and, as a result, articulated in the document?</p>	
same as Comment 1-F				<p>Is there a standard or BMP that would be followed in cleaning up (or disposal) of residual HTF from the</p>	

				surface soil after processing? Since the HTF is highly flammable and a strong oxidizing agent, how this will be done is perhaps information useful for purposes of transparency.
22	2-45	20-33	DOE	<p>Accidents and Intentional Destructive Acts is an area of analysis that DOE must include in the document. Although the potential may appear to be minor, DOE has concerns that there is no analysis in the DEIS regarding potential intentional destructive acts to the project and project elements:</p> <p>a. In case of an accidental or intentional destructive act that may require immediate 'shut down' of the towers, how will the mirrors be positioned in time to allow towers to cool down?</p>
same as Comment 1-G				Will workers be trained to fight fires that occur on site? The documents discuss plans for an onsite fire protection and suppression capability (for example, there is a good deal on infrastructure design and equipment related to fire suppression), but it is not clear whether there would be a trained fire suppression squad on site at all times, or whether all employees would be trained to fight fires or will the local fire departments be relied upon (thus causing an increased demand on local services)?
same as Comment 1-H				This discussion indicated that during initial consultation that no Native American values were identified but there is a comment directing BLM to the Yomba Shoshone Tribe. Perhaps the intention to consult with this tribe as well as the Timbisha Shoshone Tribe would be appropriate here. In table 1-5, BLM received a comment from the Timbisha tribe that the Yomba Shoshone may have an interest.
same as Comment 1-I				Wildfire prevention and control does not seem to receive sufficient attention in the document. Due to large grading activities, the project may be expected to increase growth of non-native vegetation (e.g., halogeton, Russian thistle, presence of cheat grass in area), thus increasing the potential for wildfires. Wildfire fire potential also could be increased due to heat from the mirrors. Propose considering discussion of this topic further in the FEIS.
same as Comment 1-J				Section 101(d)(6)(A) of the National Historic Preservation Act provides that properties of traditional religious and cultural significance to an Indian tribe or Native Hawaiian organization may be eligible for listing in the National Register of Historic Places.

1-M

same as Comment 1-J				<p>There is a possibility that eagle habitation in the vicinity of the project may render the landscape a potential historic property of religious and cultural importance to Indian tribes. If so, impacts to the eagle habitation need to be considered by BLM and SHPO during consultation under Section 106. In the recent, Final Environmental Assessment Proposal to Permit Take as Provided Under the Bald and Golden Eagle Protection Act (http://alaska.fws.gov/eaglepermit/index.htm), the US FWS explains that some Indian tribes find eagles or eagle nests, or both, to be sacred sites. These, and the landscapes and landforms associated with them, could be eligible for listing in the National Register.</p> <p>Given that an impact to Golden eagles is identified in the document, there maybe a reason to believe that Tribes that have a current or historic presence near the proposed site consider eagle habitation (which includes eagles and eagle nests) sacred. DOE suggests consulting with the Yomba and Timbisha Shoshone Tribes to assess the present and historic importance of eagles (particularly Golden) and their nests to these Tribes culture.</p>	
27	3-48	Section 3.6.3	DOE	<p>Is it possible to include a quantitative analysis? Something simple such as the formula for “direct emissions” calculations in the EPA’s mandatory reporting rule (for projects over 25,000 metric tons/year)?</p>	1-N
same as Comment 1-K				<p>There is no discussion of possible impacts related to glare from the mirrors (potentially if one or more becomes misdirected for various reasons) on pilots during training exercises given the presence of the Nevada Training Facility and Air Force base located approximately 40 miles away. DOE suggests consideration of this potential indirect impact of the project on operations based at the DOD facility.</p>	

From: [Minor, Andrea J](#)
To: [Christensen, Henrik](#)
Subject: RE: Crescent Dunes DEIS
Date: Wednesday, September 15, 2010 10:40:26 AM

Dear Mr. Christensen,

I believe that this project was determined to not have potential to impact any of our lands or facilities. That being said, I'll save the paper and the postage and just access the link from the BLM site if we decide to take a second look at this project. No need to send us a copy of the DEIS. Thank you for considering us in the NEPA process.

Andrea Minor
Natural Resource Specialist
775-884-8366

From: Christensen, Henrik [mailto:Henrik.Christensen@hdrinc.com]
Sent: Wednesday, September 15, 2010 10:26 AM
To: Minor, Andrea J
Subject: Crescent Dunes DEIS

Ms. Minor,

Could you provide me with your physical address so I can forward a copy of the DEIS.

Thanks you in advance.

Henrik Christensen
Senior Project Manager
Environmental Services

HDR ONE COMPANY | *Many Solutions*
7180 Pollock Drive | Suite 200 | Las Vegas, NV | 89119
P: 702-938-6000 | Direct: 702-938-6119 | Cell: 907-317-2885
Fax: 702-938-6060 | Email: henrik.christensen@hdrinc.com
www.hdrinc.com



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

October 18, 2010

Tim Coward, Renewable Energy Project Manager
Bureau of Land Management
P.O. Box 911
Tonopah, NV 89049

Subject: Draft Environmental Impact Statement, Tonopah Solar Energy, LLC, Crescent
Dunes Solar Energy Project, Nye County, Nevada (CEQ #20100343)

Dear Mr. Coward:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Tonopah Solar Energy, LLC Crescent Dunes Solar Energy Project (Project). Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

EPA provided scoping comments to the BLM in response to the Notice of Intent (NOI) for this Project on December 17, 2009. In that letter, we raised concerns about impacts to water resources, biological resources, and cumulative impacts associated with the potential development of multiple large-scale installations in the desert southwest. We remain concerned about these issues. We have rated the DEIS as Environmental Concerns - Insufficient Information (EC-2) (see enclosed "*Summary of Rating Definitions*"). Our detailed comments are enclosed.

We appreciate the opportunity to review this DEIS, and are available to discuss our comments. When the FEIS is released for public review, please send one hard copy and one CD ROM to the address above (Mail Code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Jason Gerdes, the lead reviewer for this project. Jason can be reached at (415) 947-4221 or gerdes.jason@epa.gov.

Sincerely,

/s/

Kathleen M. Goforth, Manager
Environmental Review Office

Enclosures: Summary of Rating Definitions
EPA Detailed Comments

cc: Ron Wenker, U.S. Bureau of Land Management
Ray Brady, U.S. Bureau of Land Management

U.S. EPA DETAILED COMMENTS ON THE TONOPAH SOLAR ENERGY, LLC CRESCENT DUNES SOLAR ENERGY PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT, NYE COUNTY, NEVADA, OCTOBER 18, 2010

Groundwater and Surface Water Resources

One of the major concerns identified by EPA in our scoping comments for the Crescent Dunes Solar Energy Project (Project) was the potential impacts to water resources, particularly groundwater. While EPA is pleased that a hybrid cooling system (consisting of an air-cooled condenser with a wet cool augmentation system) is planned for the Project to reduce water use (with a small evaporative cooler to be used only at times of high energy demand), we remain concerned about the effect on existing groundwater supplies, as well as the potential for cumulative impacts over the life of the Project. Although the draft EIS states that the amount of drawdown for the Project (approximately 600 acre-feet per year) will “not result in wells going dry,” it also states that “some of the existing wells in the area will experience a drawdown of between 1-foot and 1.5-feet,” and that impacts to groundwater may include “well pumping causing drawdown” and “restrictions to existing well access or use.”

3-A

EPA is also concerned about the potential impacts to surface water associated with the Project, including “increased runoff flows, increased sediment transport, increased discharge and transport of contaminants, or possible affects to drainage paths or altered flow.” The EIS states that the stormwater drainage system would be “designed to allow the storm flow to follow its preexisting drainage paths,” yet later in the document, states that “increased runoff and sediment transport are expected to have a potential cumulative effect.”

Recommendation:

EPA recommends that BLM provide additional information in the FEIS explaining how the Project will affect water supplies for existing wells during its years in operation, as well as measures that could be taken to minimize or mitigate the impacts to these wells.

3-B

Additionally, we ask that BLM include a description of the long-term viability of the Project’s groundwater source, taking into account reasonably foreseeable projects planned for the area, as well as other factors, such as climate change, that may impact the Project and surrounding wells.

We ask that BLM include in the FEIS a discussion of the feasibility of recycling the water that would be sent to the evaporation pond and re-injecting or reusing this water.

EPA also recommends that BLM incorporate mitigation measures into the proposed Project sufficient to avoid potential cumulative effects from increased runoff and sediment transport. The Stormwater Pollution Prevention Plan (SWPPP) being developed to avoid these effects should be included in the FEIS.

3-C

Wildlife Resources

EPA commends the work undertaken by the BLM to assess the risks to special status species from the Project. For the species highlighted in the DEIS, including Nevada oryctes, pale kangaroo mice, bats, golden eagles, and migratory birds, some mitigation measures have been prepared. These measures, such as covering the evaporation ponds with a porous screen, and, in the case of migratory birds, avoiding land clearing activities during the avian breeding season, should serve as crucial safeguards. But comprehensive mitigation plans for these species are characterized in the DEIS as “being developed” or “would be developed,” and are not included in the document, making it difficult for EPA to assess whether the mitigation measures planned for the Project will be sufficient to reduce potentially significant impacts.

3-D

Recommendation:

EPA recommends that BLM include comprehensive mitigation plans in the FEIS for the special status species located in the Project area.

Climate Change

EPA commends the BLM for devoting a substantive section of the EIS to greenhouse gases (GHG), including detailed estimates of emissions from construction and operation of the Project. The EIS, however, does not include a discussion of the potential impacts of climate change on the Project. Considering the Project is planned to be in operation for 30, and possibly as many as 50 years, the EIS should include a description of how climate change may affect the Project, particularly groundwater resources.

3-E

Recommendation:

EPA recommends that BLM provide information detailing what impacts climate change may have on the Project, particularly sensitive species, its sources of groundwater, and reclamation and restoration efforts after construction and decommissioning.

Cumulative Impacts

Another major concern identified by EPA in our NOI letter for this Project was the cumulative impact of multiple large-scale solar projects in the desert southwest, particularly potential impacts to water supplies, endangered species, and habitat. While BLM identified proposed projects in the cumulative effects study area (CESA), including a geothermal energy facility, two solar photovoltaic energy projects, a transmission line, and a mine, no description was provided of what the cumulative impacts may be from these and other reasonably foreseeable projects.

3-F

Recommendation:

EPA recommends that BLM provide additional information regarding the cumulative impacts associated with this and other large-scale renewable energy projects on various sensitive desert resources, including water supplies, special status species, and habitat.

3-F
continued

JIM GIBBONS
Governor

STATE OF NEVADA

ANDREW K. CLINGER
Director



DEPARTMENT OF ADMINISTRATION

**209 E. Musser Street, Room 200
Carson City, Nevada 89701-4298
(775) 684-0222
Fax (775) 684-0260
<http://www.budget.state.nv.us/>**

October 14, 2010

Timothy Coward
US Department of the Interior
Bureau of Land Management
Tonopah Field Office
1553 South Main Street
P.O. Box 911
Tonopah, NV 89049-0911

Re: SAI NV # **E2011-042**

Reference: **DOI-BLM-NVB020-2009-0104-EIS**

Project: **Crescent Dunes solar energy project, Nye County**

Dear Timothy Coward:

Enclosed are comments from the agencies listed below regarding the above referenced document. Please address these comments or concerns in your final decision.

Department of Wildlife, Las Vegas

Division of State Lands

Division of Water Resources

State Historic Preservation Office

This constitutes the State Clearinghouse review of this proposal as per Executive Order 12372. If you have questions, please contact me at (775) 684-0213.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Tietje".

R. Tietje
Nevada State Clearinghouse

NEVADA STATE CLEARINGHOUSE

Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0209 Fax (775) 684-0260

DATE: September 2, 2010

Division of Water Resources

Nevada SAI # E2011-042

Project: Crescent Dunes Solar Energy Project, Nye County

No comment on this project Proposal supported as written

Comment 4



AGENCY COMMENTS:

The proposed project resides in hydrographic basin 137A, Big Smokey Valley.

There are approximately eight to ten currently held water rights on or near the described lands in this proposed project and include wells, lakes and vested rights.

