



# Breeding Burrowing Owl Survey for California

## SPRING 2008 NEWSLETTER

### FINAL SURVEY RESULTS ARE IN!

It required literally thousands of volunteer hours, but you did it! During the 2006 and 2007 breeding seasons, 396 volunteer surveyors contributed their time and effort to **The Institute for Bird Populations'** California Burrowing Owl survey, bringing the total number of 5km x 5km survey blocks visited to 860! We at IBP are very pleased with these results, and extend a heartfelt **THANK YOU** to everyone who participated.

The table at the right provides some summary results. As expected, the highest concentrations of Burrowing Owls occurred in the Imperial Valley and Southern Central Valley regions; perhaps more surprising was the relatively large number of owls in the Western Mojave region, particularly around Antelope Valley. More disappointing were the results from the Bay Area Interior region (112 pairs counted, down substantially from our count in the early 1990s) and the Modoc Plateau/Great Basin region, where we were unable to find *any* Burrowing Owls. Note that the numbers presented here

Survey Region	No. of Blocks Surveyed (2006-2007)	Pairs of Burrowing Owls Detected
Bay Area Interior	89	112
Middle Central Valley	200	382
Northern Central Valley	48	10
Southern Central Valley	164	236
Central-western Interior	44	21
Southwestern Interior	68	150
Coachella Valley	20	49
Imperial Valley	15	521
Eastern Mojave	46	1
Western Mojave	67	94
Northern Mojave/ Eastern Sierra Nevada	38	1
Sonoran Desert	46	179
Modoc Plateau/ Great Basin	15	0
<b>Total</b>	<b>860</b>	<b>1,756</b>

are the actual numbers of owl pairs counted in each region, pooling results across both random and historical 'owl' blocks. We are now using statistical techniques to estimate regional population sizes based on these survey counts, and to compare the new regional and statewide estimates with results from our similar survey in the early 1990s.

Preliminary results suggest that Burrowing Owl distribution across the state may have contracted slightly since the early 1990s, particularly in the northern half of the state. Abundance appears to have declined slightly in many regions, though observed declines generally do not reach the threshold of statistical significance. Burrowing Owl numbers in a couple of metropolitan areas, particularly the San Francisco Bay Area and Bakersfield, have dropped substantially since the early 1990s. However, one bright spot is the Coachella Valley, where we detected no Burrowing Owls in the early 1990s, but where 49 pairs were observed during 2006-2007—many on the same individual census blocks that were found not to have owls in the 1990s.



*Photo by Dave Herr*

### **Recent, current and future activities...**

Since the 2007 field season, IBP Biologist Bob Wilkerson has presented our preliminary results at two statewide meetings: a joint meeting of the California Burrowing Owl Consortium (CBOC) and California Partners in Flight in Davis, and another CBOC meeting in Brawley. More recently we have begun work on our Final Report to our funders (including the National Fish and Wildlife Foundation and the California Department of Fish and Game) as well as a manuscript for submission to a peer-reviewed scientific journal. We also intend to post detailed results on our website ([www.birdpop.org](http://www.birdpop.org)).

Finally, many survey volunteers have asked about opportunities to participate in Burrowing Owl monitoring during 2008 and future years. We are grateful to everyone who has expressed interest. Although we think California's Burrowing Owls would be well-served by a long-term, volunteer-based monitoring program, we have not yet succeeded in securing funding to coordinate such an effort. Should funding become available in the future, we hope many of our 2006-2007 surveyors will heed the call to participate!

## **THANK YOU FOR YOUR TIME AND EFFORT!**

**The following individuals served as volunteer coordinators for their county or area in 2006, in 2007, or in both years:** Marie Barrett, Rich Cimino, Chris Conard, Jeff Davis, Jimm Edgar, Mike Fisher, Dawn Garcia, Dan Guthrie, Darrell Hutchinson, Cheryl Johnson, Robin Leong, Krista Maney, Jessica Martini, Catherine Portman, Tom Ryan, Debra Shearwater, Ginny Short, Ian Taylor, Ruth Troetschler, Dave Wagner, and Carie Wingert.

**The following individuals participated in censusing one or more survey blocks during either or both of the two survey years:** Jennifer Albright, Chris Alderete, Diana Alleman, Lisa Allen, Russell Almaraz, Jerry W. Ambrose, Mary Ann Ambrose, Sundeep Amin, Chloe Anderson, Simon Avery, Joellyn Avery, Patricia Bacchetti, Jason Bachiero, Valerie Baldwin, Jack Barclay, Marie Barrett, Margaret Barson, Peggy Bartels, Candice Basham, Jeff Beauchamp, David Bell, Joyce Bender, Judy Bendix, Debbie Benham, Vern Benhart, Nicola Bennert, Josh Bennett, Murray Berner, Linda Bernhart, Milton Blatt, Diane Bodwin, Anita K. Booth, Brian Botham, Dawn Bradley, Steve Brady, Tricia Bratcher, Theresa Brennan, Craig Breon, Beverly Brock, Charles R.

Brown, Philip Brown, Debbi Brusco, Julie Bryson, Virginia Buchholz, Maureen Buffington Santo, Cheri Buskirk, Dotty Calabrese, Karlene Campo, David Carr, David W. Carr, Chuck Carroll, Randi Cassellius, Joyce Chang, Tony Chapelle, Sophie Chiang, David Chilton, Kirsten Christopherson, Jeff Church, Rich

**...Burrowing Owl Survey Hall of Fame...**

Who found the greatest number of Burrowing Owls on a single block in 2007?

**Bruce Wilcox**, with 52 pairs on block # 3650-645 in the Imperial Valley

Cimino, Mareyn Clements, Richard Clements, Neil Clipperton, Wendy Cole, Barbara Coley, Roger Coley, James M. Collier, Judith A Collier, Chris Conard, David Cook, Mary Coolidge, Daniel S. Cooper, Curt Cotner, Erica Craven, Anne Crealock, Lori Cuesta, Cindy Curtis, Ken

Curtis, Kirsten Dahl, Virginia L. Dallas-Dull, Ilma Dancourt, Larry Davidson, Jeff N. Davis, Karen DeMello, Susan Dieterich, Joan Dodson, Jim Dodson, Jed Douglas, Peter Drumer, Doug Drynan, Jim Dunn, Natasha Dvorak, R. Eckland, Jimm Edgar, Arthur L. Edwards, Linda Edwards, Lorna Elness, Mark Elness, Madi Elsea, Kevin Enus-Rempel, Laura Erickson, Janeann Erickson, Jake Estis, Mary Fajekers, Jonathan Feenstra, Stacey Feigeikonwiesr, Hank Feilen, Jane Fielder, Megan Fisher, Mike Fisher, Tim Fitzer, Kasey Foley, Joel Forty, Bennie Fouch, Scott Frazer, Linda Freeman, Mary Freeman, Nick Freeman, Parker Fritch, Lillian Fuji, Harold Fukuma, Barry Furst, Dawn Garcia, Melisa Garcia, Maureen Geiger, Harriet Gerson, Brian Gibson, Neil Gilbert, Steven Glover, Dave Goodward, David Goodward, Debbie Green, John F. Green, Richard Greene, Linda Greene, Christina Greutink, Dan Guthrie, Samantha Hafter, Portia Halbert, Catherine Halley, Devon Hammond, Lindsay Harman, Kristey Harrington, Carmen Hashagen, Ken Hashagen, Cole Hawkins, Priscilla Hawkins, Steve Hayashi, Ursula Heffernon, Lynn Hemink, J. Herman, Philip Higgins, Jon Hilbert, Carolyn Hinshaw, Allan Hollander, Lindsay Holt, Amber Holt, Kathryn Hood, Scott Huber, Liam Huber, Sherry Hudson, Bobby Huss, Darrell Hutchinson, Meighan Jackson, Sue James, Tim Jenkins, Phil Johnson, Vernon Johnson, Dave Johnston, Jennifer Jones, Douglas Joo, Linda Jordan, Corey Kaleshnik, Ginny Kaminski, Jerry Kaminski, Martin Karsch, M. Karsch, Lola Kashyap, Maral Kasparian, Guy Kay,

**...Burrowing Owl Survey Hall of Fame...  
Top Ten Block Surveyors for 2007**

<b>Name</b>	<b>Blocks Surveyed</b>
Crispin Rendon	9
Bill Lydecker	7
Mike Fisher	6
John Luther and Susanne Methvin	6
Darrell Hutchinson	6
Chris Conard and Kimya Lambert	5
Dan Guthrie	5
Pam Williams	4
Ginny Short	4
Russell Almaraz	4

David Keeling, Elena Keeling, Mary Keitelman, Lazan Keitelman, Ruth Kennedy, Stephen King, Judy Klink, Oliver Klink, Joanna Koob, Eva Kristofik, Nathan Krumm, Tim LaFlame, Kimya Lambert, Aleatha W. Landry, Steve Laymon, Cathie LaZier, Amanda LeClerc, Rod Lee, Sara Lee, Lora Leerskov, Robin Leong, John Lewis, Phyllis Lindley, Inna Litvin, Ivette Loreda, Kent D. Lou, Calvin D. Lou, Raymond Lukens, John Luther, Bill Lydecker, Greta Lydecker, Sarah Lydecker, Betty MacDonald, John MacDonald, Chris Macintosh, Jeanne Macneil, Shelly Magier, Ernie Maier, Colleen Martin, Cheryl McCloskey, Tim McClung, Kally McCormick, Walter J. McInnis, Gregory Meissner, Mary Beth Metcalf, Susanne Methvin, Jay Milee, Ashley Miller, Mel Miller, Karen Mitchell, Allison Mohoric, Richard Montijo, Alan Moore, Kris Moore, Richard

Moore, Nancy Mori, Suzanne Morron, Gerald Mugele, Jerre Murphy, Gordon Murphy, Sue Murphy, Ted Murphy, Jean Myers, George Nash, Kelley Nelson, Nancy Nelson, Wallace Neville, Renee New, Maggie Nunes, Michelle Ocken, D. O'Keefe, Rodney Olsen, Jennifer O'neal, Regena Orr, William Orr, Ed Pandolfino, Becky Parsons, Kay Partelow, Warren Patten, Jennifer Patten, Janna Pauser, Mark Paxton, Fraser Pembeiton, Barbara Pendergrass, David Perrin, Sarah Perrin, Marilynn Perry, Dawn Peterka, Paula Peterson, Randall Peterson, Susan Peterson, Carole Petrash, Shawn Petrash, David G. Philled, Sarah Pitzer, Ken Poerner, Kathy Porter, Marian Porter, Catherine Portman, Bob Power, Ted Raczek, Corina Rahmig, Troy Rahmig, Siddharthan Ramachandramurthi, Art Ramirez, George Rawley, Tricia Reed, Crispin Rendon, Virginia Rhodas, Michael Richard, Bob Richmond, Mike Richter, Matt Ritchie, Michael Robertson,

Caroline Rodgers, Tobias Rohmer, Ann Romer, Sarah Ross, Patricia Rouzer, Jim Rowoth, Suzanne Ruckle, Tim Ruckle Jr., Tim Ruckle Sr., Ruth Rudesill, Michael Ruffino, Heather Ryan, Jeff Ryan, Thomas Ryan, Jennifer Rycenga, Donna Sadowy, Nancy Sage, John Santo, Fran Scarlett, Diana Scheel, Lexie Scheel, John Schick, Paul Schorr, Nancy Schorr, Mauricio Schrader, Steve Schwartz, Katie Schwartz, Steve Scott, Jeff Seav, Norman Self, Tracey Sharp, Kathy Sharum, Jackson Shedd, Kathy Shick, Robert Shields, Carolyn Short, Ginny Short, Rodney Siegel, Matthew Simes, Mike Skram, Dale M. Smith, Greg Smith, Michael W. Smith, Curtis Snyder, Tate Snyder, Susan Stanton, Jim Steinert, Sarah Stier, Steve Stocking, Mike Stockton, Brad Stovall, Bruce Strang, Nancy Strang, Linda Swanson, Dan Tankersley, Ian Taylor, Lynn R Thomas, Jennifer Thompson, Christine Tischen, Christine Tisher, Gene Troetschler, Ruth Troetschler, Jeff Trow, Lisa Twiford, Linda Vallee, Ann Verdi, Chuck Verturri, Chantal Villeneuve, Jamie Visinoni, Jim Waddell, Lisa Wadley, Dave Wagner, Annette Waite, Lucy Waite, Zach Wallace, Dee Warenycia, Dean Webb, Daniela Wersin, Kimberly West, Liz West, V. Wheeler, Jonathan Widdicombe, Bruce Wilcox, Bob Wilkerson, Anne Williams, Dan Williams, James Williams, M. Williams, Pam Williams, Bruce Williford, Michael Wilson, Carrie Wingert, Gary Woods, Aaron Works, Lois Wren, Rick Wulbern, Faith Yamane, Chad Young, Ryan Young, and Bill Zachman.

\*\*\* Please let us know if your name is missing from this list! \*\*\*



The Proceedings of the 2003 California Burrowing Owl Symposium, including 20 scientific papers about Burrowing Owls in California, have been published as Bird Populations Monograph No. 1 by The Institute for Bird Populations and Albion Environmental. To learn more about the monograph or to purchase a copy, please visit:

<http://www.albionenvironmental.com/>



**SPECIAL THANKS TO OUR FUNDERS:**

National Fish and Wildlife Foundation

Pacific Gas and Electric Company

California Dept. of Fish and Game

A very generous anonymous donor



**THE INSTITUTE FOR BIRD POPULATIONS**

\*\*\*Visit The Institute for Bird Populations online at [www.birdpop.org](http://www.birdpop.org)\*\*\*

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Lovich, Jeffery E., David Bainbridge. "Anthropogenic Degradation of the Southern California Desert Ecosystem and Prospects for Natural Recovery and Restoration." *Environmental Management*, Vol.24, no. 3. Springer-Verlag New York Inc, 1999. 309-326.