Please be advised that wells and/or points of diverting water on these lands, whether new or existing, shall require prior approval from the Nevada Division of Water Resources. All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS), and not otherwise. Water wells must be permitted, Monitor wells require a Waiver from the State Engineer's Office, all boreholes must be plugged within sixty (60) days after being drilled as required by NAC 534.4371.

Any water or monitor wells, or boreholes that may be located on either acquired or transferred lands are the ultimate responsibility of the owner of the property at the time of the transfer and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code. If artesian water is encountered in any well or borehole it shall be controlled as required in NRS § 534.060(3).

Any water used on the described project for construction, dust control, or maintenance should be provided by an established utility or under permit or waiver issued by the State Engineer's Office. If artesian water is located in any well or borehole it shall be controlled as required in NRS 534.060(3).

Sincerely,

Steve Shell, Staff Engineer, Nevada Division of Water Resources

Signature: //sls// Steve Shell

Date: September 2, 2010

Nevada State Clearinghouse

From: Skip Canfield
Sent: Wednesday, September 01, 2010 3:41 PM
To: Nevada State Clearinghouse
Cc: 'Thomas_Seley@blm.gov'; Skip Canfield
Subject: RE: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management
Attachments: Signed Dark Sky letter.pdf
Importance: High

To: Tom Seley – Tonopah BLM
cc: Reese Tietje – Clearinghouse

Comment 5



Hi Tom:

I've reviewed the DEIS for Crescent Dunes Solar and I cut and pasted the text below. I highlighted one section too.

- COMMENT: I think you, as the BLM representative for the area, have a lot of leeway and authority to require these guys to be more proactive. It is no different than a city requiring landscaping in a shopping center parking lot, the developer knows it is a cost of doing business, but he sure as heck won't bother putting one bush in if the city doesn't stand up to them.

Their wording, "**would be shielded from public view to the extent possible**" simply doesn't cut it in my mind, and I am not alone, especially in Tonopah, the Dark Sky Capital of the world.

BLM should place a condition on these guys that corresponds to the attached RAC letter. These guys should be required to place shields on ALL of the lights except FAA safety lights. (Note: none of the bulleted items require FAA lights except for the tower, ALL of the other lights should have shields).

If it is required up front, the lighting specs can easily accommodate the shields.

I hope you can do this as it is an easy fix if done up front.

- BLM (i.e. YOU) have the chance with this project to set the standard for future projects all over Nevada and the West, it can be a good precedent!
- These developers will jump through any hoop that is rational and justified, and if required up front as a condition of approval. After the fact, we the people are out of luck.

-Skip

Here is the cut and paste:

2.5.3.2.7 Lighting Systems

The facility's lighting system would provide operation and maintenance personnel with illumination for both normal and emergency conditions. Lighting would be designed to minimize light pollution by using sensor lights and directional lighting in cases where this would not compromise safety or security. Although the proposed project site is in a remote area, lighting on-site would be limited to areas required for safety and **would be shielded from public view to the extent possible**. Outdoor lighting would be photocell controlled through contacts that control the outdoor lighting.

Lighting will not be provided for the solar field, but is expected to be provided in the following areas:

- building interior equipment, office, control, maintenance, and warehouse
- tower
- building exterior entrances
- outdoor equipment within the power block and tank area
- power transformers
- power block roadway
- parking areas within the power block area
- tank area
- entrance gate
- water treatment area
- ACC

5 continued

From: Nevada State Clearinghouse

Sent: Wednesday, September 01, 2010 1:01 PM

To: Skip Canfield

Subject: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management



NEVADA STATE CLEARINGHOUSE

Department of Administration, Budget and Planning Division

209 East Musser Street, Room 200, Carson City, Nevada 89701-4298

(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 9/1/2010

Division of State Lands

Nevada SAI # E2011-042

Project: Crescent Dunes solar energy project, Nye County

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.

[E2011-042](#)

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local

areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Wednesday, October 13, 2010.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

[Clearinghouse project archive](#)

February 5, 2009

Ron Wenker, State Director
Bureau of Land Management
1340 Financial Blvd
Reno, NV 89502

RE: Mojave-Southern Great Basin RAC Dark Sky Lighting Comments

Dear Ron:

At previous Mojave-Southern Great Basin Resource Advisory Council (RAC) meetings, we have discussed the fact that our dark sky attributes are a finite resource and subject to increasing deterioration as inappropriately-lighted development covers the landscape. This is even more evident in remote stretches of Nevada where dark skies prevail yet are seriously impacted by even one new lighting source. There is a concern about the cumulative visual impacts to public lands users' experiences.

Multiple use development on our public lands is the accepted rule. However, the effects of these uses are broad-ranging. Resources that are very important to some user groups are typically affected by the development of other resources. Some effects can be mitigated in a relatively simple manner if measures are taken proactively and consistently. One very prominent example is lighting. Proper lighting can play a large role in the compatibility of the built and natural environment.

Impacts of improper lighting can be mitigated inexpensively and dark sky measures are simple to implement and very mainstream. In fact, lighting that is installed using dark sky fixtures (light is only aimed at the subject property) is more efficient, safer, and results in reduced electricity costs. The end product is a less obtrusive impact to other users of adjacent public lands.

A common misnomer is that facility lighting needs to stream well beyond the property and facility to be effective. The opposite is actually the case. Many southwestern cities have enacted strict dark sky ordinances to protect the night sky, including prison facilities. Lighting seen from a distance is actually wasted light that has spilled beyond the intended location of the site. Outdoor lighting that is properly directed and shielded, of adequate lumens and lighting types, and strategically placed is more cost effective and functional to monitor a site. There is a national organization, www.darksky.org, whose fundamental purpose is to educate the public and governments on ways to preserve our valuable night skies for us and future generations.



The Mojave Southern Great Basin RAC believes that a comprehensive look at visual impacts should be considered when BLM reviews any development plan on public lands in Nevada, and nationally. The RAC encourages BLM to develop a consistent policy and “condition of approval” that can be required of applicants and included in NEPA decisions. It is hoped that all Federal agencies would include dark sky lighting as a condition of approval for permanent and temporary applications.

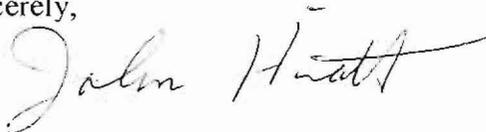
The following language is suggested that should be provided up front to applicants who propose development on BLM public lands that includes lighting:

Utilize appropriate lighting:

- Utilize consistent lighting mitigation measures that follow “Dark Sky” lighting practices.
- Effective lighting should have screens that do not allow the bulb to shine up or out. All proposed lighting shall be located to avoid light pollution onto any adjacent lands as viewed from a distance. All lighting fixtures shall be hooded and shielded, face downward, located within soffits and directed on to the pertinent site only, and away from adjacent parcels or areas.
- A lighting plan shall be submitted with the site plan review and/or architectural drawings indicating the types of lighting and fixtures, the locations of fixtures, lumens of lighting, and the areas illuminated by the lighting plan.
- Any required FAA lighting is exempt from this condition.

Thank you for the opportunity to provide comments to you on this important issue.

Sincerely,

A handwritten signature in black ink that reads "John Hiatt". The signature is written in a cursive, flowing style.

John Hiatt, Chair
Mojave-Southern Great Basin Resource Advisory Council

cc: Northeastern Great Basin RAC
Sierra Front-Northwestern Great Basin RAC
Skip Canfield

FW: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management

Mueller, Timothy [tmueller@dot.state.nv.us]

Sent: Tuesday, October 12, 2010 11:00 AM

To: Nevada State Clearinghouse

Cc: Compton, Terri [tcompton@dot.state.nv.us]

Good Morning Reese,

At this time we do not have any comment on this project.

Sincerely,

Tim

Comment 6

Tim Mueller
Special Projects Manager
Nevada DOT (NDOT)
775-888-7351 or tmueller@dot.state.nv.us

From: Compton, Terri

Sent: Thursday, September 30, 2010 2:28 PM

To: Mueller, Timothy

Subject: FW: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management

This is the only open clearinghouse project I have that has a response due during my absence that you don't already have. tc

From: Nevada State Clearinghouse [mailto:Clearinghouse@budget.state.nv.us]

Sent: Wednesday, September 01, 2010 1:01 PM

To: Compton, Terri

Subject: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management

NEVADA STATE CLEARINGHOUSE

Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 9/1/2010

Department of Transportation

Nevada SAI # E2011-042

Project: Crescent Dunes solar energy project, Nye County

Follow the link below to download an Adobe PDF document concerning the above-mentioned project

for your review and comment.

[E2011-042](#)

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Wednesday, October 13, 2010.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

[Clearinghouse project archive](#)

Questions? Reese Tietje, (775) 684-0213 or clearinghouse@state.nv.us

No comment on this project Proposal supported as written

AGENCY COMMENTS:

Signature:

Date:

Distribution: Sandy Quilici, Department of Conservation & Natural Resources
Gary Derks, Division of Emergency Management
David Mouat, Desert Research Institute
Kevin Kirkeby, Senator Ensign's Office
Nancy Boland, Esmeralda County
Chad Hastings, Fire Marshal
Karen Beckley, State Health Division
Kirk Bausman, Hawthorne Army Depot
Sherry Rupert, Indian Commission
Skip Canfield, AICP, Division of State Lands
Clint Wertz, Lincoln County
Zip Upham, NAS Fallon
Ed Rybold, NAS Fallon
Alan Coyner, Commission on Minerals
D. Driesner, Commission on Minerals
Lowell Price, Commission on Minerals
Sandi Gotta, Division of Conservation Districts

John Walker, Nevada Division of Environmental Protection
Terri Compton, Department of Transportation
Steve Siegel, Department of Wildlife, Director's Office
D. Bradford Hardenbrook, Department of Wildlife, Las Vegas
Craig Stevenson, Department of Wildlife, Las Vegas
Robert Martinez, Division of Water Resources
Tod Oppenborn, Nellis Air Force Base
Ms. Deborah MacNeill, Nellis Air Force Base
William Cadwallader, Nellis Air Force Base
99ABW, Nellis Air Force Base
James D. Morefield, Natural Heritage Program
Linda Cohn, National Nuclear Security Administration
Joseph C. Strolin, Agency for Nuclear Projects
Steve Weaver, Division of State Parks
Mark Harris, PE, Public Utilities Commission
Hatice Gecol, Renewable Energy and Energy Efficiency Authority
Pete Konesky, State Energy Office
Tara Vogel, State Energy Office
Jim Groth, State Energy Office
Rebecca Palmer, State Historic Preservation Office
Terry Rubald, Nevada Department of Taxation, Local Government, Centrally Assessed Property
John Muntean, UNR Bureau of Mines
Jon Price, UNR Bureau of Mines
Ron Hess, UNR Bureau of Mines
David David, UNR Bureau of Mines
Russ Land, Nevada Division of Environmental Protection
Clearinghouse, zzClearinghouse
Maud Naroll, zzClearinghouse-Maud

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RE: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management

Brad Hardenbrook

Sent: Friday, October 08, 2010 1:14 PM

To: Nevada State Clearinghouse

Cc: Tracy Kipke; Elmer Bull; Steven Siegel

From: Nevada State Clearinghouse

Sent: Wednesday, September 01, 2010 1:01 PM

To: Brad Hardenbrook

Subject: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management

NEVADA STATE CLEARINGHOUSE

Department of Administration, Budget and Planning Division

209 East Musser Street, Room 200, Carson City, Nevada 89701-4298

(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 9/1/2010

Department of Wildlife, Las Vegas

Nevada SAI # E2011-042

Project: Crescent Dunes solar energy project, Nye County

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.

[E2011-042](#)

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local

areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Wednesday, October 13, 2010.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

[Clearinghouse project archive](#)

Questions? Reese Tietje, (775) 684-0213 or clearinghouse@state.nv.us

___No comment on this project ___Proposal supported as written



AGENCY COMMENTS:

The Nevada Department of Wildlife welcomes commenting on review of the Draft EIS for the Crescent Dunes Solar Energy Project. Foremost, we concur with BLM's selection of its Preferred Alternative, i.e. Alternative II. This confers the least environmental impacts of the alternatives considered and would result in economies of project construction and operation. Early on in the planning process, NDOW was invited to participate in discussions and is serving as a cooperating agency regarding wildlife resource considerations. The majority of NDOW's inputs have been incorporated into the present Draft EIS which reflects important measures for avoiding and minimizing impacts to wildlife and the resources on which they depend. We look forward to continuing the positive working relationship with the BLM and Tonopah Solar LLC and its agents for effectively and reasonably resolving aspects of outstanding impacts to avian and terrestrial wildlife resources.

Signature: **D. Bradford Hardenbrook**
Supervisory Habitat Biologist
NDOW – Southern Region

Date: **8 October 2010**

Distribution: Sandy Quilici, Department of Conservation & Natural Resources
 Gary Derks, Division of Emergency Management
 David Mouat, Desert Research Institute
 Kevin Kirkeby, Senator Ensign's Office
 Nancy Boland, Esmeralda County
 Chad Hastings, Fire Marshal
 Karen Beckley, State Health Division
 Kirk Bausman, Hawthorne Army Depot
 Sherry Rupert, Indian Commission
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Jon Price, UNR Bureau of Mines
Ron Hess, UNR Bureau of Mines
David David, UNR Bureau of Mines
Russ Land, Nevada Division of Environmental Protection
Clearinghouse, zzClearinghouse
Maud Naroll, zzClearinghouse-Maud

10/16

Rebecca Palmer

From: Nevada State Clearinghouse
Sent: Wednesday, September 01, 2010 1:01 PM
To: Rebecca Palmer
Subject: E2011-042 Crescent Dunes solar energy project, Nye County - Bureau of Land Management



NEVADA STATE CLEARINGHOUSE
Department of Administration, Budget and Planning Division
209 East Musser Street, Room 200, Carson City, Nevada 89701-4298
(775) 684-0213 Fax (775) 684-0260

TRANSMISSION DATE: 9/1/2010

State Historic Preservation Office
Nevada SAI # E2011-042
Project: Crescent Dunes solar energy project, Nye County

undertaking
#2010-632

Follow the link below to download an Adobe PDF document concerning the above-mentioned project for your review and comment.

[E2011-042](#)

Please evaluate it with respect to its effect on your plans and programs; the importance of its contribution to state and/or local areawide goals and objectives; and its accord with any applicable laws, orders or regulations with which you are familiar.

Please submit your comments no later than Wednesday, October 13, 2010.

Use the space below for short comments. If significant comments are provided, please use agency letterhead and include the Nevada SAI number and comment due date for our reference.

[Clearinghouse project archive](#)

Comment 8

Questions? Reese Tietje, (775) 684-0213 or clearinghouse@state.nv.us

Rebecca Palmer
10/12/10

No comment on this project Proposal supported as written

AGENCY COMMENTS:

The Nevada State Historic Preservation Office (SHPO) reviewed the subject document. The SHPO recommends that the word "salvage" found in the sections describing the effect of the undertaking on cultural resources should be replaced with the word "mitigate" or "mitigated" to be consistent with the existing regulations and its terminology. The SHPO reminds the Bureau of Land Management that a Memorandum of Agreement for the subject undertaking should be executed before a Record of Decision is signed for the project. If you have any questions concerning this correspondence, please feel free to contact me at (775) 684-3443 or by e-mail at Rebecca.Palmer@nevadaculture.org.

TSE Crescent Dunes Solar Energy Project DRAFT ENVIRONMENTAL IMPACT STATEMENT

Public Review Meeting COMMENT FORM

Date: Thursday, September 23, 2009
Time: 6pm-8pm
Location: Tonopah Convention Center

Thank you for your interest in the TSE Crescent Dunes Solar Energy Project EIS.

Comments will be welcomed during the public review meeting, or they may be submitted to the Bureau of Land Management, Tonopah Field Office, Attention: Renewable Energy Project Manager, TSE Crescent Dunes Solar Energy EIS, 1553 South Main Street, P.O. Box 911, Tonopah, NV 89049; faxed to 775-482-7810 (Attn: Renewable Energy Project Manager, TSE Crescent Dunes Solar Energy EIS); or emailed to crescent_dunes@blm.gov. The deadline for submitting comments is October 18, 2010.

Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

TONOPAH NEEDS THIS PROJECT
and I support it.

THIS PROJECT COULD BE THE
SPARK THAT IGNITES OTHER
PROJECTS IN THE AREA. SORT OF
PUT US ON THE MAP.

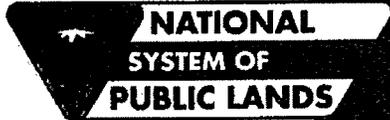
JOBS JOBS JOBS.

Name/Organization: [Signature]

Phone: 775-482-5729

Address: 3001 TOWNSEN MT LN

E-mail: LJ Ramirez at Cotline.NET



From: Wendy_Seley@blm.gov
To: Christensen, Henrik
Subject: Fw: public comment on federal register Fw: STOP TAKING NATURAL PUBLIC LAND FROM NATURAL STATE TO SOLAR - USE LAND FILLS, HAZARD SITES, ETC
Date: Saturday, September 11, 2010 4:10:01 PM

FYI -

Wendy Seley
 Realty Specialist, Renewable Energy
 Battle Mountain District
 Renewable Energy Coordination Office (RECO)
 1553 S. Main St.
 P.O. Box 911
 Tonopah, NV 89049
 775.482-7805
 775.482-7810 (fax)

----- Forwarded by Wendy Seley/TFS/NV/BLM/DOI on 09/11/2010 04:09 PM -----

Timothy
 Coward/TFS/NV/BLM
 /DOI
 09/08/2010 09:33 AM
 To
 Wendy Seley/TFS/NV/BLM/DOI@BLM,
 Dave Davis/BMFO/NV/BLM/DOI@BLM
 cc
 Thomas Seley/TFS/NV/BLM/DOI@BLM
 Subject
 Fw: public comment on federal
 register Fw: STOP TAKING NATURAL
 PUBLIC LAND FROM NATURAL STATE TO
 SOLAR - USE LAND FILLS, HAZARD
 SITES, ETC

Tim Coward
 PM RECO
 (o) 775-482-7830
 timothy_coward@blm.gov

----- Forwarded by Timothy Coward/TFS/NV/BLM/DOI on 09/08/2010 09:33 AM -----

jean public
 <jeanpublic@yahoo.com>
 09/05/2010 12:59 PM
 To
 crescent.dunes@blm.gov,
 timothy_coward@blm.gov,
 info@emagazine.com,

information@sierraclub.org,
foe@foe.org, info@earthjustice.org
cc
center@biologicaldiversity.org,
broads@greatoldbroads.org
Subject
public comment on federal register
Fw: STOP TAKING NATURAL PUBLIC LAND
FROM NATURAL STATE TO SOLAR - USE
LAND FILLS, HAZARD SITES, ETC

7680 acres of public land used by a profiteer - not a good idea. we need to save somenatural land. let the solar facility go on a landfill or some other used site. let this profiteer buyE PUT private land instead of trying to weasel so he becomes a public charge on the taxpayers back. let this be a private endeavor. the only land we should let go at lease rates is old landfills. not virgin land that needs to be saved for natural. they are NOT MAKING NEW LAND IN AMERICA. WE CANT LET PROFITEERS COME IN AND RUIN. WE HAVE TO RE USE. IBET IF THEY HAVE TO BUY PRIVATE LAND, THE ACRES REQUIRED WILL GO DOWN BY TWO THOUSAND PERCENT. THIS PROFITEER IS LOOKINGI TO TAKE ADVANTAGE OF TAXPAYERS.THIS TAKING AND SITING IS NOT NECESSARY HERE. DONT TAKE OPEN NATURAL SPACE. SOLAR CAN BE PUT ON ROOFS OF HOMES. YO UDONT NEED TO CREATE A HEAT ISLAND. YOU DONT NEED TO TAKE ALL THE WATER-THAT IS ALSO A DETRIMENT. THIS IS NOT THE BEST USE OF SOLAR POWER. THIS IS OPEN SPACE AND NEEDS PRESERVATION FOR ITSELF. THIS IS A TRULY PERVERTED OPPORTUNISTIC APPLICATION. THIS APPLICATION MEANS THE ANNIHILATION OF THE FOLLOWING INT HIS AREA: BIO RESOURCES, WATER RESOURCES, GEOLOGICAL RESOURCES, OPEN SPACE RESOURES, PALEO RESOURCES, VISUAL RESOURCES, WILDERNESS RESOURCES PLUS OTHER IMPACTS. DENY THISAPPLICATION. JEAN PUBLIC 1 ELM ST FLORHAM PARK NJ07932

10

[Federal Register: September 3, 2010 (Volume 75, Number 171)]
[Notices]
[Page 54177]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr03se10-92]

y pr
[[Page 54177]]

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[LLNVB00000 L51010000.ER0000 LVRWF0900380 241A; 10-08807;
MO 4500014355; TAS: 14X5017]

Notice of Availability of Draft Environmental Impact Statement
for the Tonopah Solar Energy Crescent Dunes Solar Energy Project, Nye
County, NV

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of availability.

SUMMARY: In accordance with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Land Management (BLM) has prepared a Draft Environmental Impact Statement (EIS) for the Crescent Dunes Solar Energy Project, Nye County, Nevada, and by this Notice is announcing the opening of the comment period.

DATES: To ensure comments will be considered, the BLM must receive written comments on the Crescent Dunes Solar Energy Project Draft EIS within 45 days following the date the Environmental Protection Agency publishes its Notice of Availability in the Federal Register. The BLM will announce future meetings or hearings and any other public involvement activities at least 15 days in advance through public notices, media news releases, and/or mailings.

ADDRESSES: You may submit comments on the Crescent Dunes Solar Energy Project Draft EIS by any of the following methods:

E-mail: crescent_dunes@blm.gov.

Fax: 775-482-7810.

Mail: Timothy Coward, Renewable Energy Project Manager,
BLM Tonopah Field Office, P.O. Box 911, Tonopah, Nevada 89049.

Copies of the Draft EIS for the Crescent Dunes Solar Energy Project are available at the BLM Tonopah Field Office and at the Battle Mountain District Office, 50 Bastian Road, Battle Mountain, Nevada, or at the following Web site: http://www.blm.gov/nv/st/en/fo/battle_mountain_field.html.

FOR FURTHER INFORMATION CONTACT: Timothy Coward, (775) 482-7800, BLM Tonopah Field Office, 1553 South Main Street, P.O. Box 911, Tonopah, Nevada 89049; Timothy_Coward@blm.gov.

SUPPLEMENTARY INFORMATION: Tonopah Solar Energy, LLC applied to the BLM for a 7,680-acre right-of-way (ROW) on public lands to construct a concentrated solar thermal power plant facility approximately 13 miles northwest of Tonopah, Nye County, Nevada. The proposed project is not expected to use the total acres applied for in the ROW application. The project is located within the southern portion of the Big Smoky Valley, north of U.S. Highway 95/6 along the Gabbs Pole Line Road (State Highway 89). The facility is expected to operate for approximately 30 years. The proposed solar power project would use concentrated solar power technology, using heliostats or mirrors to focus sunlight on a receiver erected in the center of the solar field (the power tower or central receiver). A heat transfer fluid is heated as it passes through the receiver and is then circulated through a series of heat exchangers to generate high-pressure steam. The steam is used to power a conventional Rankine cycle steam turbine, which produces electricity. The exhaust steam from the turbine is condensed and returned via

feedwater pumps to the heat exchangers where steam is regenerated. Hybrid cooling processes would be used for this project to minimize water use while continuing to maintain efficient power generation. The plant design would generate a nominal capacity of 100 megawatts.

The project's proposed facility design includes the heliostat fields, a 653-foot central receiver tower, a power block, buildings, a parking area, a laydown area, evaporating ponds, and an access road. A single overhead 230-kilovolt transmission line would connect the plant to the nearby Anaconda Moly substation.

The Draft EIS describes and analyzes the proposed project's site-specific impacts on air quality, biological resources, cultural resources, water resources, geological resources, hazardous materials handling, land use, noise, paleontological resources, public health, socioeconomics, soils, traffic and transportation, visual resources, wilderness characteristics, waste management, worker safety, and fire protection. The Draft EIS also describes facility design engineering, efficiency, reliability, transmission system engineering, and transmission line safety.

Three action alternatives were analyzed in addition to the No Action alternative: the Proposed Action Alternative, Alternative 1, and Alternative 2. Alternative 2 is the BLM preferred alternative.