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Leitner, Philip. "Current Status of the Mohave Ground Squirrel." *Transactions of the Western Section of the Wildlife Society*, 44. 2008. 11-29.

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Marzluff, John M., et al. "Spatial use and habitat selection of golden eagles in southwestern Idaho." *The Auk* 114(4). American Ornithologists Union, Oct. 1997. 673-687.

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Murphy, Robert W., et al. "A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise, *Gopherus agassizii*." *Chelonian Conservation and Biology*, 6(2). Chelonian Research Foundation, 2007. 229-251.

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Richardson, Cary T., Clinton K. Miller. "Recommendations for protecting raptors from human disturbance: a review." *Wildlife Society Bulletin* (25)3. The Wildlife Society, 1997. 634-638.

Commenter sent in copyrighted material which could not be posted without breaking copyright law. For your convenience, bibliographic information is included below.

Walker, D. et al. "Resident Golden Eagle ranging behavior before and after construction of wind farm in Argyll." *Scottish Birds* 25. 2004. 24-40.

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CALIF. DESERT DISTRICT  
MORENO VALLEY, CA

June 24<sup>th</sup>, 2010

California Desert District Office

Attn: Janet Eubanks, Project Manager

22835 Calle San Juan de Los Lagos

Moreno Valley, CA 92553

We the Steering Committee for the Ridgecrest Field office of the Bureau of Land Management [BLM] have decided that we would like to go on record as being opposed to the siting, building, and operation of the Solar Millenium power plant [RSPP] currently under review in your office. As indicated in the draft EIS, this project has a number of serious issues which we will first note here, then discuss in more detail below. They are:

1. Use of 600,000 gallons of water a day during construction
2. Use of 200,000 gallons of water a day during operations
3. Use of 191,000 gallons of propane a year
4. Disturbance of 2000 acres of top soil known to have the spores that cause valley fever
5. Proximity of the disturbed soil to human population that includes children and the elderly.
6. Disturbance of 2000 acres of prime desert tortoise habitat
7. Loss of 2000 acres of recreational opportunities
8. Cumulative impacts of this project when added to all the other proposed alternative energy projects in the area.

A. Solar Millenium's solar project is NOT 'green' alternative energy. It is highly consumptive.

1. Water. The proposal as it stands still calls for contemplated use of 200,000 gallons of water A DAY! [B.1-26, B.1-27]] This is after a sustained public outcry from the local community over the sensitive subject of water caused the company to switch from water cooled cooling towers to air cooled ones.

2. This is in addition to a projected use of water as much as THREE times higher during the construction phase of the project. The local water supply is already in an overdraft situation, and a recent Navy comment on this project shares the concern that this project will exacerbate this serious problem.
3. Fuel. The project as it stands will require the use of propane to keep the heat-transferring High Temperature Fluid [HTF] near operating temperature overnight. Propane use is projected to be approximately 1000 gallons a day [C.18], with a permitted limit of 191,000 gallons a year. This is not fuel use for the entire project, but just for ONE PROCESS in the project. Overall fuel use can reasonably be expected to be quite higher, given the number of operations involved.

B. The Draft EIS does not comply with CEQA and NEPA in principle with regards to the issues with the specific proposed project and site.

1. NEPA requires that a FEDERAL agency provide primary oversight and control over projects occurring on Federal lands. The nature of the cooperative agreement between the BLM and the CEC switches these roles, giving primary responsibility for reviewing the scope and impacts of this project to the CEC. Not only is this inappropriate in respect to the letter of NEPA, but as applied to this project it is obvious that the analysis of the impacts of the project has not been analyzed against the backdrop of BLM's responsibilities. In the past, when proposals of this magnitude on BLM land were considered, the discussion would start with a general overview of BLM's responsibilities under FLPMA. Then it would proceed into a meaningful review of how the proposal fits into the various aspects of those responsibilities. This DEIS in contrast pays only lip service to that discussion, foregoing meaningful analysis. The DEIS does indicate at several points that timeliness is an issue with the RSPP [B.2-71] and it is our sincerest hope that in the pressures of time will not preclude staff from taking the time to do this fundamental analysis and include it in their FEIS.
2. Both the letter and the spirit of CEQA and NEPA require a discussion of

consequences and alternatives that will allow the public and decision makers a meaningful opportunity to evaluate the proposal before them

3. The statistics regarding the water and fuel consumption are obscured from meaningful evaluation by constantly being referred to in non-layman's terms [i.e. the water is only listed in acre-feet, the propane in BTU] These usages should be spelled out in statistics readily understandable by ordinary people.

4. A full and frank analysis of the proposed site would identify the issue of valley fever in the proposed site, not have the discussion minimized by discussing it in the Garlock alternative site. [B.2-34] A full and frank discussion of the valley fever issue would involve an analysis of the calculus of risk, that is the probability and magnitude of the risk weighed against the cost of prevention. This calculus was done on the desert tortoise, but ironically, not for the human population!

The calculus would start with a discussion of quality and quantity as it relates to dust, and would include statistics on the likely amounts of spores in the topsoil. Then it would proceed to a discussion on the quantity of wind energy and direction in the area as it relates to moving the spores. Then the analysis would discuss the proximity of the human population to the site, as it relates to the probability and magnitude of harm.

Instead, the DEIS only talks about the applicant's plans to control dust at the site, providing no meaningful discussion about what happens if the dust control measures prove inadequate.

5. A full and frank analysis of the proposed site would identify the issue of unexploded ordinance in the proposed site, not have the discussion minimized by referring to the issue as a sidebar in the Garlock alternative. [B.2-42]

6. A full and frank analysis of the proposed site would identify the issue of secondary dust generation, which is the dust GENERATED by the company twice a week when they propose washing off the mirrors. This is not a

natural occurrence, but a man-made accumulation that is separate from the dust from disturbed soils. Are there differences in the composition of dust [ability to bond and compact] that might change once it has effectively been burned from sitting on the mirrors. We do not know the answer because no one has even addressed the question.

7. A full and frank analysis of the proposed site would identify the issue of pollution from the gradual decomposition of the mirrors and the fact that the company proposes to let the water from the mirror washing just seep into the ground. We do not know the composition of the mirrors, what their useful life expectancy is, or if they are susceptible to decomposition. Since the rinse water will go directly into the ground [B.1-28: "with no appreciable runoff"], these are important things to know.

8. A full and frank analysis of the proposed site would not attempt to minimize the presence of wind in the area as it pertains to frequency, intensity and effects on the surrounding community. At ppC.1-13, wind in the area is characterized as "exceptional events" We find it highly ironic that it should be characterized this way for the purposes of this project when there are 20 other projects in the area banking on the probability that the wind is NOT an exceptional event!

- C. The Draft EIS does not comply with CEQA and NEPA with regards to a full and frank discussion of alternative sites.
1. Preference is to be given to land that has already had 'disturbance.'
  2. The Garlock alternative has just such a disturbance.
  3. NOT located nearly as close to communities and individuals as the RSPP proposed site.[B.2-32]
  4. DEIS discussion of the site does not indicate it has the wildlife issues [ground squirrel, tortoise] that the RSPP has.[B.2-26]
- D. The Draft EIS does not comply with CEQA and NEPA with regards to a full and frank discussion of alternative energy sources.

1. Wind energy will NOT require the consumption of 200k gallons of water a day OR 1000 gallons of propane. [[B.2-66, B.2-73]

2. Wind energy will not have to provide analysis of hazmat containment for miles of HTF fluid and diesel used for plant generators.

3. Wind energy will not have to provide analysis of CO2 or ozone generation.

4. Distributed PV energy is summarily dismissed as an alternative based on timeliness [B.2-71] This makes it sound as if the decision makers MUST make a decision on this project based on whether or not it is the best option on the table TODAY, without regard for the long-term development of projects in the area.

E. There are other specious assertions of this nature in the DEIS, such as the one that approval of the RSPP will add to the diversity of California's energy portfolio [ b.2.-73]. This is a misplaced attempt to use the shield of diversity [used in affirmative action] to protect the project from full and fair comparison against its competition in the marketplace based solely on its merits.

F. The DEIS acknowledges an unmitigatable impact on a prime Desert Tortoise [DT] habitat. The staff of the CEC states at several points in the DEIS that they cannot support the project because of this impact. [pg 20, pg B.2-1, B.2-95] The DEIS correctly notes that the DT has special status in the California desert, and that the project site is part of a prime area for the DT, containing not only an unusually high density, but in a ratio of juveniles to adults “that provides evidence of a successful breeding group...” [C.2-19]

G. The southern project area sits squarely within the northern gateway to the El Paso Mountains, one of the most popular recreational destinations in the Desert District. What is most important and unique about this recreational access point is the exceptional quality and variety of activities within. The 4WD & OHV touring opportunities are exceptional, gem & mineral collecting is renowned, history seeking is very popular, upland game bird hunting is arguably the best in the Desert District. BLM has not yet completed the El Paso Collaborative Access Planning Area (CAPA)

process mandated by the 2005 West Mojave Plan (WEMO). This unique planning process was specifically created to designate motorized routes in the El Paso and Ridgecrest WEMO subregions. An official BLM survey team has just recently collected comprehensive data on all existing motorized routes within this CAPA and that data needs to serve as the baseline network for considering any rerouting of access routes necessitated by this project.

In conclusion, we would like to re-emphasize that we are not opposed to renewable energy in the Ridgecrest area. We are opposed to a highly resource-consuming project with sustained impacts being sited in an environmentally sensitive area, both with regards to wildlife and its proximity to humans.

Respectfully submitted,



CHAIRMAN STEERING COM.

DON J. MCKERNAL

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**From:** [Dunning.Connell@epamail.epa.gov](mailto:Dunning.Connell@epamail.epa.gov)  
**To:** [carspp@ca.blm.gov](mailto:carspp@ca.blm.gov)  
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**Subject:** US EPA Comments on the Ridgecrest Solar Energy Project  
**Date:** 07/12/2010 06:48 PM  
**Attachments:** [US EPA Ridgecrest Solar DEIS Comments 7.12.10.pdf](#)

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Ms. Eubanks,

Please find attached US EPA comments on the Draft Environmental Impact Statement (DEIS) for the Ridgecrest Solar Energy Project.

A mailed version will follow.

Thank you,  
Connell Dunning

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Connell Dunning, U.S. EPA Region IX  
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Learn more about EPA's role in Sustainability:  
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JUL 12 2010

Hector Villalobos  
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Eric Solorio  
Siting, Transmission, and Environmental Protection Division  
California Energy Commission  
1516 Ninth Street, MS-15  
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Subject: Staff Assessment and Draft Environmental Impact Statement (SA/DEIS) for the Ridgecrest Solar Power Project, Ridgecrest, California (CEQ # 20100111)

Dear Mr. Villalobos and Mr. Solorio:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA supports the increased development of renewable energy resources in an expeditious and well planned manner. Using renewable energy resources such as solar power can help the nation meet its energy requirements while minimizing the generation of greenhouse gases. While renewable energy facilities offer many environmental benefits, appropriate siting and design of such facilities are of paramount importance.

BLM is currently considering several hundred proposed renewable energy projects, including thirty-four "fast track" projects that are expected to complete the environmental review process and break ground by December 2010 in order to be eligible for American Recovery and Reinvestment Act funding. Many, if not all, of the total projects being considered are proposed for previously undeveloped sites.

Given the large number of renewable energy project applications currently under consideration, particularly in the Desert Southwest, we encourage BLM to apply its land management authorities in a manner that will promote a long-term sustainable balance between available energy supplies, energy demand, and protection of ecosystems and human health. For decisions regarding right-of-way approvals for such projects, we recommend that BLM consider a broader range of reasonable alternatives to avoid and minimize adverse environmental impacts. Such alternatives could include alternative technologies, reduced project footprints at proposed sites, and alternate sites on and off BLM land, including inactive landfill or other disturbed sites.

that may offer advantages in terms of available infrastructure and less vulnerable habitats. For example, the Garlock Road alternative, evaluated as a California Environmental Quality Act (CEQA) alternative, would be located on disturbed private land and would be less impacting. While the Garlock Road Alternative is outside BLM jurisdiction, EPA recommends that the FEIS fully evaluate this alternative, or another less damaging alternative not on or off BLM land, in accordance with Council on Environmental Quality NEPA implementing regulations which state that agencies “include reasonable alternatives not within the jurisdiction of the lead agency” (40 CFR Part 1502.14). If all evaluated NEPA alternatives for a given project result in significant impacts, we recommend that BLM consider that project in the context of the larger universe of proposed projects and select the No-Action alternative, which would not preclude consideration of the Garlock Road alternative by the California Energy Commission.

The Ridgecrest proposed project is an example of such a case. The proposed project site contains unique habitat for sensitive species, supporting one of the highest concentrations of the federally threatened desert tortoise in the western United States. It is also an important geographic area which supports connectivity and genetic linkage between populations of the State-listed threatened Mohave ground squirrel. The California Energy Commission’s Staff Assessment (SA) recognizes the value of these resources and does not recommend approval of the proposed project. EPA believes there are cases where effective mitigation for impacts on rare or unusual habitat can only be obtained by avoidance.

Our review has also identified significant environmental impacts to groundwater resources and desert wash hydrology, which relate to functioning habitat. As written, the SA/DEIS does not provide sufficient information regarding the viability and effectiveness of proposed mitigation measures that are intended to reduce these impacts to below the level of significance. We believe approval of a right of way for this project on such an ecologically valuable site, and with the potential for such significant environmental degradation, would set an unwise precedent<sup>1</sup> for the many renewable energy right-of-way applications currently under consideration by BLM, which, collectively, could result in severe and immitigable impacts to desert ecosystems. For these reasons, we have rated the DEIS’s preferred alternative as Environmental Objections – Insufficient Information (EO-2) (see enclosed “Summary of Rating Definitions”).

EPA appreciates the opportunity to review this SA/DEIS. When the Final EIS is released for public review, please send one hard copy and one electronic copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3843, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or [vitulano.karen@epa.gov](mailto:vitulano.karen@epa.gov).

Sincerely,



*EM* Enrique Manzanilla, Director  
Communities and Ecosystems Division

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<sup>1</sup> Rating System Criteria, p. 4-5. EPA’s *Policy and Procedures for the Review of Federal Actions Impacting the Environment*. October 3, 1984.

Enclosures: Summary of EPA Rating Definitions  
EPA's Detailed Comments

cc: Janet Eubanks, Project Manager, Bureau of Land Management  
Danielle Dillard, Brian Croft, U.S. Fish and Wildlife Service, Ventura, California  
Michael Picker, California Governor's Office, Sacramento, California  
Jim Abbott, Bureau of Land Management  
Kern Valley Indian Council

## **SUMMARY OF EPA RATING DEFINITIONS\***

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

### **ENVIRONMENTAL IMPACT OF THE ACTION**

#### ***“LO” (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### ***“EC” (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### ***“EO” (Environmental Objections)***

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### ***“EU” (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

### **ADEQUACY OF THE IMPACT STATEMENT**

#### ***Category “1” (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### ***Category “2” (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### ***Category “3” (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

## Water Resources

### *Impacts to Groundwater Resources*

#### Mitigation measures

The proposed mitigation measures for groundwater impacts are undeveloped, and insufficient information is provided to assess their viability. We are concerned that these undeveloped mitigation measures are being used as the basis for concluding that impacts are less than significant, and that resolving the issue of their viability is being deferred until after the lead agencies have already made their decisions.

The proposed project will utilize groundwater from the Indian Wells Valley Groundwater Basin. The Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) indicates this basin is already significantly overdrafted and that project water use will exacerbate this overdraft condition (p. C.9-28). The applicant has proposed a mitigation plan with a portfolio of mitigation measures to offset the proposed project's construction and operation water demand of 215 acre-feet/year (average annualized) (p. C.9-29). The SA/DEIS states that implementing this offset plan (mitigation measure "Soil&Water-3"), along with a requirement to supply an executed agreement for water supply (Soil&Water-2), and a requirement to install water meters (Soil&Water-4), will mitigate impacts to below the level of significance (p. C.9-35, C.9-55).

NEPA requires that an EIS discuss mitigation measures with sufficient detail to ensure that environmental consequences have been fairly evaluated<sup>2</sup>, and an essential component of this discussion is an assessment of whether the proposed mitigation measures can be effective<sup>3</sup>. The SA/DEIS does not discuss the viability of the three mitigation measures it deems feasible, and the discussion that is included reveals significant weaknesses in the mitigation offset plan<sup>4</sup>. We note the following weaknesses for the three offset options that were deemed feasible:

1. *Utilizing the Los Angeles Department of Water and Power (LADWP) Aqueduct for construction water supply.* The offset plan simply states that contact with the Aqueduct Manager has been initiated, but "further details leading to an understanding of the viability of this option and a schedule for implementation are not yet provided but will be when they are understood" (offset plan p. 4-2). This mitigation is not sufficiently developed to support a conclusion that it will mitigate significant impacts.
2. *Underwriting an Indian Wells Valley Water District (IWWVD) xeriscaping program.* The SA/DEIS states that the IWWVD is currently in the process of developing a "cash for grass" rebate program for the City of Ridgecrest and that the project would underwrite a portion of the xeriscaping program to cover 625 homes needed to offset project water demand (p. C.9-

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<sup>2</sup> *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)

<sup>3</sup> *South Fork Band Council of Western Shoshone of Nevada v. DOI*, 588 F.3d 718 (9th Cir. 2009)

<sup>4</sup> Included in SA/DEIS as *Plan of Offsetting Proposed Construction and Operational Water Supply, Ridgecrest Solar Power Project, Data Request 170-172*, February 2010

29, offset plan p. 4-2). Since this program was already under review for development, it does not offer additionality<sup>5</sup> and is therefore not a viable mitigation measure for project impacts.

3. *Implementing an agricultural fallowing program for land grown by Brown Road Farming.* The offset plan states that the applicant would have to meet with the Brown Road Farming landowners to determine if they would be willing to participate in the fallowing program (offset plan p. 4-3). To date, there have been no discussions on how the Project can implement a fallowing program. The schedule for implementation of the program is planned following receipt of the license from the CEC and to be coincident with the initiation of the Project construction. This mitigation is undeveloped and depending on the level of interest by landowners, may not be viable.

Mitigation measures should be fully developed so that an evaluation of their effectiveness can inform the impact assessment conclusions. This evaluation is needed to substantiate conclusions of less-than-significant impacts, and to be consistent with recent court rulings<sup>6</sup>. Without effective viable offsets, impacts to groundwater resources would remain significant.

*Recommendation:* Because groundwater is the exclusive source of water for the area (p. C.9-66), EPA strongly recommends mitigation measures (offsets for project water use) be evaluated for effectiveness to reduce impacts prior to agency decisions. This evaluation should be included in the FEIS. Should they prove to be viable and effective, binding commitments to these measures should be included in the project description and in the lead agencies' conditions of certification and right-of-way terms and conditions.

#### Impacts to nearby water wells

The SA/DEIS acknowledges that local decline of groundwater levels within the cone of depression could affect nearby wells, but concludes that, since groundwater is supplied by the water purveyor under a basin management program, any impacts would be managed as part of the overall groundwater management plan of the groundwater basin (p. C.9-35). This mitigation approach is unclear, especially since the project does not appear to comport with some of the seven management objectives for the Indian Wells Cooperative Groundwater Management Group (p. C.9-11), specifically objectives 1, 2 and 4<sup>7</sup>. Additionally, the document states that miscellaneous private well owners constituted 24% of total production in the basin in 2007 (p. C.9-13). It is not clear how the project will affect these wells nor is there mitigation proposed for impacted residents.

*Recommendation:* In the FEIS, clarify how groundwater impacts would be managed as part of the overall groundwater management plan. Discuss the project's consistency with

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<sup>5</sup> Assurance that the planned reductions would not have occurred anyway (without the additional incentive provided by offset)

<sup>6</sup> *South Fork Band Council of Western Shoshone of Nevada v. DOI*, 588 F.3d 718 (9th Cir. 2009)

<sup>7</sup> Objective No. 1: Limit additional large-scale pumping in areas that appear to be adversely impacted;  
Objective No. 2: Distribute new groundwater extraction within the Valley in a manner that will minimize adverse effects to existing groundwater conditions and maximize the long-term supply within the Valley;  
Objective No. 4: Encourage the use of treated water, reclaimed water, recycled, gray and lower quality water where appropriate and economically feasible.

the management objectives of the groundwater management group. Discuss the options for use of reclaimed water (objective #4) for the project. Discuss how project impacts could affect private well owners, and discuss potential mitigation measures. A possible mitigation measure could be a provision for an alternative water supply should individual well owners be significantly impacted. Since groundwater is the only available source of water in the valley (p. C.9-66), this mitigation appears appropriate.

### ***Impacts to Desert Washes/Hydrology***

#### Hydrologic and erosion impacts

Hydrologic impacts are of concern. The drainage analysis from the applicant, as modified by CEC staff, predicts the potential for significant increases in post-development discharges at all outlet locations as a result of site development (p. C.9-38). The SA/DEIS describes significant hardening and modification of the drainage features to limit channel slope on the eastern side of the northern solar field, and because of sediment concerns, there is need for steeply constructed side slopes for the western side of the northern solar field. Because of the steepness and channelization that would be necessary, no biological benefits will be maintained (p. C.9-42). The document also notes that the operation of the proposed channels and erosion mitigation measures will require significant inspection and maintenance over the life of the facility to ensure the channels are operating as intended and that the potential and observed erosion issues are addressed promptly to minimize damage to the facility and areas beyond the project boundary (p. C.9-43). The document defers design of this mitigation to a later time via submittal of a revised drainage report and channel erosion engineering plans (Soil&Water-10 and 11) that support a drainage design resulting in no more than a 5% increase in post-development discharges at any of the designated outlet locations.

It is not clear whether these designs will be able to prevent unacceptable erosion that could impact El Paso Wash and significantly increase sediment loads to adjacent washes. We also have concerns that reliance on such substantial maintenance will reduce effectiveness of the mitigation, and question whether the main goals of the channel maintenance program, as identified on p. C.9-44, can be met. If such substantial maintenance is needed, the implementation mechanism, accountability, enforcement, and funding of such a program should be identified. In general, the viability of this mitigation is not discussed and the mitigation specifics are deferred to a later approval process. In order to fully evaluate environmental consequences, the EIS must discuss effectiveness of mitigation measures. Without a fully developed and evaluated drainage report and channel erosion engineering and maintenance plans, conclusions that impacts will be less than significant are not supported.

*Recommendation:* In the FEIS, discuss the viability of the needed drainage channel and berm design mitigation and the effectiveness of such designs to prevent significant erosion of El Paso Wash. Describe how post-development discharges within 5% of pre-development discharges would be achieved, and what effect there might be on the overall design of the project. Describe the specifics of the needed maintenance program necessary to prevent significant erosion in El Paso Wash and offsite damage and flooding, including the implementation mechanism, responsible parties, enforcement, and funding sources.

### Compensation for loss of desert wash functions

We commend the project proponent for redesigning the project to avoid most of El Paso Wash. We understand that the Corps of Engineers has determined that the ephemeral washes on site are nonjurisdictional per Section 404 of the Clean Water Act and thus would not require a 404 permit. Regulatory requirements aside, the SA/DEIS acknowledges that mass grading of the unnamed washes on the proposed site would eliminate the hydrological and biological values and functions provided by these features and permanently alter the natural geomorphic and hydrological processes that currently characterize the project site, which, in turn, would fundamentally alter the biological processes that support recruitment of native vegetation and creation of wildlife habitat within the wash and on the associated floodplain. For these reasons, CEC staff has concluded that construction of the proposed project would significantly impact the biological functions and values of the desert washes (p. C.2-30). The project proposes to mitigate these impacts via acquiring compensation lands that contain acreage equal to or greater than that lost on the proposed project site. Availability of such compensation lands should be discussed, including a comparison of the quality and functions of the desert washes to those lost on the project site.

*Recommendation:* In the FEIS, discuss the availability of sufficient compensation lands to replace desert wash functions lost on the project site.

### **Biological Resources**

#### *Unique habitat and sensitive species*

The project site contains unique habitat for sensitive species and biological resources, supporting one of the highest concentrations of the federally threatened desert tortoise (DT) in the western United States. It also is an important geographic area which supports connectivity and genetic linkage between populations of the State-listed threatened<sup>8</sup> Mohave ground squirrel (MGS). Project construction and operation will have a substantial impact through fatality and loss of 2,002 acres of high value DT and MGS habitat (p. C.2-3, C.2-47). The SA/DEIS concludes that these unique qualities are irreplaceable and cannot be fully mitigated, and because of this, CEC staff believe the site should be protected and does not recommend its approval (Executive Summary p. 19). CEC Staff considers the No Project/No Action Alternative to be superior to the proposed project (p. B.2-1).

The proposed project also appears to conflict with the Bureau of Land Management's (BLM) direction regarding land use in relation to wildlife habitat management. The SA/DEIS states that the proposed project is consistent with BLM plans because it is not in a Desert Wildlife Management Area, an Area of Critical Environmental Concern (ACEC), or in designated critical habitat. But as the document notes, while it is not designated as a habitat conservation area or critical habitat, it has been found to support a high population of DT. In addition, the lower one-third of the property is within the Mojave Ground Squirrel Conservation Area (MGSCA), a BLM Wildlife Habitat Management Area (West Mojave Desert Management Plan (WEMO) p. 2-14). While the project right-of-way is only a small part of public lands set aside for MGS

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<sup>8</sup> The U.S. Fish and Wildlife Service published a positive 90-day finding on a petition to list the Mohave ground squirrel, which initiates a status review for determination on Federal listing of the species.

conservation, it contains part of the Sierra Foothills Habitat Connector, a particularly significant migration corridor linking MGS habitats in the northern and southern desert areas. The proposed project has the potential to substantially reduce these biological resource values of the project area, and cumulative impacts to DT are likely to remain significant even after compensatory mitigation (p. C.2-74). CEC staff believes that the impacts may not be mitigable and concludes that the project must be considered inconsistent with an existing land use (p. C.5-33) and the WEMO due to interference with the conservation and protection of sensitive species (p. C.5-41, 46).

EPA agrees with CEC staff that the No Action Alternative is superior to the proposed project. EPA considers habitat alteration and destruction to be among the greatest risks to ecological and human welfare<sup>9</sup> and believes that there are cases where effective mitigation for impacts on rare or unusual habitat can only be obtained by avoiding impacts. Rarely, if ever, is restoration or compensation an adequate mitigation for the loss of these habitats. In such cases, mitigation occurs by siting projects away from habitats of concern<sup>10</sup>.

*Recommendation:* We recommend that the decision-makers heed the recommendations of the CEC staff and pursue renewable resource development on less-pristine lands. Since there are 244 renewable energy projects proposed in California in various stages of the environmental review process or under construction (p. B.3-1), and 21 solar or wind projects within the Ridgecrest Field office, alone (p. C.1-36), sufficient new renewable resources may be developed in the absence of the Ridgecrest project to meet both the State's Renewable Energy Portfolio Standard, and BLM's mandates under the Energy Policy Act of 2005 and the Department of Interior's Secretarial Orders 3283 and 3285. We recommend full evaluation of a less-impacting alternative, such as the Garlock Road alternative (see alternatives comment below) in the FEIS, or the no action alternative.