Scoping of the project occurred from November 24, 2009 through December 24, 2009. A total of 24 comments were received. Comments on cumulative impacts identified the affects to air quality to include criteria pollutant and ``Dark Sky" attributes on the effects of the viewshed, and the availability of water for current and future use. Other comments were that the proposed project is located in an area of pediment adjacent to 2 highly mineralized mountain ranges which have identified molybdenum and lithium deposits.

Maps of the proposed project area and the alternatives being analyzed in the Draft EIS are available at the BLM Tonopah Field Office, the Battle Mountain District Office, and at: http://www.blm.gov/nv/st/en/fo/battle_mountain_field.html.

Please note that public comments and information submitted, including names, street addresses, and e-mail addresses of persons who submit comments, will be available for public review and disclosure at the above address during regular business hours (8 a.m. to 4 p.m.), Monday through Friday, except holidays. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment--including your personal identifying information--may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Authority: 40 CFR 1506.6 and 1506.10.

Thomas J. Seley,
Manager, Tonopah Field Office.
[FR Doc. 2010-21958 Filed 9-2-10; 8:45 am]
BILLING CODE 4310-HC-P

From: [Brendan Hughes](#)
To: crescent_dunes@blm.gov
Subject: Comments on Crescent Dunes Solar
Date: Sunday, October 17, 2010 1:50:05 PM

To whom it may concern:

I would like to express my opposition to the Crescent Dunes Solar project. This project will have unnecessary impacts on water, wildlife, habitat, and recreation. FLPMA charged BLM with preventing undue degradation to the public lands when alternatives exist. It is obvious that alternatives in the form of energy conservation, efficiency, and rooftop solar exist and should be implemented before we sacrifice large swaths of our public lands. It may not be BLM's duty to identify specific project alternatives, but it is BLM's duty to protect the public lands. If BLM approves this project it will have failed in one of the main objectives of its organic act, FLPMA. The proof that this project should not go forward is in the data contained within the DEIS, as it has been with every other project located on public land. This project will harm sensitive or T&E species and destroy habitat. It is up to BLM to be a reasoned, scientific arbiter and reject these destructive proposals.

Thank you for your consideration.

Brendan Hughes
61093 Prescott Trail
Joshua Tree, CA 92252

October 18th, 2010

Timothy Coward

Renewable Energy Project Manager

BLM Tonopah Field Office

P.O. Box 911

Tonopah, NV 89040

Dear Mr. Coward:

We would like to submit these comments on the Draft Environmental Impact Statement (DEIS) for the proposed Crescent Dunes Solar Energy Project.

Basin and Range Watch is a group of volunteers who live in the deserts of Nevada and California, working to stop the destruction of our desert homeland. Industrial renewable energy companies are seeking to develop millions of acres of unspoiled habitat in our region. Our goal is to identify the problems of energy sprawl and find solutions that will preserve our natural ecosystems and open spaces.

Project Right of Way: The preferred project site contains up to 1,600 acres of undeveloped land. The Right of Way is substantially larger. Will it expand?

12-A

Purpose and Need: All alternatives are now defined by a Need reflecting the recent Secretarial Order 3283: Enhancing Renewable Energy Development on Public Lands.

The goals of Section 4 in Secretarial Order 3283 clearly state a need for environmental responsibility: *"the permitting of **environmentally responsible** wind, solar, biomass, and geothermal operations and electrical transmission facilities on the public lands;*

12-B

Alternatives: Following the guidelines of the National Environmental Policy Act, the final EIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall:

12-C

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

12-C
continued

Distributed Generation Alternative:

Included in the guidelines of the National Environmental Policy Act are requirements to *"Include reasonable alternatives not within the jurisdiction of the lead agency."*

Distributed generation in the built environment should be given much more full analysis, as it is a completely viable alternative. Crescent Dunes will need just as much dispatchable baseload behind it, and also does not have storage. But environmental costs are negligible with distributed generation, compared with the Silver State project. Distributed generation cannot be "done overnight," but neither can large transmission lines across hundreds of miles from remote central station plants to load centers. Most importantly, distributed generation will not reduce the natural carbon-storing ability of healthy desert ecosystems, will not disturb biological soil crusts, and will not degrade and fragment habitats of protected, sensitive, and rare species.

Alternatives should be looked at that are in load centers, not closest to the project site. There is a need to consider the "macro" picture, the entire state, to look at maximum efficiency.

12-D

A Master comprehensive plan should exist before large expensive inefficient solar plants are sited and built out in the wildlands. This plan should carefully analyze the recreational and biodiversity resources of the Nevada desert. A list of assumptions should be included detailing the plan for integrating various fuels mixes and technologies into each utility's plan, an overall state plan, and a national plan. Loads should be carefully analyzed to determine whether additional capacity is needed for peaking, intermediate, or baseload purposes. Unit size, which impacts capital and operating costs and unit capacity factors, has a direct bearing on the relative economics of one technology over another. A plan might recommend that smaller units built in cities and spaced in time offer a less risky solution than one large unit built immediately.

Right now there is no utility plan, no state plan, and no national plan. Large-scale central station solar plants have been sited very far from load centers out in remote deserts, with the only criterion being nearness to existing transmission lines and natural gas lines. Very little thought has been given to the richness of biological resources, the

cumulative impacts on visual scenery to tourists, the proximity to ratepayers, or the level of disturbance of the site.

The California Energy Commission says there will be a need to build many new efficient natural gas peaker or baseload plants to back up the renewables planned, and this will undoubtedly be the case in Nevada as well. Instead, the renewables should be distributed generation in load centers, which will provide much more efficiency, rather than inefficient remote central station plants that reduce biodiversity and require expensive transmission lines. This reduces the risk, as distributed generation is a known technology and has been proven in countries like Germany where incentive programs have been tested. Incentive programs can be designed in an intelligent manner to vastly increase distributed generation. Incentives for large remote projects like Crescent Dunes are unproven to lower risk and may actually raise debt levels with runaway costs associated with poor siting and higher-than-anticipated operating and maintenance costs.

12-D
continued

Many renewable project developers have failed to consider reasonable or viable alternatives that could serve as solutions that everybody could live with. In the case of this particular project, conflicts with endangered species, cultural resources, storm water drainage erosion, views from National Parks and wilderness areas could all be avoided with a distributed generation alternative. Thin film photovoltaic can be sited on developed areas using rooftops, parking lots and other urban vacant lots.

Off Site Alternative:

The FEIS should provide two additional alternatives away from the preferred alternative.

12-E

Basin and Range Watch Preferred Alternative:

Our preferred alternative would be to deny the Right of Way to the applicant and designate the region unsuitable for renewable energy development.

12-F

Greenhouse gases:

The DEIS has indicated a need for transmission line upgrades and new transmission facilities. The green house gas called SF6 is used primarily in electricity transmission - and is emitted in especially large amounts in construction of new lines – and is 24,000 times as potent as CO2 in its global warming impacts. The Environmental Protection Agency has declared “that the electric power industry uses roughly 80% of all SF6 produced worldwide“. Ideally, none of this gas would be emitted into the atmosphere. In reality significant leaks occur from aging equipment, and gas losses occur during equipment maintenance and servicing. With a global warming potential 23,900 times greater than CO2 and an atmospheric life of 3,200, one pound of SF6 has the same

12-G

global warming impact of 11 tons of CO₂. In 2002, U.S. SF₆ emissions from the electric power industry were estimated to be 14.9 Tg CO₂ Eq. ...

<http://www.epa.gov/electricpower-sf6/basic.html>

Please provide a more detailed analysis of the amount of SF₆ gases that would be released by this project.

12-G
continued

Carbon sink:

Scientific studies have revealed that desert ecosystems and minerals have the ability to store CO₂ gases. Have Desert Researchers Discovered a Hidden Loop in the Carbon Cycle? Richard Stone: Science 13 June 2008: Vol. 320. no. 5882, pp. 1409 - 1410 DOI: 10.1126/science.320.5882.1409

How much CO₂ storage capability would be replaced by development? If the goal is indeed to reduce greenhouse gases, is it wise to remove this much carbon storing living crust? Please provide a detailed analysis on the amount of GHG that would otherwise be offset by an intact arid ecosystem.

12-H

Biological Resources:

Development of this project will result in the loss of 1,600 acres of habitat for the following species:

Pronghorn

Mule Deer

Elk

12-I

Bighorn Sheep

Bighorn biologists Dr. John Wehausen and Dr. Vern Bleich have concluded that radio telemetry studies of bighorn sheep in various southwestern deserts, including the Mojave Desert of California, have found considerable movement of these sheep between mountain ranges.... Consequently, intermountain areas of the desert floor that bighorn traverse between mountain ranges can be as important to the long-term viability of populations as are the mountain ranges themselves.

Alluvial fans near steep rocky terrain can provide crucial foraging habitat for big horn sheep (Wehausen 2009)

For example, ewes at the end of gestation that need nutrients may come down from steep, rocky terrain looking for higher quality forage. They might use areas like the project site for only three weeks, but those three weeks are critical. The Ivanpah Valley

12-J

might also provide important movement corridors for deer and bighorn sheep. The California Department of Fish and Game has noted that wildlife corridors are present through and adjacent to the Silver State Site and Ivanpah Solar Electric Generating System Site, and have expressed concern that the ISEGS project could adversely affect bighorn sheep. Due to ISEGS close proximity to the Silver State site.

“Radio telemetry studies of bighorn sheep in various southwestern deserts, including the Mojave Desert of California, have found considerable movement of these sheep between mountain ranges (Bleich et al., 1990b). This is especially true of males, but also of ewes (Bleich et al., 1996). Within individual mountain ranges, populations often are small (Table 1). Levels of inbreeding could be high in such populations, but intermountain movements provide a genetic connection with a larger metapopulation, and this will counteract potential inbreeding problems (Schwartz et al., 1986; Bleich et al., 1990b). Intermountain movements also are the source of colonization of vacant habitat, which is fundamental to metapopulation dynamics and persistence. Colonization by ewes is the slow link in this process, but has recently been documented in two Mojave Desert ranges in California (Bleich et al., 1996; Torres et al., 1996). Consequently, intermountain areas of the desert floor that bighorn traverse between mountain ranges are as important to the long term viability of populations as are the mountain ranges themselves (Schwartz et al., 1986; Bleich et al., 1990b, 1996).”

What if any measures would be provided to mitigate the loss of this habitat? Would land be purchased?

Special Status Wildlife Species:

How much foraging habitat would be lost for bald and golden eagles? Would this result in any Take under the Bald and Golden eagle Protection Act?

Raptors potentially resident or migratory on the site that could be adversely impacted by towers:

- American kestrel
- Prairie falcon
- Peregrine falcon
- Northern harrier
- Swainson's hawk
- Ferruginous hawk
- Rough-legged hawk
- Osprey
- Bald eagle
- Golden eagle
- Sharp-shinned hawk
- Cooper's hawk

12-J
continued

12-J

Northern goshawk

12-K
continued

Migratory Birds, Insects and Polarized Light Pollution

The heliostat mirror towers will assume the appearance of water from a distance.

The Nature Conservancy has just released their Mojave Desert Ecoregional Assessment. In the assessment, they discuss the impacts of polarized light pollution on birds and insects:

“Light and noise pollution associated with electrical power plants can be problematic for wildlife. Polarized light pollution can attract aquatic insects and other species that mistake the panels for bodies of water, potentially leading to population decline or even local extinction of some organisms (Horvath et al. 2010). Nighttime lighting for security or other reasons may negatively impact a variety of Mojave Desert species, many of which have developed nocturnal behavior to escape the daytime heat of the desert. (*Mojave Desert Ecoregional Assessment September 2010, The Nature Conservancy of California 201 Mission Street, 4th Floor San Francisco, CA 94105*) p. 50”

12-L

Evaporation Ponds:

Saline evaporation ponds will attract birds, bats and insects and be toxic. How will mortality from pollutants be mitigated?

12-M

Pale Kangaroo Mice:

Approval of this project will result in the loss of habitat and impede connectivity for this species. How will this be mitigated? A comprehensive mitigation plan describing land acquisition should be provided.

12-N

Endemic Dune Beetle:

Direct loss of 1,600 acres will occur for *Aegelia crescentia* a diurnal, flightless dune beetle. How will this loss be mitigated?

12-O

Special Status Plant Species

Over 1,600 acres will be lost for rare plants such as Sand Cholla and Nevada oryctes.

There are no mitigation measures outlined for avoidance of rare plants or enhancement of habitat for these plants..