We understand that consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act has not yet been initiated for the proposed project. The FEIS should provide an update on the consultation process, and we strongly recommend including the Biological Opinion as an appendix.

#### ***Site reclamation/long-term productivity***

The SA/DEIS states that at the end of the term of the right of way, the land would be reclaimed and returned to its prior condition and use, returning to long term productivity (Executive Summary p. A-8), however the document also acknowledges that desert ecosystems are especially sensitive to ground disturbance and can take decades to recover, if at all (p. B.2-49).

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<sup>9</sup> *Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents* (January, 1993), p.1. Available: <http://www.epa.gov/compliance/resources/policies/nepa/habitat-evaluation-pg.pdf>; based on EPA's Science Advisory Board report *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*. Info at: <http://www.epa.gov/history/topics/risk/01.htm>, Full Report available: [http://yosemite.epa.gov/sab/sabproduct.nsf/28704D9C420FCBC1852573360053C692/\\$File/REDUCING+RISK+++++EC-90-021\\_90021\\_5-11-1995\\_204.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/28704D9C420FCBC1852573360053C692/$File/REDUCING+RISK+++++EC-90-021_90021_5-11-1995_204.pdf)

<sup>10</sup> *Habitat Evaluation: Guidance for the Review of Environmental Impact Assessment Documents* (January, 1993), p. 88. Available: <http://www.epa.gov/compliance/resources/policies/nepa/habitat-evaluation-pg.pdf>

*Recommendation:* Provide, in the FEIS, a reasonable estimate of the success of site reclamation that would be expected, and modify the discussion of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity to reflect this.

### **Purpose and Need/Alternatives**

An inappropriately narrow purpose and need statement and unclear site selection criteria have limited the range of reasonable alternatives considered in the SA/DEIS. The SA/DEIS identifies BLM's purpose and need for the project, under NEPA, to be to respond to the project proponent's application for a right-of-way grant (p. A-6). However, the Council on Environmental Quality (CEQ) Regulations<sup>11</sup> specify that the underlying purpose and need to which the agency is responding should be identified, which, in this case, is the need to develop renewable resources and to meet the direction of the Energy Policy Act and Department of Interior (DOI) Secretarial Orders related to renewable energy. Because of the narrow purpose and need statement in the SA/DEIS, BLM concludes that all offsite alternatives, some of which appear to have reduced environmental impacts, such as the Garlock Road Alternative<sup>12</sup>, are unreasonable because none would accomplish the purpose and need for the proposed action (p. B.2-2). This approach is not consistent with CEQ guidance that advises that alternatives outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if they are reasonable<sup>13</sup>. The definition of a reasonable alternative used in the SA/DEIS is not consistent with CEQ guidance, which defines reasonable alternatives as those that are practical or feasible from the technical and economic standpoint and using common sense<sup>14</sup>.

In addition, it is unclear why the site selection criteria identified on page B.2-17 include a criterion that the site be large enough to include a 250 MW solar power plant, especially since two other alternatives that were evaluated under NEPA and, thus, presumably deemed reasonable, would construct smaller solar power projects (Alternatives 1 and 2 for 146 MW and 104 MW, respectively). This criterion of 250 MW was also used to dismiss alternatives that would locate the project on disturbed sites (Ridgecrest landfill, p. B.2-62) and that would use distributed solar photovoltaics (p. B.2-63, 71).

*Recommendation:* The FEIS should expand the range of alternatives to include those outside the legal jurisdiction of BLM, especially if they are evaluated for the State cooperating agency (CEC) such as the less impacting Garlock Road alternative. The FEIS should also consider those that are less than 250 MW in size. If the alternatives analysis is not expanded, the decision-makers should consider the larger universe of renewable energy projects under review on BLM land and strongly consider selecting the second or third No-Action alternative<sup>15</sup> for the proposed project.

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<sup>11</sup> 40 CFR 1500-1508

<sup>12</sup> The Garlock Road alternative would be located on disturbed land and would have fewer impacts to biology, cultural resources, land use, recreation, noise and vibration, public health and safety, and soils and water than the proposed action (p. B.2-46).

<sup>13</sup> *Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, Question 2b, Available: <http://ceq.hss.doe.gov/nepa/regs/40/1-10.HTM#2>

<sup>14</sup> *Ibid*, Question 2a

<sup>15</sup> The 2<sup>nd</sup> No-Action alternative denies the project and amends the California Desert Conservation Area

## **Air Quality**

### ***General Conformity***

The statement in the SA/DEIS that compliance with existing Air District rules and regulations would ensure compliance with the air quality plans (p. C.1-39) is not a basis for conformity. The statement should pertain to conformity of project emissions with air quality plans. If the project is specified in the particulate matter greater than ten microns (PM<sub>10</sub>) maintenance plan for the area and its emissions were included as part of an emissions budget in that EPA-approved plan, that would be one basis for a positive determination of conformity. If the project is not specified in the plan, a letter from the Kern County Air Pollution Control District stating that the project emissions will not interfere with maintenance of the federal PM<sub>10</sub> National Ambient Air Quality Standards (NAAQS) and are of a type and extent that were included in development of their plan, that would be another basis for a positive conformity determination.

The proposed project would require that BLM conduct a formal federal conformity determination under the General Conformity rule (40 CFR Parts 51 and 93) for PM<sub>10</sub> since the estimated construction emissions would exceed the de minimis level of 100 tons per year.

*Recommendation:* Clarify the basis for conformity in the FEIS. Per 40 CFR 93.155, BLM is required to provide EPA Region 9, in addition to other agencies, a 30-day notice that describes the proposed action and BLM's draft conformity determination on the action. This conformity determination for PM<sub>10</sub> should be completed before the Federal action begins. While it is not required, we recommend that this determination be part of the NEPA documentation.

### ***Additional Air Quality comments***

- The analysis of greenhouse gas emissions does not include the impacts from the loss of carbon sequestration from vegetation loss (p. C.1-94).
- The air quality modeling included 17 sources (p. C.7-15), but the sources are not identified in the SA/DEIS. It is not clear, for example, whether emissions from the Land Treatment Unit (LTU) were included.

## **Cultural Resources**

The SA/DEIS identifies the concerns expressed by tribal groups, including the Kern Valley Indian Council, concerning the proposed project, specifically the likelihood of disturbing burials, destruction of archaeological sites, and the proximity of the project to the El Paso Mountains sacred lands. It notes that two individuals from the Kern Valley Indian Council took California Energy Commission and BLM staff on a tour of a portion of the sacred area. A programmatic agreement (PA) pursuant to Section 106 of the National Historic Preservation Act is being prepared, and the SA/DEIS, in some places, indicates that tribal groups are involved in this coordination, but omits them in other references to the PA preparation. It does state that BLM and Energy Commission staffs anticipate that the draft PA would be available for public comment concurrent with the publication of the final environmental impact statement.

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(CDCA) plan to classify the site as unsuitable for large-scale renewable energy development; the 3<sup>rd</sup> No-Action alternative simply denies the project and takes no action on the CDCA plan.

*Recommendation:* The FEIS should discuss how the concerns raised by Tribes were addressed and resolved, provide an update on the status of the programmatic agreement and whether coordination with Tribes is occurring, and indicate whether the Tribes are in agreement that the programmatic agreement will reduce impacts to prehistoric and sacred sites to less than significant.

### **Land Treatment Unit**

The SA/DEIS does not provide much information regarding the land treatment unit (LTU) and its operations. There is practically no information in the project description, and only limited information provided in the Waste Management chapter. We note a discrepancy in the description of the liner under the LTU: page C.13-16 states it will be constructed with a clay liner at least five feet deep, while page C.9-36 states that the clay liner will be two-feet thick on top of 3 feet of native soil.

*Recommendation:* We recommend providing additional detail regarding project operations as they relate to the identification and removal of soil contaminated by spills and leaks of Heat Transfer Fluid (HTF), including frequency, in the project description. Clarify the LTU liner composition.



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05/01/2010 08:56 AM

To Florence Smith/CASO/CA/BLM/DOI@BLM  
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Subject Fw: 09AFC9 Ridgecrest Solar Power; CURE SA Comments

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cc



Subject 09AFC9 Ridgecrest Solar Power; CURE SA Comments

Attached in pdf format are (1) DOCKET OFFICE COVER LETTER and (2) COMMENTS OF CALIFORNIA UNIONS FOR RELIABLE ENERGY ON THE STAFF ASSESSMENT AND DRAFT ENVIRONMENTAL IMPACT STATEMENT AND DRAFT CALIFORNIA DESERT CONSERVATION AREA PLAN AMENDMENT. The requisite hard copies will follow via U.S. Mail. If you encounter problems with the receipt of these documents, please contact Bonnie Heeley at the email address or phone number listed below.

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April 30, 2010

California Energy Commission  
Attn: Docket No. 09-AFC-9  
1516 Ninth Street, MS-4  
Sacramento, CA 95814-5512

Re: Ridgecrest Solar Power Plant Project; 09-AFC-9

Dear Docket Clerk:

Enclosed are an original and one copy of COMMENTS OF CALIFORNIA UNIONS FOR RELIABLE ENERGY ON THE STAFF ASSESSMENT AND DRAFT ENVIRONMENTAL IMPACT STATEMENT AND DRAFT CALIFORNIA DESERT CONSERVATION AREA PLAN AMENDMENT. Please process the document, conform and return a copy in the envelope provided.

Thank you for your assistance.

Sincerely,

/s/

Elizabeth Klebaner

EK:bh  
Enclosures

2321-020a

**STATE OF CALIFORNIA**

**Energy Resources Conservation  
and Development Commission**

In the Matter of:

The Application for Certification for the  
Ridgecrest Solar Power Plant Project

Docket No. 09-AFC-9

**COMMENTS OF  
CALIFORNIA UNIONS FOR RELIABLE ENERGY  
ON THE STAFF ASSESSMENT AND  
DRAFT ENVIRONMENTAL IMPACT STATEMENT AND DRAFT  
CALIFORNIA DESERT CONSERVATION AREA PLAN AMENDMENT**

April 30, 2010

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Attorneys for the CALIFORNIA  
UNIONS FOR RELIABLE ENERGY

California Unions for Reliable Energy (“CURE”) submits these comments pursuant to the March 29, 2010 Notice of Availability of Staff Assessment, Draft Plan Amendment, Draft Environmental Impact Statement for the Ridgecrest Solar Power Project (“SA/DEIS”).

The SA/DEIS fails to satisfy both the requirements of the California Environmental Quality Act (“CEQA”) and the Commission’s regulations. Under CEQA, a draft environmental review document must include a description of the proposed project, its environmental setting, a description of the project’s significant environmental effects, and a statement of the measures proposed to mitigate such environmental effects. (Cal. Code Regs., tit. 14, § 15122-15130; *see also* Pub. Resources Code § 21100.) Under the Commission’s regulations, a staff assessment must be sufficient to “inform interested persons and the commission of the environmental consequences of the proposal . . . and indicate the staff’s positions on the environmental issues affecting a decision on the applicant’s proposal.” (Cal. Code Regs., tit. 20, § 1742.5(c).) The SA/DEIS fails to inform the public in such a way that it can intelligently weigh the environmental consequences of the Project because it is admittedly incomplete.

At the April 22 and 23 workshops on the SA/DEIS, staff indicated that the March 29, 2010 assessment does not constitute their testimony for the purpose of evidentiary hearings because it is incomplete. Staff is working diligently to complete its analysis; however, the SA/DEIS is incomplete in

several core areas, including air quality, biological resources, cultural resources, hazardous materials, land use, soil and water, traffic, transmission engineering, and worker safety. Staff's analysis does not include the Applicant's recent revisions to the Project design, the biological and cultural resources survey data for all Project disturbance areas, and adequate mitigation measures to reduce all potentially significant Project impacts to a level of insignificance.

For example, the SA/DEIS does not include an analysis of an additional fuel depot and evaporation ponds that the Applicant recently added to the Project design. The SA/DEIS also does not include the results of the Applicant's ongoing biological and cultural survey data for the Project's linear features and changed Project footprint, or an assessment of the Project's downstream transmission interconnection impacts. Staff has also yet to include conditions of certification to mitigate the Project's potentially significant impacts to cultural resources, area hydrology, and worker safety with respect to potential exposure to coccidiomycosis during Project grading activities. Staff is also continuing to identify new information regarding the Project and its environmental setting. The Project would be sited in the vicinity of two formerly used defense sites. Yet, the SA/DEIS contains only a cursory and inconclusive discussion of munitions and explosive of concern suspected to exist on the Project site. Just three days

ago, on April 27, 2010, staff received new information regarding the potential presence of unexploded ordnance at the Project site.

The SA/DEIS is so fundamentally and basically inadequate so as to preclude meaningful public review of the Project. (See Cal. Code Regs., tit. 14, § 15088.5 (a)(4); see, e.g., *Cadiz Land Co. v. Rail Cycle L.P.*, 83 Cal. App. 4th 74, 95 (2000); *Save Our Peninsula Committee v. Monterey County Board of Supervisors*, 87 Cal. App. 4th 99, 130 (2001).) When Staff has prepared a complete analysis, it must be circulated for public review and comment, in accordance with CEQA. (See Pub. Resources Code, § 21091(b); Cal. Code Regs, tit. 14, § 15105(a); 15025(d).)

Dated: April 30, 2010

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_  
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Attorneys for the CALIFORNIA UNIONS  
FOR RELIABLE ENERGY

**DECLARATION OF SERVICE  
RIDGECREST SOLAR POWER PROJECT  
Docket No. 09-AFC-9**

I, Bonnie Heeley, declare that on April 30, 2010, I served and filed copies of the attached **COMMENTS OF CALIFORNIA UNIONS FOR RELIABLE ENERGY ON THE STAFF ASSESSMENT AND DRAFT ENVIRONMENTAL IMPACT STATEMENT AND DRAFT CALIFORNIA DESERT CONSERVATION AREA PLAN AMENDMENT** dated April 30, 2010. The original document, filed with the Docket Office, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_ridgecrest/Ridgecrest\\_POS.pdf](http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest/Ridgecrest_POS.pdf).

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Office via email and U.S. Mail as addressed below.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, CA on April 30, 2010.

\_\_\_\_\_/s/\_\_\_\_\_  
Bonnie Heeley

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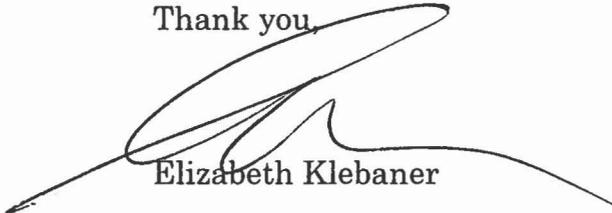
Mr. Eric Solorio  
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Re: CURE's Supplemental Comments on the Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment

Dear Mr. Solorio:

Pursuant to the April 29, 2010 Committee order, please find enclosed CURE's Supplemental Comments on the Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment.

Thank you,



Elizabeth Klebaner

EK:bh

2321-022a

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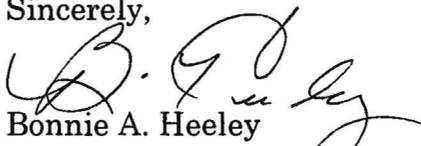
Re: 09-AFC-9 Ridgecrest Solar Power Plant Project

Dear Docket Clerk:

Enclosed are an original and one copy of California Unions for Reliable Energy's Supplemental Comments on the Staff Assessment and Draft Environmental Impact Statement. Please process the document and provide us with a conformed copy in the envelope provided.

Thank you.

Sincerely,

  
Bonnie A. Heeley  
Administrative Assistant

:bh  
Enclosures

**SUPPLEMENTAL COMMENTS**  
of the  
**CALIFORNIA UNIONS FOR RELIABLE ENERGY**  
on the  
Staff Assessment/Draft Environmental Impact Statement  
Ridgecrest Solar Power Project  
Application for Certification (09-AFC-9)

May 21, 2010

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On behalf of California Unions for Reliable Energy (“CURE”), this letter provides supplemental comments on the Staff Assessment/Draft Environmental Impact Statement (“SA/DEIS”) for the Ridgcrest Solar Power Project (“Project”).

The SA/DEIS provides an excellent snapshot of a Project under development. However, the SA/DEIS does not meet the standard of an informational document under CEQA. The SA/DEIS does not allow the public to intelligently weigh the environmental consequences of the Project because it was incomplete when it was published and has since been superseded, in part, by new Project changes submitted by the Applicant. As a result, the SA/DEIS does not yet inform the public about the Project, as currently proposed, its potentially significant environmental impacts, and any feasible and enforceable mitigation measures that would reduce those impacts to a level of insignificance. Staff’s revised analysis (“RSA”) must be recirculated for public comment, and the public must be given an adequate opportunity to review the significant new information that will be added to the RSA, in accordance with CEQA.

## **I. THE SA/DEIS DOES NOT ACCOMPLISH ITS PURPOSE AS AN INFORMATIONAL DOCUMENT**

In the approval process for an application for certification of a power plant project, the Commission acts as lead agency under CEQA.<sup>1</sup> In all essential respects, its process is functionally equivalent to that of all other CEQA proceedings.<sup>2</sup> The SA/DEIS serves as the functional equivalent of a draft environmental impact report,<sup>3</sup> which must be prepared by Staff to inform decision-makers and the public of a project’s environmental impacts.<sup>4</sup> The SA/DEIS, like an environmental impact report, is the “heart” of this requirement.<sup>5</sup> The environmental impact report has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.”<sup>6</sup>

The SA/DEIS also must ensure that the Project avoids or reduces environmental damage when possible by requiring alternatives or mitigation

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<sup>1</sup> Pub. Resources Code, § 25519(c).

<sup>2</sup> Pub. Resources Code, § 21080.5.

<sup>3</sup> See Memorandum of Understanding Between the U.S. Department of the Interior, Bureau of Land Management California Desert District and the California Energy Commission Staff, Concerning Joint Environmental Review For Solar Thermal Power Plant Projects, p. 4, available at [http://www.energy.ca.gov/siting/solar/BLM\\_CEC\\_MOU.PDF](http://www.energy.ca.gov/siting/solar/BLM_CEC_MOU.PDF) (“[t]he assessments provided by the Parties must be sufficient to meet all federal and state requirements for NEPA and CEQA and shall be included as part of the joint Preliminary Staff Assessment/Draft Environmental Impact Statement and the joint Final Staff Assessment/Final Environmental Impact Statement.”)

<sup>4</sup> Cal. Code Regs., tit. 14, § 15002, subd. (a)(1) (hereafter CEQA Guidelines).

<sup>5</sup> *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 84.

<sup>6</sup> *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795.

measures.<sup>7</sup> The environmental review document serves to provide public agencies, and the public in general, with information about the effect that a proposed project is likely to have on the environment, and to “identify ways that environmental damage can be avoided or significantly reduced.”<sup>8</sup> If a project has a significant effect on the environment, the agency may approve the project only upon a finding that it has “eliminated or substantially lessened all significant effects on the environment where feasible,” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns” specified in Public Resources Code section 21081.<sup>9</sup>

The dual purpose of the environmental impact report is echoed in the Commission’s regulations. The staff assessment must be sufficient to “inform interested persons and the commission of the environmental consequences of the proposal . . . and indicate the staff’s positions on the environmental issues affecting a decision on the applicant’s proposal.”<sup>10</sup> The Commission’s regulations place the burden on the Applicant to show a reasonable likelihood that the principal adverse impacts on the environment can be mitigated or avoided.<sup>11</sup>

The Applicant has not met its burden, and the SA/DEIS does not meet the requirements of CEQA or the Commission’s regulations. As we briefly set out in our initial comments on the SA/DEIS, the SA/DEIS is fundamentally and basically inadequate and precludes meaningful agency and public review of the Project because the Applicant has not yet provided information that is core to Staff’s analysis.<sup>12</sup>

#### **A. The SA/DEIS Does Not Provide a Stable and Finite Project Description**

“[A]n accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document].”<sup>13</sup> The SA/DEIS fails to set forth a coherent Project description. The SA/DEIS should be revised to include a complete description of the reconfigured Project, and to provide a stable and accurate Project description across all resource areas.

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<sup>7</sup> Cal. Code Regs., tit. 14, § 15002, subd. (a)(2)-(3); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs.* (2001) 91 Cal.App.4th 1344, 1354.

<sup>8</sup> Cal. Code Regs., tit. 14, § 15002, subd. (a)(2).

<sup>9</sup> *Ibid.*; Cal. Code Regs., tit. 14, § 15092, subd. (b)(2)(A)-(B).

<sup>10</sup> Cal. Code Regs., tit. 20, § 1742.5(c).

<sup>11</sup> Cal. Code Regs., tit. 20, § 1723.5(a)(2); *see* Cal. Code Regs., tit. 20, § 1704(a)(3).

<sup>12</sup> *See* Cal. Code Regs., tit. 14, § 15088.5 (a)(4); *see, e.g., Cadiz Land Co. v. Rail Cycle L.P.*, 83 Cal. App. 4th 74, 95 (2000); *Save Our Peninsula Committee v. Monterey County Board of Supervisors*, 87 Cal. App. 4th 99, 130 (2001).

<sup>13</sup> *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193.

1. The SA/DEIS Must Be Revised to Fully and Clearly Describe the Reconfigured Project

The configuration of the Project was revised by the Applicant in order to reduce direct impacts to the El Paso Wash. However, the SA/DEIS fails to provide a clear and complete description of the Project with respect to the Applicant's originally proposed Project footprint. Specifically, information regarding the relative size of the reconfigured solar fields, changes to the Project linear features, and the engineering changes resulting from the reconfiguration of the facility are absent from the Project Description and Alternatives chapter of the SA/DEIS; this information is buried in the Cultural Resources chapter.

The organization of the RSA should be revised so that the public can readily understand the reconfigured Project before embarking on a review of its environmental impacts. This information is key to the public's understanding of the Project under review. The following information, taken from the Cultural Resources chapter of the SA/DEIS, should be included in the beginning of the document, in the Project Description and Alternatives chapter of the RSA:

This adjustment [of the southern solar field] results in an *approximate 4% reduction in the area of disturbance of the southern solar field*;<sup>14</sup>

The area of disturbance associated with the north solar field has *increased by approximately 25%* to offset the reduction of the south solar field;<sup>15</sup>

Engineered drainages along the perimeters of both the north and south solar fields *are being* [or, have been] *redesigned* to accommodate the new solar field configuration;<sup>16</sup>

To mitigate the overall *losses in process efficiency* resulting from the new configuration, the process performance of the steam cycle was improved by adding cells to the air cooled condenser;<sup>17</sup>

The movement of the power block to the north of Brown Road will result in a *longer gen tie line alignment* [increasing its length] from *1,250 ft to 3,900 ft*;<sup>18</sup>

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<sup>14</sup> SA/DEIS, p. C.3-23 (emphasis added).

<sup>15</sup> *Id.* at p. C.3-24.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*, p. C.3-25.

The reconfiguration will also result in the need for the gen-tie line to cross over *Brown Road*;<sup>19</sup>

HTF piping will span over *El Paso Wash* via a new pipe bridge, under *Brown Road* via a pair of culverts, and onward into the south solar field.<sup>20</sup>

A clear and consistent description of the proposed Project should also be incorporated across all resources areas of the RSA to facilitate the public's understanding of the Project's potentially significant environmental impacts.

## 2. The SA/DEIS Does Not Consider All of the Project's Emitting Units

The SA/DEIS does not include in its analyses of the Project's air quality impacts, the proposed land treatment unit ("LTU") for the bioremediation of soils contaminated by spills and leaks of heat transfer fluid ("HTF").<sup>21</sup> According to the Application for Certification ("AFC"), the Project will use one LTU which will be designed in accordance with a facility-specific WDR permit from the Lahontan Regional Water Quality Control Board.<sup>22</sup> Fugitive VOC emissions from the Project LTU have been estimated at 0.169 lb/day and 0.031 tons/year for one 250-MW power block.<sup>23</sup> Although the Applicant has not yet provided Staff with the exact description of the LTU, nor obtained approval for its design from the Lahontan Regional Water Quality Control Board, the LTU "is expected to comprise an area of about 8 acres."<sup>24</sup> Once the Applicant supplies Staff with the necessary data, the RSA should be revised to provide a consistent Project description across all resource areas. In particular, the Air Quality chapter of the RSA should include the LTU.

The RSA should also be revised to include an analysis of potentially significant impacts to air quality and public health resulting from the Project's new and altered emissions units, including a new fuel depot and the changed daily operations of the Project's cooling tower.<sup>25</sup> These Project changes were made by the Applicant after the publication of the SA/DEIS and are discussed more fully in Section II of these comments.

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<sup>19</sup> *Id.*

<sup>20</sup> *Id.* (emphasis added).

<sup>21</sup> Compare SA/DEIS, p. B.1-3 and SA/DEIS, p. C.1-15.

<sup>22</sup> AFC, pp. 5.16-19-20.

<sup>23</sup> See Exhibit A.

<sup>24</sup> SA/DEIS, p. B.1-30.

<sup>25</sup> See SA/DEIS, p. C.7-12 and pp. C.1-15-1.16, C.1-18.

### 3. The SA/DEIS Does Not Consider the Out-of-Field Extension of the Project's HTF Piping System

HTF is a synthetic hydrocarbon liquid mixture of diphenyl ether and biphenyl, and is classified as a hazardous material by the State of California.<sup>26</sup> During Project operation, HTF is heated to 750°F and piped through a series of heat exchangers where it releases its stored heat to generate high pressure steam.<sup>27</sup> The reconfigured Project proposes to extend HTF piping from the power block and over the El Paso Wash, to connect the northern and southern solar fields.<sup>28</sup> However, the SA/DEIS does not evaluate this potentially hazardous element of the Project because the Applicant has not yet provided a complete description of its design.<sup>29</sup>

While the SA/DEIS requires the Applicant to reduce the potential hazards related to out-of field reaches of the HTF piping system where it would cross Brown Road (by undergrounding the piping and restricting access to the pipe), no mitigation is required for the portion of the HTF pipe that would extend over the El Paso Wash.<sup>30</sup> Absent such mitigation, it is difficult to understand how the reconfigured Project would avoid impacts to the El Paso Wash as intended. The RSA should be revised to include an analysis of the unprotected HTF piping over the El Paso Wash and its potentially significant impacts to public safety and the environment.

#### **B. The Applicant Has Not Yet Provided All Baseline Data to Staff**

CEQA defines “baseline” as the physical environment as it exists at the time CEQA review is commenced.<sup>31</sup> The identification of the environmental baseline is the starting point for an environmental impact analysis.<sup>32</sup> An accurate description of the environmental setting is critical to an accurate, meaningful evaluation of environmental impacts. Before the impacts of a project can be assessed and mitigation measures considered, an [environmental review document] must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined.<sup>33</sup> In other words, the

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<sup>26</sup> SA/DEIS, p. B.1-6.

<sup>27</sup> AFC, p. 1-1.

<sup>28</sup> *Id.* (emphasis added).

<sup>29</sup> SA/DEIS, p. C.4-8.