Mitigation measures for several California renewable energy projects with a similar sized destructive footprint outline plans to form a “halo” of construction avoidance around rare plant species that have been located on the site.

12-P

Conclusion:

Again, our preferred alternative would be to deny the Right of Way to the applicant and designate the region unsuitable for renewable energy development.

12-Q

Thank you,

Kevin Emmerich

Laura Cunningham

Basin and Range Watch

P.O. Box 70

Beatty, NV 89003

TSE Crescent Dunes Solar Energy Project

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Public Review Meeting COMMENT FORM

Date: Thursday, September 23, 2010

Time: 6pm-8pm

Location: Tonopah Convention Center

Thank you for your interest in the TSE Crescent Dunes Solar Energy Project EIS.

Comments will be welcomed during the public review meeting, or they may be submitted to the Bureau of Land Management, Tonopah Field Office, Attention: Renewable Energy Project Manager, TSE Crescent Dunes Solar Energy EIS, 1553 South Main Street, P.O. Box 911, Tonopah, NV 89049; faxed to 775-482-7810 (Attn: Renewable Energy Project Manager, TSE Crescent Dunes Solar Energy EIS); or emailed to crescent_dunes@blm.gov. The deadline for submitting comments is October 18, 2010.

Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

I am very supportive of the project - Nye County needs jobs & we need the taxes.

the location is ideal.
I have never heard of the Crescent Dunes Special Resource Management Area and I have lived here 18 yrs. ~~And~~

I do have one concern and that is the fact that our power bill will increase because the power generated ^{by the solar energy plants} is more expensive than what we receive now. So this cost will be passed on to us.

But as with all 'green' energy products, we have to weigh the pros & cons, and are we willing to pay for 'green'?

Name/Organization: Ann McGaw

Phone: 775 316 0180

Address: PO Box 3268, Tonopah, NV 89049

E-mail: aembrif@hotmail.com



I would like to be kept informed of any meetings or updates to the project-

Thank you.



TSE Crescent Dunes Solar Energy Project

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

I believe this is an excellent project that will benefit the area economically. The construction jobs alone and influx of workers over the next 3 years will be a boon to the local economy not to mention the 50 or so permanent jobs that will also contribute.

The use of apprentices during construction will aid in training a future workforce for our state. Hopefully the developer will use Nevada workers to build this project and include fair wages + benefits. I also believe this is a well engineered, quality project that will benefit the area for years to come.

Judging by the presentation I feel this will have little or no environmental impact.

Build it! Thank you

Name/Organization: Danny Costella, Ironworkers 118

Phone: (775) 331-8696

Address: 1110 Greg St, Sparks, NV 89431

E-mail: IW118@SBCGLOBAL.NET



TSE Crescent Dunes Solar Energy Project DRAFT ENVIRONMENTAL IMPACT STATEMENT

Public Review Meeting COMMENT FORM

Date: Thursday, September 23, 2010
Time: 6pm-8pm
Location: Tonopah Convention Center

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

THIS PROJECT WILL BE A VERY IMPORTANT TO THE LOCAL ECONOMY AS WELL AS TO THE JOB MARKET AS WELL AS THE FUTURE OF RENEWABLE ENERGIES, IT SHOULD BE VERY EXCITING TO PARTICIPATE IN THIS VENTURE, I CAN HARDLY WAIT TO GET STARTED.

Name/Organization: DUANE KRAMER I.B.E.W. LOCAL # 401 RENO NV.
Phone: (702) 722-3300 HOME (775) 434-5939 CELL
Address: 304 OCCIDENTAL DR. DAYTON, NV, 89403
E-mail: DL KRAMER @ CHARTER . NET



TSE Crescent Dunes Solar Energy Project

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

This project will be of economic benefit for Nye County. The construction work force will help ease the Nevada unemployment problem. The renewable energy benefits go without mention. I am most definitely in favor of this project

Name/Organization: Bob Primeau - IBEU, Local 401
 Phone: 775-750-4650
 Address: 2713 E. 4th St. Reno 89512
 E-mail: rprimeau52741@aol.com



TSE Crescent Dunes Solar Energy Project DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

I am in support of this project. I am
an avid outdoor enthusiast.

Name/Organization: David Ries
Phone: (775)-842-9496
Address: 1718 Woodhaven Ln Sparks, NV 89434
E-mail: djr@live.com



TSE Crescent Dunes Solar Energy Project DRAFT ENVIRONMENTAL IMPACT STATEMENT

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

I think that the proposed #2 alternative would be a good idea for this project. This is a needed addition to the community for green energy and jobs for the area.

Name/Organization: Paul Davies
Phone: 775-287-5176
Address: 3429 Ridgecrest Dr Reno, NV 89512
E-mail: PLDMAD@aol.com



TSE Crescent Dunes Solar Energy Project

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Please provide your comments on this EIS in the space below. Please feel free to use the back of this sheet for additional comments or add additional pages as needed.

I THINK THEY SHOULD MOVE TO PROJECT A COUPLE
MPLBS WEST TO ESMEDELLER COUNTY, THEY NEED THE TAX
REVENUE MORE THAN NYE COUNTY, THAT WAY BOTH
NYE AND ESMEDELLER COUNTY BENEFIT OVERALL THE
PROJECT WILL PROVIDE MORE MONEY THAN THE OCCASIONAL
MONEY SPENT BY PEOPLE COMING HERE TO STARGAZE
THE ONLY REAL PROBLEM IS THE TRUE COST OF PRODUCING THE POWER
WHICH IS APPROX. \$.13 PER KW COMPARED TO APPROX. \$.08
PER KW OF COAL, GAS, OIL, FIRED POWER PLANTS,
AS STATED THIS ACCUALLY INCREASES THE COST FOR POWER
SO AS A RATE PAYER AND TAX PAYER IT ~~INCREASES~~ DECREASES THE
AMOUNT OF MONEY THAT I CAN SPEND ON OTHER ITEMS

Name/Organization: DENNIS MCGAN
Phone: 775 316 2770
Address: PO BOX 3268 TONOPAH NV 89049
E-mail: DJMACIS@HOTMAIL.COM



October 18, 2010

Bureau of Land Management, Tonopah Field Office
Attn: Renewable Energy Project Manager
TSE Crescent Dunes Solar Energy EIS
1553 South Main Street, P.O.Box 911
Tonopah, NV 89049

crescent_dunes@blm.gov

RE: Crescent Dunes Solar Energy Project Draft EIS comments

Thank you for the opportunity to comment on the Crescent Dunes Solar Energy Project draft EIS. While we support the concept of moving toward renewable energy and away from fossil fuels for electric power generation we have some concerns about how utility scale renewable energy projects in the desert southwest are implemented. It doesn't make sense to destroy the very environment we're trying to save by reducing generation of greenhouse gases.

This project will permanently alter some 1700 acres of marginal habitat and use some 600 acre-feet/year of groundwater. There will, in addition, be impacts to migratory birds. According to the draft EIS a mitigation plan is being developed, but is not yet available. It is not possible for the public to provide meaningful comments on a plan which does not yet exist. The wildlife impact mitigation plans need to be provided to the decision makers and the general public as part of this draft EIS, not provided as a fait accompli in the final EIS. In addition to a mitigation plan a monitoring plan needs to be developed so that we can know how many birds are killed or injured by the heliostat field and the tower. Much bird migration takes place at night and collisions with towers are well known to be a significant source of mortality for migrating birds or many species. We have very little experience with large tower energy collectors of the size proposed here with relation to effects on raptors. The thermal uplift above and around the tower will be substantial and as such attractive to large soaring birds. However, the air temperature in the immediate vicinity of the tower may potentially be lethal. This subject deserves a comprehensive monitoring plan.

21-A

The 600 acre-feet/year of water that will be used is approximately 10% of the estimated perennial yield of the hydrographic basin. Unfortunately, the groundwater basin in which this project is located is already greatly over allocated, although actual pumping at this time is considerably less. Given the very long-term nature of this proposed project and the large financial investment involved we can be confident that pumping will occur at the maximum permitted level for the life of the project (unlike mining projects which are temporary or intermittent). Hence, now is the time to start getting control of groundwater utilization in this groundwater basin. It is essential that mitigation include purchase and retirement of groundwater rights in an amount that is at least equal to the proposed usage of this project.

21-B

The draft EIS discusses reclamation of temporarily disturbed areas when the construction phase is finished and reclamation and restoration of the entire site at the end of the ROW permit period. Since little is known about how to restore areas of degraded and disturbed soil in that area reclamation efforts need to be result based rather than effort based, since successful restoration of the native plant community on the first try is unlikely.

21-C

The section on socioeconomic impacts notes that due to the depressed housing market in Tonopah that there is quite a bit of unoccupied housing available for construction workers. The impacts to schools, however, are dismissed with the statement that: “The Nye County School District has an established schooling program, which would accommodate the relocating families”(p.4-86). Given the dire state of K-12 school funding in Nevada it is not reasonable to assume that the Nye County School District will be able to just absorb a significant number of additional students. The developer of this project should be required to provide the Nye County School District with the additional funds necessary to provide for an influx of construction related school children. The students will arrive and need to be educated long before Nye County derives any tax benefit from this project. The same is true for other county services such as police, fire and medical personnel.

21-D

Sincerely,

John E. Hiatt
Conservation Chair, Red Rock Audubon Society
8180 Placid Street
Las Vegas, NV 89123
702-361-1171

October 18th, 2010

Delivered via electronic mail (crescent_dunes@blm.gov) and U.S. mail.

Timothy Coward
Renewable Energy Project Manager
BLM Tonopah Field Office
P.O. Box 911
Tonopah, NV 89040

Re: Comments on the Crescent Dunes Solar Energy Project Draft Environmental Impact Statement

Dear Mr. Coward:

Please accept and fully consider these comments on the Draft Environmental Impact Statement (DEIS) for the proposed Crescent Dunes Solar Energy Project (CDSEP) on behalf of The Wilderness Society, Nevada Wilderness Project and the Toiyabe Chapter Sierra Club.

Clearly, our 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 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. Renewable energy development is not appropriate everywhere on the public lands, however, and thorough review under the National Environmental Policy Act is an essential part of determining which of the many proposed utility-scale projects should be permitted to go forward.

We strongly believe that long-term, environmentally responsible success of the Bureau of Land Management's solar energy program depends on developing policy and guidelines that guide projects to the most appropriate locations, thus limiting environmental impacts and reducing obstacles to construction of the most appropriate projects. We are submitting these comments in the hope that CDSEP can be one of those projects.

I. Summary of Findings

Our review of the DEIS revealed several important potential public benefits from the development of CDSEP. These potential benefits include: reducing greenhouse gas emissions from electricity generation, helping meet Nevada's Renewable Energy Portfolio Standard (RPS), and creating new jobs and tax revenues. In addition, the BLM should be commended for the format of their public meetings for CDSEP. These meetings included a presentation on CDSEP from the BLM and the project applicant, Tonopah Solar Energy (TSE), a subsidiary of Solar

Reserve. The meetings also allowed participants to ask questions during a group question and answer session.

This review identified three key issues for additional consideration and evaluation.¹ The first is the need to provide the public with more detailed information on mitigation as well as the actual mitigation plans mentioned in the DEIS. Though there are details in some sections, the DEIS notes in numerous places that plans are being developed, but does not provide any details on the content of those plans. Clarification of these issues will enable the public to better understand the potential impacts of CDSEP and the associated mitigation measures being proposed as well as providing additional certainty for TSE.

The BLM should 1) provide these plans to the public for comment as soon as they are finalized, and certainly before the publication of the Final EIS; 2) specify which mitigation measures will be required as terms and conditions in the Record of Decision (ROD); and 3) examine opportunities to offset unavoidable impacts on the project site with off-site mitigation.

The second key issue requiring additional consideration and evaluation is the analysis of cooling options in the DEIS. We appreciate that TSE is proposing hybrid cooling rather than wet cooling. However, Nevada is an arid region of the country, water is critical to its future, and groundwater is already being depleted by numerous uses. Analysis of dry cooling in the DEIS is inadequate, and the BLM should provide further analysis of the potential economic and technical viability of dry cooling, including potential impacts of dry cooling to the levelized cost of electricity, the annualized electrical production, and the capital cost of CDSEP, as well as the potential benefits to natural resources of using dry cooling.