<sup>30</sup> *Id.* See Project Description Figure 1, dated March 2010, for a depiction of the Applicant's reconfigured Project.

<sup>31</sup> Cal. Code Regs., tit. 14, §15125(a); *Riverwatch v. County of San Diego* (1999) 76 Cal.App.4th 1428, 1453 (“*Riverwatch*”).

<sup>32</sup> See, e.g., *Communities for a Better Environment v. South Coast Air Quality Management District* (March 15, 2010) 48 Cal.4th 310, 316; *Fat v. County of Sacramento* (2002) 97 Cal.App.4th 1270, 1278 (“*Fat*”), citing Remy, et al., Guide to the Calif. Environmental Quality Act (1999) p. 165.

<sup>33</sup> *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.

determination of baseline conditions is the first, rather than the last step, in the environmental review process.<sup>34</sup>

1. The Applicant Has Not Provided Baseline Data for the Project's Linear Features

The Project will require the construction of a 4.6 mile long water pipeline to supply water from the Indian Wells Valley Water District for Project construction and operation.<sup>35</sup> Construction of the pipeline would disturb approximately 16.3 acres, and will be located within the China Lake Boulevard and Brown Road County right of ways.<sup>36</sup> At the time of publication of the SA/DEIS, the Applicant had not supplied Staff with focused surveys and vegetation mapping results for the proposed water pipeline route. Therefore, the SA/DEIS lacks information regarding the quality of habitat and the species that would be disturbed within the 16.4 acres of temporary and permanent disturbance caused by the construction and operation of the proposed water pipeline.<sup>37</sup>

The Project will also require a realignment of the proposed transmission line, which will result in a larger area of disturbance than the originally proposed transmission alignment. Specifically, in order to connect with the power block, the gen-tie will cross over Brown Road and will increase in length from 1,250 to 3,900 feet.<sup>38</sup> The total area of disturbance resulting from the construction of the transmission line is estimated at 58.2 acres.<sup>39</sup> The Applicant has not yet provided Staff with the survey results detailing "habitat(s) associated with the proposed transmission line route."<sup>40</sup> Therefore, the SA/DEIS also lacks baseline information regarding the quality of habitat and the species that would be disturbed within the proposed alignment of the transmission line.

Although the SA/DEIS sets forth estimates of Project impacts to vegetation communities, special status species, and cultural resources, this analysis may have to be revised after the Applicant completes surveys of the baseline conditions along the Project's linear features and submits final Project plans to Staff.<sup>41</sup> The RSA must be recirculated for public review and comment once Staff incorporates this

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<sup>34</sup> *Save Our Peninsula Committee*, 87 Cal.App.4<sup>th</sup> at 125.

<sup>35</sup> SA/DEIS, p. C.2-4.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> SA/DEIS, p. C.3-25.

<sup>39</sup> See SA/DEIS, p. C.2-28.

<sup>40</sup> SA/DEIS, pp. C.2-5, C.2-28-29.

<sup>41</sup> See, e.g., SA/DEIS, p. C.3-103 ("[I]t is possible that there would be some additional ground disturbing work that might be necessary in the course of maintenance to the subsurface linear facilities and that such activity could affect resources that had escaped damage in the original construction. Monitoring of such work will be addressed in subsequent documents, in particular the Programmatic Agreement.")

outstanding information regarding the Project setting into its environmental analysis.

2. The Applicant Has Not Provided Baseline Data for the Entirety of the Project Footprint

With the reconfigured Project alternative, the acreage of disturbance area has increased from approximately 1,738 acres to 2,002 acres.<sup>42</sup> The Applicant has not yet provided the survey results for the several hundred acres that were not previously surveyed for biological resources or mapped for vegetation communities. Similarly, direct impacts to cultural resources could not be assessed at the time of publication of the SA/DEIS.<sup>43</sup> The RSA must be revised to account for the changed area of impact once the Applicant submits baseline data for the entire Project footprint, and that analysis must be made available for public review in accordance with CEQA.

3. The Applicant Has Not Yet Provided Baseline Data for the Golden Eagle

The Eagle Protection Act requires an incidental take permit for the take of golden eagles. The Project site contains potential foraging habitat for golden eagles, and there are known nesting locations within the estimated foraging distance for golden eagles.<sup>44</sup> However, the SA/DEIS does not identify the number of golden eagles that could potentially be impacted by the Project because the Applicant has not yet submitted results of focused golden eagle surveys to Staff.<sup>45</sup> The RSA must be revised to identify whether the Project could potentially affect take of the golden eagle and the number of eagles that would potentially be impacted by the Project. Staff's analysis must also be made available for public review in accordance with CEQA.

**C. The SA/DEIS Must Disclose And Analyze All Potentially Significant Impacts**

CEQA requires the SA/DEIS to disclose and analyze *all* potentially significant adverse environmental impacts of a proposed project.<sup>46</sup> Similarly,

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<sup>42</sup> *Id.*

<sup>43</sup> See SA/DEIS, p. C.3-25 ("In addition, regarding the less efficient use of land area, the staggered field configuration results in triangular spaces at the "offsets" in the field design that may be disturbed in the process of grading the site. These areas are currently being evaluated to minimize any impact.") ("The disturbed areas west of the south field may be able to be further reduced at such time as SCE has finalized their design for the realignment.")

<sup>44</sup> SA/DEIS, p. C.2-31.

<sup>45</sup> *Id.*, at C.2-32.

<sup>46</sup> Pub. Resources Code, § 21100(b)(1).

Commission regulations require that Staff give “complete consideration of significant environmental issues in the proceeding.”<sup>47</sup>

1. The SA/DEIS Does Not Disclose and Analyze All of the Project’s Potentially Significant Impacts to Air Quality

The analysis of Project operational emissions is no longer accurate. The SA/DEIS provides that the Project’s two-cell cooling tower would have a maximum daily run time of 16 hours a day. However, on May 12, 2010, the Applicant requested a revision to the Kern County Air Pollution Control District’s permit conditions that would allow the Project’s wet cooling tower to operate 24 hours per day rather than 16 hours per day.<sup>48</sup> This Project change increases the daily emissions of PM10 and PM2.5 above the amounts analyzed in the SA/DEIS. The SA/DEIS also does not analyze emissions from recently added Project components.<sup>49</sup>

The SA/DEIS may no longer reflect an accurate analysis of the Project’s impacts on air quality during construction. At the April 22, 2010 public workshop, Staff indicated that more stringent measures for dust suppression during grading may be included in the RSA to reduce and minimize worker exposure to the coccidiomycosis fungus (also known as Valley Fever) during construction grading activities.<sup>50</sup> The implementation of enhanced dust control measures, such as increased frequency of watering, would increase emissions from diesel trucks during construction above the levels analyzed in the SA/DEIS. The RSA should be revised consistent with the proposed changes to construction activities, and Staff’s analysis must be recirculated for public review and comment in accordance with CEQA.

2. The SA/DEIS Does Not Analyze the Project’s Potentially Significant Impacts to the Golden Eagle

As has already been discussed, the SA/DEIS does not include an analysis of Projects impacts to the golden eagle because the Applicant has not yet submitted baseline information regarding this species for Staff’s review and analysis. The information will be included in the RSA and must be made available for public review and comment in accordance with CEQA.

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<sup>47</sup> *Id.*, § 1742.5(d).

<sup>48</sup> Letter to Mr. Glen Stephens, Kern County Air Pollution Control District from Billy Owens, Director Project Development Solar Millennium, LLC, regarding Application for a Change of Conditions for the Cooling Tower at the Ridgecrest Solar 1, LLC Power Project, May 12, 2010.

<sup>49</sup> See Comments Section II.

<sup>50</sup> See also SA/DEIS, p. C.14-34.

3. The SA/DEIS Does Not Disclose and Analyze the Project's Potentially Significant Impacts to Cultural Resources

The SA/DEIS identifies 71 cultural resources that will be directly impacted by the Project,<sup>51</sup> and concludes that 14 cultural resources and 17 archaeological sites, 13 prehistoric sites, and 4 historic sites in the inventory of the Project area are eligible for listing in the California Register of Historic Resources and for inclusion in the National Register of Historic Places.<sup>52</sup> However, the SA/DEIS does not provide an analysis of the Project's impacts to these resources. The SA/DEIS makes no secret of the fact that an impact analysis has not yet been conducted. It states,

Staff *would* assess as significant and adverse all project-related construction impacts . . . to all known resources located in the APE (Area of Potential Effects).<sup>53</sup>

With regard to impacts as a result of Project operation, the SA/DEIS states,

[i]t is possible that there would be some additional ground disturbing work that might be necessary in the course of maintenance to the subsurface linear facilities and that such activity could affect resources . . . Monitoring of such work *will be* addressed in subsequent documents, in particular the Programmatic Agreement.<sup>54</sup>

At such time that Staff completes its impact analysis, the analysis must be included in the RSA and recirculated for public review and comment in accordance with CEQA.

4. The SA/DEIS Does Not Disclose and Analyze All Potentially Significant Impacts to Public Safety

The SA/DEIS does not discuss the Project's potentially significant impacts to public safety and the environment from the exposed portion of HTF piping that would extend beyond the Project security fence and over the El Paso Wash. The RSA must include an analysis of such impacts, and the public must be given an opportunity to review and comment on the revised analysis in accordance with CEQA.

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<sup>51</sup> SA/DEIS, p. C.3-51.

<sup>52</sup> SA/DEIS, pp. C.3-87-88.

<sup>53</sup> SA/DEIS, p. C.3-108 (emphasis added).

<sup>54</sup> *Id.* at p. C.3-103 (emphasis added).

5. The SA/DEIS Must Disclose and Analyze All Potentially Significant Impacts Associated with Transmission System Engineering

The SA/DEIS correctly states that the Commission is required under CEQA to conduct environmental review of the whole of the Project, which may include facilities not licensed by the Commission.<sup>55</sup> As such, the Commission must analyze the Project's downstream transmission impacts.<sup>56</sup> The SA/DEIS further states that, "[t]he Phase I Interconnection Study (Phase I Study) results no longer provide a meaningful forecast of the reliability impacts of the proposed project" and that reliance on the Phase I Study would be tantamount to "idle speculation."<sup>57</sup>

According to the SA/DEIS, the Phase II Interconnection Study will not be completed until September, 2010,<sup>58</sup> and therefore an analysis of potentially significant impacts associated with any downstream transmission facilities identified in the study will be conducted by the California Public Utilities Commission.<sup>59</sup> This legal conclusion cannot be squared with CEQA's requirement that the lead agency analyze "the whole of the action" prior to Project certification. The RSA must be revised to include Staff's analysis of the Project's downstream transmission impacts once the Phase II Interconnection Study is available. Staff's analysis must then be recirculated for public review and comment in accordance with CEQA.

At the May 17, 2010 Committee Status Conference, Staff requested an extension for the issuance of the RSA until the results of the Phase II Interconnection Study could be made available and incorporated into the RSA. We strongly support Staff's request and hope that the Committee adopts a Project schedule that allows Staff to comply with CEQA.

**D. The SA/DEIS Must Incorporate Feasible and Enforceable Mitigation Measures**

A public agency may not rely on mitigation measures of uncertain efficacy or feasibility.<sup>60</sup> Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments.<sup>61</sup> Such measures must be capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and

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<sup>55</sup> SA/DEIS, p. D.5-1 (citing Cal. Code Regs. tit. 14, § 15378).

<sup>56</sup> *Id.*

<sup>57</sup> SA/DEIS, p. D.5-5.

<sup>58</sup> *Id.*

<sup>59</sup> SA/DEIS, p. D.5-7.

<sup>60</sup> *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727 (finding groundwater purchase agreement inadequate mitigation measure because no record evidence existed that replacement water was available).

<sup>61</sup> *Id.*, § 15126.4(a)(2).

technological factors.<sup>62</sup> Importantly, formulation of mitigation measures may not be deferred to post project certification studies.<sup>63</sup> An EIR is inadequate if “[t]he success or failure of mitigation efforts . . . may largely depend upon management plans that have not yet been formulated, and have not been subject to analysis and review within the EIR.”<sup>64</sup>

The SA/DEIS lacks effective, feasible mitigation for numerous impacts it identifies as significant. As such, the SA/DEIS is inadequate under CEQA. By deferring the development of specific mitigation measures, the SA/DEIS has also denied the public a meaningful opportunity to comment on the efficacy and feasibility of the measures.

1. The SA/DEIS Improperly Defers the Identification of Mitigation Measures for Project Impacts to Cultural Resources

The SA/DEIS proposes, as the *sole* measure for mitigating the Project’s potentially significant impacts to cultural resource, the requirement that the Applicant comply with the terms of the programmatic agreement that the BLM is to execute under 36 C.F.R. section 800.14(b)(3).<sup>65</sup> The SA/DEIS states that,

Staff *would* make recommendations that the impacts of this alternative [reconfigured Project] on cultural resources *would have to be* avoided or mitigated with specific modes of mitigation detailed in the programmatic agreement, executed for this project [*sic*].<sup>66</sup>

The SA/DEIS also clarifies that Staff’s anticipated recommendations will be included in a programmatic agreement that has yet *to be negotiated and signed*.<sup>67</sup> This is a textbook example of improper deferral of mitigation that is prohibited under CEQA. Courts have routinely set aside EIRs that condition a permit on recommendations of a report that has yet to be performed.<sup>68</sup>

“Numerous cases illustrate that reliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA’s

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<sup>62</sup> Cal. Code Regs., tit. 14, § 15364.

<sup>63</sup> *Id.*, § 15126.4(a)(1)(B); *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 308-309.

<sup>64</sup> *Communities for a Better Environment v. City of Richmond* (2010) WL1645906 \*14 (quoting *San Joaquin Raptor* (2007) 149 Cal.App.3d 296, 307).