The third key issue is cultural resources and Native American religious concerns. It is not clear if the Nevada State Historic Preservation Office (SHPO) has had an opportunity to review and comment on the BLMs findings of eligibility of the cultural resources. It is also unclear whether mitigation plans exist for existing properties recommended eligible for listing on the National Register of Historic Places (eligible sites) and Native American religious concerns on the alternative sites. The BLM should continue to consult with interested Native American tribes about the project and any concerns they may have and clarify if a plan for alleviating issues has been developed to the satisfaction of all interested parties. The BLM should also make clear whether the SHPO has had an opportunity to review the Class III archaeological inventory and concurs with the determinations made by the BLM, as well as detailing a plan for avoidance of eligible sites found outside of the Preferred Alternative. Finally, the BLM should mandate education of the workers on the importance of avoiding cultural sites and artifacts and provide rules for areas not within the work area.

Additional issues to be considered are included in Section VIII.

¹ We understand that BLM and TSE are working under a schedule tied to the American Recovery and Reinvestment Act (requiring projects to break ground or take other action by December, 2010). Our recommendations are not intended to jeopardize this schedule. We believe that there is sufficient time to publish the documents recommended in Section V of these comments (this should not be an additional burden, as BLM should be finalizing these documents as part of the development of the Final EIS anyway) and provide an opportunity to comment.

II. Preferred Alternative

Note that the BLM’s Preferred Alternative in the DEIS is not the Proposed Action, but rather Alternative 2 (p. 2-71). It is our understanding based on personal communication with TSE that Alternative 2 is also TSE’s Preferred Alternative. We agree that Alternative 2 has the least resource impacts. We support Alternative 2 as the Preferred Alternative, and these comments are focused on Alternative 2.

22-A

Recommendation: The BLM should carry forward Alternative 2 as the Preferred Alternative.

III. Potential Public Benefits from SSEP

a. Greenhouse gas emissions reductions

The CDSEP offers the potential to reduce greenhouse gas (GHG) emissions related to electricity production during its 30 year lifetime by avoiding electricity production and associated greenhouse gas emissions at highly polluting fossil fuel plants. The CDSEP is expected to produce approximately 485,000 megawatt hours (MWh) of no-emissions electricity annually, (p. 1-7²) enough to power over 40,000 homes.³

22-B

b. Helping meet Nevada’s Renewable Portfolio Standard

The State of Nevada has passed a RPS rule requiring that the investor-owned utilities generate 25 percent of their electricity from renewable resources by the year 2025 (p. 1-7). The CDSEP could help the utilities reach the RPS goals.

22-B
Continued

c. Local economic benefits

The CDSEP would provide the opportunity for local economic benefits including creation of jobs and the addition of personal income to the State of Nevada. The DEIS states that during construction, “through direct, indirect and induced impacts during the peak of construction, approximately 1,500 jobs would be created, \$140 million of personal income would be added to the State of Nevada annually, and \$160 million would be added to the gross state product annually.” (p. 4-87) During operations and maintenance, the DEIS states that “through direct, indirect and induced impacts during operations and maintenance of the facility, approximately 200 jobs would be created, \$30 million of personal income would be added to the State of Nevada annually, and \$22.7 million would be added to the gross state product annually.” (p. 4-87)

22-B
Continued

IV. Relative Suitability of the CDSEP Site

² Unless otherwise indicated, all page references are for the DEIS.

³ Per the U.S. Energy Information Administration, in 2008, the average annual electricity consumption for a U.S. residential utility customer was 11,040 kWh (*available at:* http://www.eia.doe.gov/ask/electricity_faqs.asp#electricity_use_home)

a. Characteristics conducive to utility-scale solar development

Tonopah Solar Energy seems to have identified a site with excellent solar resources, close to existing transmission and other infrastructure, and with limited conflicts with biological and other resources. Further, the site does not contain any officially designated sensitive and protected areas such as Areas of Critical Environmental Concern, nor has been it been proposed by citizens for designation as wilderness or other conservation status. The efforts of TSE to identify a good site should be generally commended.

22-C

b. Potential impacts to important resources

There are natural resources that will be impacted by construction of a utility-scale solar plant on the site, as would be expected for industrial development on any intact 1,628-acre parcel of desert. Chapters 3 and 4 of the DEIS detail potential impacts from CDSEP in detail, and additional potential impacts are listed below. We include this summary to help illustrate the scope of potential impacts and highlight the importance of incorporation of robust mitigation measures, described further in Section V of these comments.

Impacts identified in the DEIS – impacts to plant and wildlife species from the CDSEP could include loss of habitat and/or direct mortality to:

- Game species, including pronghorn, mule deer, bighorn sheep and elk (p. 3-21, 4-11).
- Special Status Animal Species, specifically the Crescent Dunes aegialian scarab Crescent Dunes aphodius scarab and Crescent Dunes serician scarab (p. 2-48, 3-33).
- Special Status Plant Species, specifically sand cholla and Nevada oryctes (p. 3-23, 4-15).
- Special Status Wildlife Species, including golden eagles, migratory birds, pale kangaroo mice and potentially several species of bats (p. 3-30, 4-23).

22-D

Impacts not identified in the DEIS – impacts from CDSEP could also include impacts to cultural resources:

- Direct effects would include surface and subsurface disturbances to four existing properties recommended eligible for listing on the National Register of Historic Places (eligible sites) caused by construction activities. (p. 4-65)
- Indirect effects: numerous eligible sites have been identified outside the Preferred Alternative, and indirect effects to these sites could be significant. Despite the importance of these potential effects, they have not been analyzed by the BLM in the DEIS. Possible effects to eligible sites outside the Preferred Alternative could include surface and subsurface disturbances from vehicle traffic, increased visitation and possible illicit artifact collection.

Recommendation: Given the significant natural and cultural resources that would be impacted by CDSEP, the BLM should require robust mitigation measures that are directly related to the expected impacts, and define how the efficacy of those mitigation measures will be evaluated. Section V of these comments includes additional recommendations on this issue, including recommendations to address potential indirect effects to cultural resources, including eligible sites.

V. **The BLM Should Provide More Detail on Mitigation Measures for Wildlife Impacts, Terms and Conditions, and Field Survey Methods**

a. **Mitigation plans and terms and conditions**

In order to evaluate the CDSEP, the public needs to know the potential impacts of CDSEP, the mitigation measures that the BLM will require TSE to employ, and how those measures will be monitored and evaluated for effectiveness and modified as necessary under a robust adaptive management plan.

Unfortunately, many of the mitigation measures and plans mentioned in the DEIS lack important details or are not present at all. The DEIS does include some good details in several areas, including raptor deterrent mechanisms (p. 2-48), compaction of soils (p. 2-51), and dark skies (p. 2-53). However, numerous other plans are missing altogether. For example, the DEIS mentions a mitigation plan for the Nevada State Protected Species pale kangaroo mouse and lists a few elements that the plan will contain, but does not provide the plan for review: “A mitigation plan is being developed between TSE, BLM, and NDOW.” **Plans mentioned in the DEIS but not included for public review and comment include:**

- Special Status Wildlife Species – pale kangaroo mice and bats (p. 2-48)
- Weed Management Plan (p. 2-47)
- Golden eagle monitoring plan (p. 2-48)
- Spill Prevention Control and Countermeasure plan (2-49)
- Stormwater Pollution Prevention Plan (p. 2-49) and
- Hazardous Materials Management Plan (p. 2-55).

The DEIS also does not explain how the mitigation measures and plans described in the document would be translated into terms and conditions in the Record of Decision (ROD) and incorporated in the ROW grant, or how TSE and the public will receive confirmation that the requirements have been met.

The comments in this section are intended to clarify our understanding of the mitigation measures included in the DEIS and recommend specific ways in which the BLM should improve its treatment of mitigation in the mitigation plans and the Final Environmental Impact Statement (FEIS). The best way to address this issue would be to publish a supplement to the DEIS that clarifies and improves the discussion and incorporation of mitigation measures and includes the specific mitigation plans. At the very least, the BLM should publish this additional information and the actual mitigation plans on the BLM project website as soon as they are finalized and provide an opportunity for public comment.⁴ This additional information and the mitigation plans and/or DEIS supplement should be published prior to publication of the FEIS, and should also be incorporated into the FEIS.

Recommendations: As detailed above, the BLM should provide additional information on mitigation, as well as the actual mitigation plans for public review and comment. The plans

⁴ Please see footnote 1.

should include details on what, where, when, and how mitigation measures will be carried out, how they relate to the likely impacts of the project, how results will be monitored, and how adaptive management will be carried out based on the monitoring. The BLM should also specify how the mitigation measures will be translated into terms and conditions in the ROD.

As an example, we would direct the BLM to the Jack Morrow Hills Coordinated Activity Plan, prepared by the BLM in Rock Springs (Wyoming), which includes a highly detailed section (Appendix 17: "Implementation, Monitoring, and Evaluation Process" – **attached** for your reference (Attachment A)) that provides the specificity needed to evaluate the effectiveness of planned mitigation measures by setting out specific indicators, measurements and actions to be taken if these measures are not effective. We particularly note the following sections, as examples of the sort of detail that should be contained in the environmental analysis for SSEP:

- Table A17-1 Resource Management Indicators - p. 8
- Table A17-2 Indicator Detail - p. 9-11
- Table A17-3 Measurement Detail - p. 12-14
- Figure A17-3 CAP Management Process - p. 16 and
- Discussion of the JMH CAP - p. 20-21.

22-E
Continued

b. Mitigation and adaptive management

The BLM should ensure that a robust adaptive management program is included in the FEIS and carried forward in the ROD. This is particularly important for measures for potentially serious impacts, such as mitigating impacts to wildlife from evaporation ponds. For example, if the BLM chooses to modify the mitigation plan for evaporation ponds and employ hazing or misting instead of the more aggressive and expensive netting, the BLM should carry forward a robust monitoring program, set clear thresholds for unacceptable levels of impacts, and specify additional mitigation measures required if thresholds are exceeded.

Recommendation: The BLM should include a robust adaptive management plan in the FEIS.

22-F

c. Off-site mitigation

Utility-scale solar development has significant impacts on project sites, and off-site mitigation is one tool that should be used to offset impacts from converting intact, multiple-use lands to single-use, industrial energy production. TSE and the BLM should commit to further discussions with interested stakeholders to develop additional ideas for off-site mitigation, and the BLM should commit to further consideration and analysis of potential off-site mitigation measures.

We direct the BLM's attention to Instruction Memorandum (IM) 2008-204, which describes the broad type of actions that may be taken to address both direct impacts of a project and greater cumulative effects that development is having on a landscape. IM 2008-204 identifies and elaborates on the types of off-site mitigation that can be used. *For example:*

- Offsite mitigation may include, as appropriate:

22-G

- In-kind: Replacement, substitution or permanent protection of resources that are of the same type and kind as those being impacted.
 - Example: For every acre of new, long-term surface disturbance in important pale kangaroo mouse habitat in Area (A), (X) acres of suitable, in-use habitat in Area (B) will be administratively protected with permanent mineral withdrawal and no off-road/route vehicular activities with the specific purpose of protecting pale kangaroo mouse habitat.
- Out-of-kind: Replacement or substitute resources that, while related, are of equal or greater overall value to public lands.
 - Example: For every acre of new, long-term surface disturbance in important pale kangaroo mouse habitat in Area (A), the project proponent agrees to bury (Y) miles of existing power lines and remove the power poles used as hunting perches by raptors in Area (B).
- In-lieu-fee: Payment of funds to the BLM or a natural resource management agency, foundation, or other appropriate organization for performance of mitigation that addresses impacts of a project.
 - Example: The applicant may make payment to the BLM or a conservation group based on the amount of acres that will be disturbed in exchange for commitment from the recipient to apply the funds toward local, specified pale kangaroo mouse habitat protection/restoration projects.

22-G
Continued

In the context of solar development, there may be additional conservation priorities that can be pursued to mitigate the impacts of individual projects and the BLM could hold discussions with interested stakeholders to identify these potential targets for off-site mitigation efforts or funding. Regarding CDSEP, we are not comfortable with decisions regarding mitigation being made in closed negotiations, especially in light of the presence of poorly understood, but incredibly localized species (i.e., scarabs that have very high conservation importance but little scientific information). Although the preferred alternative does not directly impact the dune habitats where scarabs are believed to be localized, there is not enough known about the ecology and life history of these species to definitively rule out impacts that might arise from possibilities not discussed, e.g., shading from the tower on the dune habitats. (It is known that larval stages of invertebrates are particularly sensitive to variation in their thermal environment. Nothing is known about the larval requirements of these species and potential impacts from additional shade that change the thermal environment.)