<sup>65</sup> SA/DEIS, p. C.3-117.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.* at C.3-103.

<sup>68</sup> *See, e.g., Gentry v. Murrieta* (1995) 36 Cal.App.4th 1359, 1396; *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275; *Endangered Habitat League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794.

goals of full disclosure and informed decision making.”<sup>69</sup> Foreclosing the public from participating in the CEQA process before adequate mitigation is incorporated in the RSA violates CEQA. The RSA must be recirculated for public comment after the terms of the Programmatic Agreement are included in Staff’s analysis.

2. The Applicant Carries the Burden of Demonstrating that the Project’s Significant Unavoidable Impacts to the Desert Tortoise Can Be Fully Mitigated

Under CEQA, for the “kinds of impacts for which mitigation is known to be feasible, the environmental review document may give the lead agency a choice of measures to adopt, so long as the measures are coupled with specific and mandatory performance standards to ensure that the measures, as implemented, will be effective.”<sup>70</sup> However, where there is evidence that mitigation measures are not feasible, or the agency has not fully committed to implementing those measures, the agency has but one option: it must defer approval of the Project until the proposed measures can be “fully developed, clearly defined, and made available to the public and interested agencies for review and comment.”<sup>71</sup> “Fundamentally, the development of mitigation measures, as envisioned by CEQA, is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that involves other interested agencies and the public.”<sup>72</sup> Mitigation measures must be set forth *in an environmental review document* to enable public review and comment in accordance with CEQA.<sup>73</sup>

Impacts to species listed under the California Endangered Species Act may be mitigated through an incidental take permit issued pursuant to Section 2081(b) of the Fish and Game Code. Section 2081(b) provides that an incidental take permit may be issued upon a showing of several conditions, four of which are relevant here.<sup>74</sup> First, the impacts of the authorized take shall be minimized and *fully mitigated*.<sup>75</sup> The fully mitigated provision has been interpreted to mean that “mitigation must be sufficient to prevent listed species from becoming more threatened and endangered than they were before the proposed project was built.”<sup>76</sup> Second, *where various measures are available*, to meet this obligation, the measures required shall maintain the applicant’s objectives to the greatest extent possible.<sup>77</sup>

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<sup>69</sup> *Communities for a Better Environment v. City of Richmond* (2010) WL1645906 \*14.

<sup>70</sup> *Id.* at \*15.

<sup>71</sup> *Id.* at \*16.

<sup>72</sup> *Id.* at \*14.

<sup>73</sup> Pub. Resources Code § 21100(b)(3); Cal Code Regs., tit. 20, § 151269e), 15126.4; *see also*, Cal. Code Regs., tit. 20, § 1742.5(a)-(c).

<sup>74</sup> Cal. Fish & Game Code § 2081(b).

<sup>75</sup> *Id.*

<sup>76</sup> Energy Commission Staff Opening Brief, In the Matter of Application for Certification for the Ivanpah Solar Electric Generating System, Docket No. 07-AFC-5, p. 9.

<sup>77</sup> *Id.*

Third, all required measures shall be capable of successful implementation.<sup>78</sup> Fourth and finally, *the Applicant* shall demonstrate adequate funding to implement the required measures, and that the action will not jeopardize the continued existence of the species.<sup>79</sup>

The conclusions reached in the SA/DEIS regarding Project impacts to Desert tortoise are supported by the best available science. We agree with Staff's conclusion that the Project site provides the abundance of flora and fauna that contributes to its unique ability to support DT.<sup>80</sup> Staff's conclusion that the DT population at the project site is important to the overall conservation effort is supported by substantial evidence.<sup>81</sup> We also agree with Staff's conclusion that "there is *no evidence* supporting the belief that other lands can be enhanced to support population densities as found on the Project site."<sup>82</sup> Staff's conclusion that the Project site would contribute to significant losses of suitable habitat available for DT dispersal is also supported by substantial evidence. The proposed site supports a high density of DT relative to known populations in the Mojave, and DT habitat at the Project site provides suitable habitat for individual DTs from the south.<sup>83</sup> In addition, movements to the north and east are somewhat limited by development associated with Ridgecrest and movement barriers associated with US 395, and State Routes 14 and 178.<sup>84</sup> In conclusion, Staff finds that impacts to "the proposed site's high value habitat and tortoise concentration will not be possible to replace through CEQA."<sup>85</sup>

What the RSA must make explicit is that Staff independently found, based on the Applicant's submissions, consultation with the California Department of Fish and Game and its own research, that the impacts of the reconfigured Project on the Desert tortoise *cannot* be fully mitigated and that no alternative measures are *available* to fully mitigate the Project's impacts to the Desert tortoise. Staff also found that even with the minimization measures proposed in the SA/DEIS, the Applicant has not met its burden to show no jeopardy to the continued existence of the Desert tortoise. Any change in Staff's position with regard to the Project's unavoidable impacts to the Desert tortoise would require *the Applicant* to provide new information, or a Project change, to demonstrate that the Project will not jeopardize the continued existence of the species.

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<sup>78</sup> *Id.*

<sup>79</sup> *Id.* § 2081(b)(4), (c).

<sup>80</sup> SA/DEIS, p. C.2-39.

<sup>81</sup> *Id.* at p. C. 2-38.

<sup>82</sup> SA/DEIS, p. C. 2-39 (emphasis added).

<sup>83</sup> SA/DEIS, p. C.2-39.

<sup>84</sup> SA/DEIS, p. C.2-40.

<sup>85</sup> SA/DEIS, p. C.2-50.

3. The Applicant Carries the Burden of Demonstrating that the Project's Significant Unavoidable Impacts to the Mojave Ground Squirrel Can Be Fully Mitigated

Under CEQA, for the “kinds of impacts for which mitigation is known to be feasible, the environmental review document may give the lead agency a choice of measures to adopt, so long as the measures are coupled with specific and mandatory performance standards to ensure that the measures, as implemented, will be effective.”<sup>86</sup> However, where there is evidence that mitigation measures are not feasible, or the agency has not fully committed to implementing those measures, the agency has but one option: it must defer approval of the Project until the proposed measures can be “fully developed, clearly defined, and made available to the public and interested agencies for review and comment.”<sup>87</sup> “Fundamentally, the development of mitigation measures, as envisioned by CEQA is not meant to be a bilateral negotiation between a project proponent and the lead agency after project approval; but rather, an open process that involves other interested agencies and the public.”<sup>88</sup> Mitigation measures must be set forth *in an environmental review document* to enable public review and comment in accordance with CEQA.<sup>89</sup>

Impacts to species listed under the California Endangered Species Act may be mitigated through an incidental take permit issued pursuant to Section 2081(b) of the Fish and Game Code. Section 2081(b) provides that an incidental take permit may be issued upon a showing of several conditions, four of which are relevant here.<sup>90</sup> First, the impacts of the authorized take shall be minimized and *fully mitigated*.<sup>91</sup> The fully mitigated provision has been interpreted to mean that “mitigation must be sufficient to prevent listed species from becoming more threatened and endangered than they were before the proposed project was built.”<sup>92</sup> Second, *where various measures are available*, to meet this obligation, the measures required shall maintain the applicant’s objectives to the greatest extent possible.<sup>93</sup> Third, all required measures shall be capable of successful implementation.<sup>94</sup> Fourth and finally, *the Applicant* shall demonstrate adequate funding to implement the required measures, and that the action will not jeopardize the continued existence of the species.<sup>95</sup>

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<sup>86</sup> *Id.* at \*15.

<sup>87</sup> *Id.* at \*16.

<sup>88</sup> *Id.* at \*14.

<sup>89</sup> Pub. Resources Code § 21100(b)(3); Cal Code Regs., tit. 20, § 151269e), 15126.4; *see also*, Cal. Code Regs., tit. 20, § 1742.5(a)-(c).

<sup>90</sup> Cal. Fish & Game Code § 2081(b).

<sup>91</sup> *Id.*

<sup>92</sup> Energy Commission Staff Opening Brief, In the Matter of Application for Certification for the Ivanpah Solar Electric Generating System, Docket No. 07-AFC-5, p. 9.

<sup>93</sup> *Id.*

<sup>94</sup> *Id.*

<sup>95</sup> *Id.* § 2081(b)(4), (c).

Staff concludes that Project impacts to Mojave ground squirrel connectivity can be minimized but *cannot* be fully mitigated.<sup>96</sup> As with the Desert tortoise, the Staff proposes mitigation measures to minimize such impacts, “in the event the Commission approves the project.” However, Staff makes clear that compensatory mitigation will not fully mitigate the loss of Mojave ground squirrel connectivity, and that “the unique characteristics and geographic location of this site makes it irreplaceable.”<sup>97</sup>

The conclusions reached in the SA/DEIS regarding Project impacts to the Mojave ground squirrel are supported by the best available science. Staff’s conclusion that the Project would substantially reduce the connectivity of the Little Dixie Wash core population to the west of the Project site with known populations east of the City of Ridgecrest, and the populations to the south of the Project with the Olancha core population, is supported by substantial evidence. In fact, one of the principal studies supporting this finding was authored by the Applicant’s consultant, Dr. Phil Leitner.<sup>98</sup> Staff’s conclusions have also been strongly endorsed by the California Department of Fish and Game.<sup>99</sup> At the May 3, 2010 public workshop, a representative from the U.S. Fish and Wildlife Service acknowledged the importance of the site to the future viability of the Mojave ground squirrel. These expert agency opinions are particularly relevant to the Commission’s, and the public’s, understanding of the Project’s impact on the squirrel. We agree with Staff’s recommendation that the proposed Project site should be avoided and the site should be preserved in a natural state.<sup>100</sup>

A contrary conclusion from Staff would require *the Applicant* to provide new information, or a Project change, to demonstrate that the Project will not jeopardize the continued existence of the species. Any such new information would have to be incorporated into the RSA and recirculated for public comment in accordance with CEQA.

## II. THE RSA MUST BE RECIRCULATED FOR PUBLIC COMMENT

When significant new information is added to a draft environmental review document after the close of public comment and before Project certification, a revised draft environmental review document must be noticed and recirculated for public comment.<sup>101</sup> New information is significant, for the purpose of CEQA, when

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<sup>96</sup> SA/DEIS, p. C. 2-50.

<sup>97</sup> SA/DEIS, p. C. 2-52.

<sup>98</sup> See generally, SA/DEIS, pp. C.2-35-37.

<sup>99</sup> See CDFG Presentation of David Hacker for the May 3-4 public workshop.

<sup>100</sup> See SA/DEIS, p. C.2-37.

<sup>101</sup> Pub. Resources Code, § 21092.1.

the environmental review document is “changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect.”<sup>102</sup>

As detailed in these comments, significant new information will be added to the RSA regarding the Project, its environmental setting, potentially significant impacts, and Staff’s recommendations to mitigate those impacts. In addition, the Applicant has made several late changes to the Project, which constitute significant new information, and which require the recirculation of the RSA in accordance with CEQA.

**A. The Applicant Plans to Add a Fuel Depot to the Project, Which Requires New Staff Analyses**

At a public workshop held on April 22, 2010, the Applicant indicated that a fuel depot will be added to the Project. The Applicant also indicated that an “index of changes” resulting to the Project’s original air emissions calculations would be submitted to enable Staff to revise its analysis. At the workshop, the Applicant indicated that such index would also include corrected mirror washing events and previously unaccounted for painting operations. This new information will change Staff’s analysis regarding the Project’s potentially significant impacts to air quality and public health and constitutes significant new information under CEQA. The Commission’s regulations require Staff to assess the Applicant’s submittal and to prepare a report that is provided to the public and the decisionmakers for review.<sup>103</sup>

**B. The Applicant Plans to Add Evaporation Ponds and a Water Treatment System to the Project, Which Require New Staff Analyses**

At a public workshop held on April 23, 2010, the Applicant informed Staff that evaporation ponds and a water treatment system would be added to the Project. The Applicant has, on several occasions, represented that any potentially significant adverse impacts resulting from this Project change would be mitigated in the same manner as was proposed for the Beacon Solar Energy Project. If any such mitigation were to be proposed by Staff, it must be added to the RSA as new conditions of certification and would constitute significant new information regarding significant new impacts under CEQA.

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<sup>102</sup> Cal. Code Regs. tit 14, § 15088.5.

<sup>103</sup> Cal. Code Regs., tit. 20, § 1742.5.

**C. The Applicant Requests a Permit Condition to Increase Daily Cooling Tower Operations, Which Requires New Staff Analyses**

Just on May 12, 2010, the Applicant requested an additional change to the Project's air permit conditions that would allow the Project to increase daily emissions of particulates during operation.<sup>104</sup> This change would be reflected in the RSA as a new condition of certification and constitutes significant new information under CEQA.

**D. The Applicant Requests Staff to Incorporate New Baseline Data in the Revised Staff Assessment, Which Requires New Staff Analyses**

In comments on the SA/DEIS, the Applicant requested that Staff incorporate the result of biological and jurisdictional delineation surveys in the RSA.<sup>105,106</sup> According to the Applicant, this new data regarding the environmental setting of the Project would be made available "later this spring."<sup>107</sup> Importantly, however, the public has not had an opportunity to comment on the adequacy of the Applicant's survey protocols. The Applicant simply informed Staff on April 9, 2010, that new surveys of the revised Project footprint were ongoing.<sup>108</sup> If Staff plans to rely on this new information, the public must be given an opportunity to review and comment on any changed assumptions regarding the Project's environmental setting. Such assumptions constitute significant new information under CEQA.

The new information that will be provided by the Applicant to Staff in the weeks following publication of the SA/EIS is, *admittedly*, significant. Therefore, Staff's revised analysis must be recirculated to allow the public the opportunity to evaluate and comment on the revised Project components, and Staff's independent analysis of any new information regarding the Project's environmental setting and potentially significant adverse impacts and required mitigation measures.