Recommendation: Tonopah Solar Energy should commit to further discussions with interested stakeholders to develop additional ideas for off-site mitigation, and the BLM should commit to further consideration and analysis of potential off-site mitigation measures. A mitigation team should be assembled that would include expertise on the poorly understood invertebrate species in the area.

d. Field surveys

The BLM should provide additional details on the methods used for field surveys. Some good detail is included regarding the area of analysis and methodology for special status plant species surveys, including dates of surveys, and specifics on methods for pedestrian surveys. However,

22-H

additional information is necessary in several areas. The BLM should specify how many traps were used per trap line for kangaroo mice (p. 3-28), as well as whether and how many traps were used for reptiles. The BLM should also specify whether surveys were completed for bats.

We have seen that in Nevada as well as in other states, there is a lack of consistency in carrying out full protocol surveys and ensuring they are done at different times of the year to capture such things as fall-blooming plants. The BLM needs to implement standard, comprehensive guidelines for conducting surveys to ensure that all species' presence on proposed renewable energy sites can be identified.

Recommendation: The BLM should provide the additional details covered above regarding field surveys. The BLM should also ensure that going forward, comprehensive wildlife and plant surveys are completed at least twice and at different times of the year (i.e., spring and fall) for every large scale renewable energy project.

22-H
Continued

VI. Cultural Resources and Native American Religious Concerns

We commend the BLM for actively consulting with interested Native Americans to determine any concerns they may have. However, no clear plan is included for addressing these concerns.

The DEIS does not make it clear whether the Nevada SHPO has had an opportunity to review the results of the Class III archaeological inventory, or whether the SHPO concurs with the eligibility determinations made by the BLM. The DEIS also fails to identify or explain whether any plan for protection against indirect effects has been developed for the eligible sites outside of the Preferred Alternative that have been identified during the inventory. Increased access of workers and the public may affect significant cultural resources through illicit collecting or inadvertent damage. The BLM needs to provide these details to the public.

Recommendation: The BLM should continue to consult with interested Native American tribes about the project and any concerns they may have. Understanding the sensitivities of these concerns, the BLM should clarify if a plan for alleviating issues has been developed to the satisfaction of all interested parties. The BLM should also make clear whether the SHPO has had an opportunity to review the Class III archaeological inventory and concurs with the determinations made by the BLM, as well as detailing a plan for avoidance of eligible sites found outside of the Preferred Alternative. The BLM should mandate education of the workers on the importance of avoiding cultural sites and artifacts and provide rules for areas not within the work area, for example, prohibiting off-road driving outside of the project.

22-I

VII. Analysis of dry cooling

- a. The BLM should provide further analysis of the potential economic and technical feasibility of dry cooling, including potential impacts to the levelized cost of electricity (LCE), the annualized electrical production, and the capital cost of CDSEP.**

22-J

As demand increases for the southwest's already strained water resources, it is critical to capitalize on any available opportunities to limit unnecessary water use. Substantial groundwater pumping is already contributing to a lowering of the water table. Significant drops can contribute to ground subsidence and impact nearby wells, and harm any connected surface water and related wildlife. Because of these reasons, we appreciate that TSE and the BLM are proposing hybrid cooling rather than wet cooling for CDSEP. However, additional information is necessary on the potential impacts and benefits of dry cooling.

Though the DEIS does nominally analyze wet, dry and hybrid cooling, the analysis does not appear to be very deep. Similarly, the DEIS appears to dismiss dry cooling out of hand, simply stating that "because of the decrease in efficiency and, thereby, a higher power cost, the fully dry-cooled technology was not carried forward in the analysis." (p. 2-65)

There are a number of hybrid and dry cooled power plants in operation today that illustrate the technical and economic feasibility of low water use cooling in some situations. A study by the California Energy Commission's Public Interest Energy Research (CA PIER) program detailed years of data from five dry or hybrid cooled power plants (four combined cycle natural gas plants and one wood waste fired plant) and found limited difficulties with operations and maintenance of the dry and hybrid cooled systems.⁵ Further, a number of proposed solar plants that intend to begin construction by the end of this year in California and Nevada plan to use dry cooling.⁶

Overall, additional analysis of the potential impacts of dry cooling to the capital costs, annual output, and LCE from SSEP will be necessary to determine which option makes the most sense from environmental, economic and technical perspectives.

Recommendations: The BLM should provide further analysis of the potential impacts of dry cooling to the LCE, the annualized electrical production, and the capital cost of from CDSEP. If dry cooling is determined to be technically and economically feasible, the BLM should select the least water-intensive cooling method as the agency's Preferred Alternative.

VIII. Additional Issues to be Considered

a. The BLM should improve the purpose and need statement in the DEIS

The purpose statement in the DEIS is restricted to responding to TSE's application for a ROW (p. 1-6). We are glad to see that the BLM's need is defined to include limiting unnecessary or undue degradation of public lands. We are also glad to see mention of the broader goals for the BLM's solar energy program in TSE's purpose and need, including the Energy Policy Act of 2005's goal of 10,000 MW of non-hydropower renewable energy on public lands by 2015 and

⁵ See Comparison of Alternate Cooling Technologies for California Power Plants: Economic, Environmental and Other Tradeoffs, California Energy Commission available at http://www.energy.ca.gov/reports/2002-07-09_500-02-079F.PDF

⁶ See Dry Cooling Challenges Notion of Water Intensity for Desert Solar available at <http://www.environmentalleader.com/2009/11/17/dry-cooling-challenges-notion-of-water-intensity-for-desert-solar/>; BrighSource Energy, Ivanpah Solar Power Complex available at <http://www.brightsourceenergy.com/projects/ivanpah>

22-J
Continued

22-K

Interior Secretary Salazar’s March 11, 2009 Secretarial Order prioritizing responsible renewable energy development on public lands. (p. 1-8) However, to both make clear the BLM’s goals for its solar program and ensure that the DEIS is legally defensible, we recommend that the BLM go further in defining the purpose and need to include mention of the broader goal of “facilitating environmentally responsible commercial development of solar energy projects” and the possibility of CDSEP helping meet Nevada’s RPS and other clean energy goals.

22-K
Continued

Recommendation: The BLM should go further in defining the purpose and need for CDSEP to include mention of the broader goal of “facilitating environmentally responsible commercial development of solar energy projects” and the possibility of CDSEP helping meet Nevada’s RPS and other clean energy goals.

b. Analysis of alternatives

The DEIS does a good job of selecting three action alternatives and one no-action alternative for analysis in the DEIS. Further, the description of parameters used for site selection is very helpful. (p. 2-62). The fact that the project proponent and the BLM included enough flexibility to consider three action alternatives with different footprints was important in arriving at an alternative which minimizes impacts. We also appreciate that the BLM provides some description of the analysis conducted on two additional alternative sites outside of the current ROW application area, the Mud Lake Site, east of Tonopah, and the Peavine Creek Site, west of the proposed project site. (p. 2-63)

22-L

Though the information in the DEIS is helpful, we would recommend that the BLM include additional details on the results of the analyses of the Mud Lake and Peavine Creek sites to provide the public with additional information on why the sites identified as action alternatives were selected and why these sites were not.

Recommendation: The BLM should provide additional details on the results of the analyses of the Mud Lake and Peavine Creek sites to provide the public with additional information on why the sites identified as action alternatives were selected. For future NEPA analysis on proposed renewable energy projects, the BLM should fully analyze a robust range of action alternatives, including alternatives outside the proposed ROW, projects of different size, and projects that include phasing.

c. The BLM needs to clarify the extent of the grading of the project area

The DEIS makes it clear that the project area would be graded: “Approximately 1,500 acres (including the access road) would be graded in order to construct the project facilities (i.e., heliostats, power block, evaporation ponds, and administrative buildings), and a paved access road.” (p. 4-2) However, conflicting statements throughout the DEIS leave the reader with several different acreages of graded project area. Further, statements made by TSE staff at the public meetings in Las Vegas suggested that there would be little grading necessary because the area is level. We recommend limiting grading as much as possible to limit impacts to the project site.

22-M

Recommendations: The BLM should limit grading of the project site to the extent possible, and the BLM should make clear the extent of the grading of the project area.

- d. The BLM should be commended for their public meetings format for the DEIS, and should continue to use this or a similar format in future CDSEP and other public meetings**

The BLM should be commended for the format of their public meetings for CDSEP. These meetings included a presentation on CDSEP from the BLM and TSE, as well as “open house” time for the public to review poster boards and ask questions of BLM, TSE and other staff. The meetings also allowed participants to ask questions during a group question and answer session. These types of meetings are much more effective in engaging the public than meetings consisting only of open house time because of the opportunity for public discourse and questions.

Recommendation: The BLM should continue to hold public meetings in the format used for the CDSEP.

22-M
Continued

Thank you for your thorough consideration of these comments.

Sincerely,

Alex Daue, Renewable Energy Coordinator
The Wilderness Society – BLM Action Center
1660 Wynkoop St. Suite 850
Denver, CO 80202

Greg Seymour, Renewable Energy Program Coordinator
Nevada Wilderness Project
P.O. Box 571675
Las Vegas, Nevada 89157

Barb Boyle, Senior Representative, Clean Energy Solutions
Joe Johnson, Energy Chair
Toiyabe Chapter Sierra Club
PO Box 8096
Reno, NV 89507



Bureau of Land Management – Tonopah Field Office
Attn: Mr. Tim Coward
P.O. Box 911
Tonopah, NV 89049

October 18, 2010

Sent via e-mail: crescent_dunes@blm.gov

RE: Comments- proposed Crescent Dunes Solar Energy Project DEIS

Dear Mr. Coward:

On behalf of the Center for Biological Diversity, please accept this set of comments regarding the Draft Environmental Impact Statement (“DEIS”) for the Crescent Dunes Solar Energy Project (“project”) proposed by Tonopah Solar Energy, LLC.

The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center’s Climate Law Institute develops and implements legal campaigns to limit global warming pollution, including that from the burning of dirty coal, and prevent it from driving species extinct.

The Center has over 315,000 members and on-line activists throughout Nevada and the United States. We submit these comments on behalf of our members, activists, staff, and members of the general public who are interested in protecting native species and their habitats, achieving 350 parts per million or less of CO₂ in the atmosphere, and protecting quiet recreation activities, and wilderness experiences on Bureau of Land Management (BLM) lands in Nevada and particularly those lands that would be impacted by the proposed action.

The development of renewable energy is a critical component of efforts to reduce carbon pollution and climate-warming gases, avoid the worst consequences of global warming, and to assist in meeting needed emission reductions. The Center strongly supports the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and 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 impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

It is unfortunate that the proposed project site is in a largely undisturbed setting rather than on previously disturbed lands or brownfields. That said, the Center prefers the Alternative 2 location because it attempt to minimize impacts to species, is furthest from the Crescent Dunes and the rare species found there, and is has the shortest transmission distance to the Anaconda-Moly Substation.

We offer the following specific concerns and comments regarding the DEIS.

1. Impacts to rare species

Plants

The DEIS discloses that the only BLM Sensitive Plant species, aside from cacti and yuccas, found on the site is the Nevada Oryctes. This plant is of concern and is classified by the Nevada Heritage Program as “imperiled due to rarity or other demonstrable factors”. Agency direction contained in BLM Manual 6840.2 establishes that, “...the BLM shall designate Bureau sensitive species and implement measures to conserve these species and their habitats, including ESA proposed critical habitat, to promote their conservation and reduce the likelihood and need for such species to be listed pursuant to the ESA.”

Section 6840.2 C. on implementation of this direction provides:

“On BLM-administered lands, the BLM shall manage Bureau sensitive species and their habitats to minimize or eliminate threats affecting the status of the species or to improve the condition of the species habitat, by:

2. Ensuring that BLM activities affecting Bureau sensitive species are carried out in a way that is consistent with its objectives for managing those species and their habitats at the appropriate spatial scale.

4. Working with partners and stakeholders to develop species-specific or ecosystem-based conservation strategies.

7. Considering ecosystem management and the conservation of native biodiversity to reduce the likelihood that any native species will require Bureau sensitive species status.

8. In the absence of conservation strategies, incorporate best management practices, standard operating procedures, conservation measures, and design criteria to mitigate specific threats to Bureau sensitive species during the planning of activities and projects.”

Despite this direction, the proposed action would grade and destroy over 1374 acres of suitable and occupied habitat for this plant, while the BLM’s preferred alternative would destroy approximately 434 acres of such habitat. Nowhere in the document is there any analysis or disclosure of the impacts to the status of this plant from this amount of habitat loss, or a disclosure of the likelihood that such loss would increase the need for listing of this plant under the Endangered Species Act.

These deficiencies should be addressed in the final environmental impact statement (“FEIS”).

The Tonopah milkvetch (*Astragalus pseudiodanthus*) is not yet a BLM Sensitive Species in Nevada, but arguably could be given its rarity and its Sensitive Species Status in California. The State Natural Heritage Program (“Heritage”) ranks this species as both globally and state “imperiled due to rarity and/or other demonstrable factors”. According to Heritage maps it is found in the project site vicinity. It is a perennial herb with a

23-A

23-B

buried root crown found in deep loose sandy soils of sand dune margins. According to NatureServe and Heritage databases, there are only ten occurrences in California and fifteen in Nevada. Estimated population levels for Nevada are likely in the vicinity of 1420 individuals – a number far less than the estimates for *Oryctes* (24,000+) a designated sensitive species.^{1 2 3}

23-B
Continued

Due to the rarity of the Tonopah milkvetch, the Center requests that it be treated as a Nevada BLM Sensitive Species and provided the protections called for in BLM Manual 6840. The FEIS must analyze and disclose the impacts to this species and how the BLM will comply with the mandates of Manual 6840.

Invertebrates

Heritage and NatureServe rank the Crescent-dune Aegialian scarab beetle (*Aegialia crescent*) as globally and state “critically imperiled due to extreme rarity, imminent threats, and/or biological factors”. It is found only within the Southern Big Smoky Valley,⁴ and the proximity of the proposed solar project to the primary habitat at Crescent Dunes creates an imminent threat. It is a BLM Sensitive Species.

23-C

The Crescent Dune Serican scarab beetle (*Serica ammomenisco*) is ranked by Heritage and NatureServe as being globally and state “critically imperiled due to extreme rarity, imminent threats, and/or biological factors”. It too is found only within the Southern Big Smoky Valley,⁵ and the proximity of the proposed solar project to the primary habitat at Crescent Dunes creates an imminent threat. It also is a BLM Sensitive Species.

¹ Nevada Natural Heritage Program – See: <http://heritage.nv.gov/atlas/atlasndx.htm>

² NatureServe – See –

http://www.natureserve.org/explorer/servlet/NatureServe?sourceTemplate=tabular_report.wmt&loadTemplate=species_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular_report.wmt&elKey=138654&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=138654&offPageSelectedElType=species&offPageYesNo=true&post_processes=&radiobutton=radiobutton&selectedIndex=138654

³ Nature Serve – See –

http://www.natureserve.org/explorer/servlet/NatureServe?sourceTemplate=tabular_report.wmt&loadTemplate=species_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular_report.wmt&elKey=152330&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=152330&offPageSelectedElType=species&offPageYesNo=true&post_processes=&radiobutton=radiobutton&selectedIndex=152330

⁴ NatureServe – See -

http://www.natureserve.org/explorer/servlet/NatureServe?sourceTemplate=tabular_report.wmt&loadTemplate=species_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular_report.wmt&elKey=110146&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=110146&offPageSelectedElType=species&offPageYesNo=true&post_processes=&radiobutton=radiobutton&selectedIndex=110146

⁵ NatureServe – See:

http://www.natureserve.org/explorer/servlet/NatureServe?sourceTemplate=tabular_report.wmt&loadTemplate=species_RptComprehensive.wmt&selectedReport=RptComprehensive.wmt&summaryView=tabular_report.wmt&elKey=108779&paging=home&save=true&startIndex=1&nextStartIndex=1&reset=false&offPageSelectedElKey=108779&offPageSelectedElType=species&offPageYesNo=true&post_processes=&radiobutton=radiobutton&selectedIndex=108779

These two beetles, along with four other found elsewhere, have been petitioned for listing under the Endangered Species Act, adding to the burden and responsibility of the BLM to provide adequate protections as to not further jeopardize their survival and viability.⁶

Another beetle, the Crescent Dunes Aphodious scarab is a BLM Sensitive Species, but awaits further taxonomic work and is not listed in Heritage or NatureServe databases.

The DEIS discloses that Alternative 1 would directly impact the beetles by destroying 8 acres of dune habitat.

The proposed action and alternative 2 are said to not impact the beetles since the mapped dune ecosystem is avoided. This is a faulty justification due to the premise that the alternatives do not impact areas mapped as “Inter-Mountain Basins Active or Stabilized Dune Habitat”. A study of images obtained with Google Earth as well as a comparison of Figures 2-1, 3-2, 3-15 and 3-16 reveals gross errors in mapping as well as in interpretations as to the habitat for the above beetles.

Specifically, our concerns are:

- DEIS Figure 3-15 identifies soil types STC and TGE as the primary types in the proposal alternative’s impact area. Both these soil types are comprised of deep, fine sands, easily displaced by wind.⁷ The BLM assumes that the beetles are only found on the actual dune area. However, the sandy areas around the current dunes are part of the dune ecological system and as the dunes shift, so does the habitat. The DEIS does not mention surveys or inventories being conducted outside the area of actual dunes to confirm the absence of the beetles.
- DEIS Figure 2-1 and views from Google Earth clearly show the dunes systems as being much more expansive than mapped on Figure 3-2. In addition, the soil mapping found on Figure 3-16 also shows the dunes covering a much greater area than that mapped on Figure 3-2. It is quite likely that Alternative 2 impacts greater than the 8 acres disclosed, and the same argument for soil type STC made in the bullet above applies to Alternatives 1 and 2.

Nowhere in the DEIS does the BLM analyze or disclose the impacts from disrupting sand transport to the dunes and the habitat provided for the beetles, nor does it discuss the cumulative impacts to the dunes and the beetles from continued off-road recreational use.

We are also concerned that no mitigation is planned to off-set the impacts to these species.⁸ The full intent of BLM Manual 6840 must be met and disclosed.

23-C
Continued

⁶ WildEarth Guardians, 2010. PETITION TO LIST SIX SAND DUNE BEETLES UNDER THE U.S. ENDANGERED SPECIES ACT.

⁷ Table 3-24.

⁸ DEIS, page 4-33.

The Center requests that as part of the project approval process a thorough inventory be made of the entire proposed right-of-way area to determine the presence, absence and status of these species within it, and if present that the environmental compliance process document the avoidance and mitigation strategies that will be employed to ensure the long term survival of the species to preclude the need for listing under the Endangered Species Act. Included should be a cumulative effects analysis of the off-road vehicle (“ORV”) use at the Crescent Dunes, another major threat to these species. In addition, the survey should be robust enough to identify the presence or absence of other rare or imperiled species that may not have previously been known at this site.

23-C
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Insects, Birds, Bats and Raptors

The Center asserts that the DEIS is lacking due to its failure to address the impacts from the proposed facility on flying creatures. Our concerns stem from several factors:

- Direct mortality from the death ray zone. While the DEIS does mention a short term study done on a small concentrated solar facility in 1986 on bird mortalities. However, the DEIS merely speculates that it is possible that migratory birds and golden eagles may be harmed by the intense concentration of reflected light and heat towards to top of the central receiver. McCrary estimated 1.7 birds deaths per week on a 32 ha site with one 86 m tower.⁹ The proposed project site is approximately 647 ha (over 20 times larger) with a 653 foot receiving tower. Lacking baseline data of mean daily count of birds on the project site, analysis of the impacts to birds is impossible. Based on the existing literature, the impact may be significant. Further, no mention was made regarding the impacts to flying insects by either McCrary’s study or the DEIS. As a minimum the BLM and proponent should present details in the FEIS on the death zones associated with the tower, perhaps by temperature, height and area of influence, similar to what is done with respect to the area of influence of wind power blades. In the FEIS BLM must address this issue and make a good faith attempt to describe the magnitude of the potential impacts.
- Also, there was no mention made of any raptor or other bird surveys having been conducted aside from a single survey for golden eagles done on June 4, 2010 and a single flight looking for eagle nesting areas on June 24, 2010.¹⁰ This presents several concerns. First, no site specific information was collected for migrating raptors and passerine species. Second, there is considerable doubt on the reliability of such limited sampling and how such surveys did or did not meet scientifically acceptable protocols. Third, the use of office analysis of existing available data not specific to the project also creates great doubt in the reliability of the information presented in the DEIS. The DEIS fails to disclose the number of pairs of golden eagles that could be affected by the proposed project. Scientific literature on this subject is clear - the presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the

23-D

⁹ McCrary, M.D. 1986. Avian Mortality at a Solar Energy Power Plant. Journal of Field Ornithology 57(2): 135-141.

¹⁰ DEIS, page 3-27.

human is far from an active nest.¹¹ Regardless of distance, a straightline view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involves calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on the modeling.¹² The BLM must address these data deficiencies and conduct scientifically credible surveys to detect the species likely to be impacted by the proposed project and then to address and disclose the impacts and mitigation in the FEIS.

- There is a lack of clarity in the DEIS as to how impacts from the evaporative ponds will be mitigated. Early on in Section 2.5.3.5.7, the DEIS discloses that when the ponds are filled with water, a porous screen would cover the entire pond so that wildlife (presumably, birds, bats and other mammals) would not be attracted to the water surface. However. Later in section 4.5.11 on “Mitigation”, no mention is made of the protective cover. Instead, a monitoring scheme is described that would document the occurrences of bird and wildlife species use of then ponds and any deaths, deformities or other abnormalities found, and share that information with the BLM, NDOW and other appropriate agencies. The Center feels that the avoidance/mitigation value of the protective cover in essential, and must be the first line of protection against undesirable impacts. The monitoring program should also be implemented, but geared towards measuring the effectiveness of the screen.

23-D
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2. Water Needs

The POD stated and the DEIS confirms that the Tonopah Flat sub-basin in which the proposed project is located is currently over allocated by about 20,000 acre-feet per year. This disturbing fact is somewhat dismissed by pointing out that the existing water rights in the basin do not represent the actual groundwater withdrawal and consumption.^{13 14} The DEIS states that water for the proposed project would come from purchased and retired active irrigation rights 10.6 miles from the project site. The DEIS fails to specifically identify these wells/rights and their location.

The proposed project will employ a “hybrid cooling system”, and together with the water needed for steam cycle makeup, mirror washing and dust control would require an estimated 600-854 acre-feet per year, all to come from groundwater wells.¹⁵

The Center is concerned about the ability of this overdrawn basin to supply the water needs without impacting biological and spring resources within and adjacent to the basin. Alternatives that consume less groundwater should be evaluated and, in particular, the applicant must assess dry cooling as an alternative. Additionally the proponent should be required to purchase and

23-E

¹¹ Richardson, C.T. and C.K. Miller. 1997. Recommendations for protecting raptors from human disturbance: a review. Wildlife Society Bulletin 25(3): 634-638.

¹² Camp, R.J., D.T. Sinton and R.L. Knight 1997. Viewsheds: a Complementary Management Approach to Buffer Zones. Wildlife Society Bulletin 25(3): 612-615.

¹³ POD, page 45.

¹⁴ DEIS, page 3-39.

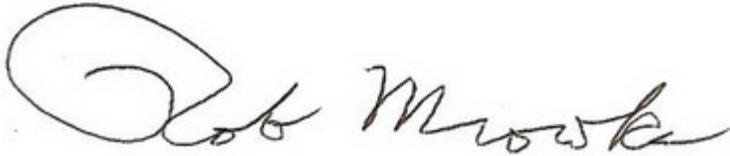
¹⁵ DEIS, page 2-21.

retire water rights in excess of their own needs to bring the basin into a better balance in order to protect biological and hydrologic resources.

23-E
Continued

The Center appreciates the opportunity to provide comments on this project and wishes to continue to receive notices and documents pertaining to it.

Sincerely yours in conservation,

A handwritten signature in black ink that reads "Rob Mrowka". The signature is written in a cursive style with a large, looping initial "R".

Rob Mrowka
Ecologist/Conservation Advocate