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<sup>104</sup> Letter to Mr. Glen Stephens, Kern County Air Pollution Control District from Billy Owens, Director Project Development Solar Millennium, LLC, regarding Application for a Change of Conditions for the Cooling Tower at the Ridgecrest Solar 1, LLC Power Project, May 12, 2010.

<sup>105</sup> We note that this Project was redesigned in February 2010 in an attempt to reduce impacts to the El Paso Wash.

<sup>106</sup> Ridgecrest Solar 1, LLC's Initial Comments on the Biological Resources Section of the Staff Assessment/Draft Environmental Impact Statement, Docket No. 09-AFC-09, April 30, 2010, p. 11 ("Applicant's SA Comments"); *see also* Letter to Rick York, California Energy Commission from William Graham, AECOM, regarding Biological Survey Methodologies for the Blythe, Palen and Ridgecrest Solar Power Project Sites 2010, March 30, 2010 (docketed on April 9, 2010).

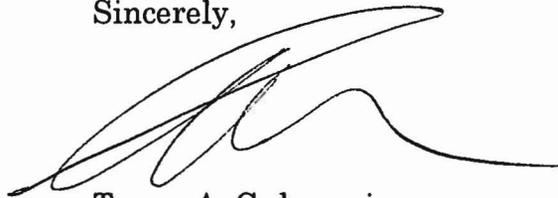
<sup>107</sup> Applicant's SA Comments, p. 11.

<sup>108</sup> Letter to Rick York, California Energy Commission from William Graham, AECOM, regarding Biological Survey Methodologies for the Blythe, Palen and Ridgecrest Solar Power Project Sites 2010, March 30, 2010 (docketed on April 9, 2010).

### III. CONCLUSION

We commend Staff for its dedication and its efforts to provide an adequate analysis of this Project, particularly in light of the shortened review period and the unique difficulties presented by this Project. However, numerous data gaps and inconsistencies in the SA/DEIS, as well as the Applicant's recent revisions to the Project, have deprived the public of a meaningful opportunity to evaluate the environmental consequences of the Project at this time. Once this Project comes into full focus and the Applicant provides Staff with all of the required information to produce an adequate environmental review document, Staff's revised analysis must be recirculated for public review and comment in accordance with CEQA's requirements.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tanya A. Gulesserian', with a long horizontal flourish extending to the right.

Tanya A. Gulesserian  
Elizabeth Klebaner

EK:bh

---

**EXHIBIT A**

KERN COUNTY AIR POLLUTION CONTROL DISTRICT

PRELIMINARY DETERMINATION OF COMPLIANCE

2700 "M" Street, Suite 302  
Bakersfield, CA 93301-2370  
Phone: (661) 862-5250  
Fax: (661) 862-5251



Field Office  
Phone: (661) 823-9264

ISSUE DATE: MONTH XX, 2010	APPLICATION NO.: 0368006
EXPIRATION: MONTH XX, 2012	DATE: SEPTEMBER 17, 2009

DETERMINATION OF COMPLIANCE IS HEREBY GRANTED TO:

SOLAR MILLENNIUM, LLC

DETERMINATION OF COMPLIANCE IS HEREBY GRANTED FOR:

Bio-Remediation of Hydrocarbon Contaminated Soil

(See attached sheets for equipment description and conditions)

<b>S</b> SW26	<b>T</b> 27S	<b>R</b> 39E	<b>Location:</b> APN: 341-110-02	Startup Inspection
------------------	-----------------	-----------------	-------------------------------------	--------------------

This document serves as a temporary Permit to Operate only as provided by Rule 201 of the District's Rules and Regulations. For issuance of a Permit to Operate, Rule 208 requires equipment authorized by this Determination of Compliance be installed and operated in accordance with conditions of approval. Changes to these conditions must be made by application and must be approved before such changes are made. This document does not authorize emission of air contaminants in excess of New Source Review limits (Rule 210.1) or Regulation IV emission limits. Emission testing requirements set forth on this document must be satisfied before a Permit to Operate can be granted.

UPON COMPLETION OF CONSTRUCTION AND/OR INSTALLATION, PLEASE TELEPHONE DISTRICT

Validation Signature:

\_\_\_\_\_  
David L. Jones  
Air Pollution Control Officer

**CONDITIONS OF APPROVAL:**

Pursuant to Rule 209, "conditional approval" is hereby granted. Please be aware compliance with all conditions of approval imposed by any applicable Determination of Compliance remain in effect for life of project, unless modified by application.

**EQUIPMENT DESCRIPTION:** Bio-Remediation of Hydrocarbon Contaminated Soil, including following equipment and design specifications:

- A. 800-ft. by 200-ft. bio-remediation/land-farm facility,
- B. Irrigation system for bio-remediation/land-farm facility, and
- C. Bio-remediation fertilizer for enhanced bio-remediation.

**DESIGN CONDITIONS:**

- a. Bio-remediation area shall be lined with minimum 60-mil high density polyethylene (HDPE) or alternate lining approved by Lahontan Regional Water Quality Board (LRWQB). (Rule 210.1)
- b. Permittee shall provide District with depth of bio-remediation operation area. (Rule 210.1)

**OPERATIONAL CONDITIONS:**

- 1. Visible emissions from bio-remediation/land-farm facility shall not equal or exceed 0% opacity for more than 5 minutes in any two hour period. (Rule 210.1 BACT Requirement)
- 2. Permittee shall have flame ionization detector (FID) or photo ionization detector (PID) on site to measure soil VOC emissions (measured as hexane). (Rule 210.1)
- 3. Permittee shall maintain weekly VOC readings of bio-remediation area during any time it is operated. Permittee shall provide protocol for VOC readings, soil acidity (pH), soil moisture content (% weight), soil temperature (°F), and Nutrient Ratio (C:N:P) to be approved by District staff. (Rule 210.1)
- 4. If soil in bio-remediation area registers a VOC reading of less than 50-ppm by volume, measured three inches above soil surface, with FID or PID compliance with Condition No. 5 is not required. (Rule 210.1)
- 5. If soil in bio-remediation area registers a VOC reading greater than or equal to 50-ppm (calibrated to methane) by volume, measured three inches above soil surface, with FID or PID bio-remediation operation shall comply with the following conditions. (Rule 210.1)
  - a. Affected soil stockpile shall be covered with minimum 10-mil plastic sheeting within 24-hours of detection to control emissions during treatment until VOC readings 3-inches above the uncovered soil stockpile are less than 50-ppmv (Rule 210.1);
  - b. Covered soil stockpile shall be treated by enhanced bio-remediation using accepted environmental engineering practices to maintain conditions suitable for bio-remediation. Soil in stockpiles shall be conditioned as necessary through addition of nutrients, moisture and air as needed;
  - c. The following parameters in treatment area shall be monitored according to approved protocol: VOC readings over treatment area in use, soil acidity (pH), soil moisture content (% weight), soil temperature (°F), and Nutrient Ratio (C:N:P);
  - d. Records of soil treatment and monitoring results shall be maintained at the site for a period of at least 5-years, and

- e. If bio-remediation operation is not effective after 2 months (i.e. VOC readings show no reduction in VOC content), Permittee shall propose alternate method of soil remediation for District approval.
- 6. Soil moisture content shall be maintained according to District approved protocol. (Rule 210.1)
- 7. Compliance with all operational conditions shall be verified by appropriate recordkeeping, including records of operational data needed to demonstrate compliance. Such records shall be kept on site in readily available format. (Rule 209)
- 8. No emission resulting from use of this equipment shall cause injury, detriment, nuisance, annoyance to or endanger comfort, repose, health or safety of any considerable number of persons or public. (Rule 419 and CH&SC 41700)

**CONSTRUCTION ACTIVITY:**

All construction phase emissions shall be controlled utilizing reasonably available control provisions, e.g. construction site and unsurfaced roadway dust control, conscientious maintenance of mobile and piston engine-powered equipment, etc.

**STATE OF CALIFORNIA AIR TOXICS HOT SPOTS REQUIREMENTS:**

Facility shall comply with California Health and Safety Code Sections 44300 through 44384. (Rule 208.1)

**COMPLIANCE TESTING REQUIREMENTS:**

Should inspection reveal conditions indicative of non-compliance, compliance with hourly and concentration emission limits for VOC shall be verified pursuant to Rule 108.1 and KCAPCD Guidelines for Compliance Testing, within 45 days of District request.

**EMISSION LIMITS:**

Emissions rate of each air contaminant from this unit shall not exceed following limits:

<b><u>Volatile Organic Compounds (VOC):</u></b>	0.17 lb/day
<b>(as defined in Rule 210.1)</b>	0.03 ton/yr

(Emissions limits established pursuant to Rule 210.1, unless otherwise noted.)

Compliance with maximum daily emission limits shall be verified by source operator (with appropriate operational data and recordkeeping to document maximum daily emission rate) each day source is operated and such documentation of compliance shall be retained and made readily available to District for period of three years. (Rules 209 and 210.1)

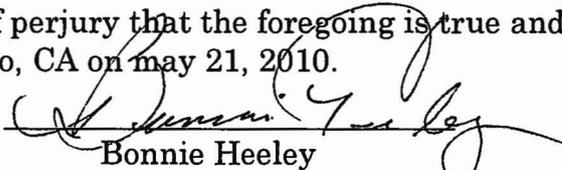
**DECLARATION OF SERVICE  
RIDGECREST SOLAR POWER PROJECT  
Docket No. 09-AFC-9**

I, Bonnie Heeley, declare that on May 21, 2010, I served and filed copies of the attached Supplemental Comments of the California Unions for Reliable Energy dated May 21, 2010. The original document, filed with the Docket Office, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[http://www.energy.ca.gov/sitingcases/solar\\_millennium\\_ridgecrest/Ridgecrest\\_POS.pdf](http://www.energy.ca.gov/sitingcases/solar_millennium_ridgecrest/Ridgecrest_POS.pdf).

The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Office via email and U.S. Mail as addressed below.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed at South San Francisco, CA on May 21, 2010.

  
Bonnie Heeley

CALIFORNIA ENERGY COMMISSION Attn: Docket No. 09-AFC-9 1516 Ninth Street, MS-4 Sacramento, CA 95814-5512 <a href="mailto:docket@energy.state.ca.us">docket@energy.state.ca.us</a>	Alice Harron Senior Project Manager 1625 Shattuck Avenue, Suite 270 Berkeley, CA 94709-1161 <a href="mailto:harron@solarmillennium.com">harron@solarmillennium.com</a>	Elizabeth Copley AECOM Project Manager 2101 Webster Street, Suite 1900 Oakland, CA 94612 <a href="mailto:Elizabeth.copley@aecom.com">Elizabeth.copley@aecom.com</a>
Scott Galati Galati/Blek, LLP 455 Capitol Mall, Suite 350 Sacramento, CA 95814 <a href="mailto:sgalati@qb-llp.com">sgalati@qb-llp.com</a>	Peter Weiner Matthew Sanders Paul Hastings Janofsky & Walker LLP 55 2 <sup>nd</sup> Street, Suite 2400-3441 San Francisco, CA 94105 <a href="mailto:peterweiner@paulhastings.com">peterweiner@paulhastings.com</a> <a href="mailto:matthewsanders@paulhastings.com">matthewsanders@paulhastings.com</a>	California Unions for Reliable Energy T.Gulesserian/M.D.Joseph/E.Klebaner Adams Broadwell Joseph & Cardozo 601 Gateway Boulevard, Suite 1000 South San Francisco, CA 94080 <a href="mailto:tgulesserian@adamsbroadwell.com">tgulesserian@adamsbroadwell.com</a> <a href="mailto:eklebaner@adamsbroadwell.com">eklebaner@adamsbroadwell.com</a> [VIA EMAIL ONLY]
Desert Tortoise Council Sidney Silliman 1225 Adriana Way Upland, CA 91784 <a href="mailto:gssilliman@csupomona.edu">gssilliman@csupomona.edu</a>	Janet Eubanks, Project Manager US Dept. of the Interior, Bureau of Land Mngmnt., California Desert District 22835 Calle San Juan de los Lagos Moreno Valley, CA 92553 <a href="mailto:Janet_Eubanks@ca.blm.gov">Janet_Eubanks@ca.blm.gov</a>	<a href="mailto:e-recipient@caiso.com">e-recipient@caiso.com</a> [VIA EMAIL ONLY]
James D. Boyd Vice Chair/Presiding Member California Energy Commission 1516 Ninth Street Sacramento, CA 95814 <a href="mailto:jboyd@energy.state.ca.us">jboyd@energy.state.ca.us</a>	Anthony Eggert Commissioner/Associate Member California Energy Commission 1516 Ninth Street Sacramento, CA 95814 <a href="mailto:aeggert@energy.state.ca.us">aeggert@energy.state.ca.us</a>	Kourtney Vaccaro, Hearing Officer California Energy Commission 1516 Ninth Street Sacramento, CA 95814 <a href="mailto:kvaccaro@energy.state.ca.us">kvaccaro@energy.state.ca.us</a>

<p>Eric Solorio, Project Manager  California Energy Commission  1516 Ninth Street  Sacramento, CA 95814  <a href="mailto:esolorio@energy.state.ca.us">esolorio@energy.state.ca.us</a></p>	<p>Jared Babula, Staff Counsel  California Energy Commission  1516 Ninth Street  Sacramento, CA 95814  <a href="mailto:jbabula@energy.state.ca.us">jbabula@energy.state.ca.us</a></p>	<p>Jennifer Jennings  Public Adviser  California Energy Commission  1516 Ninth Street  Sacramento, CA 95814  <a href="mailto:publicadviser@energy.state.ca.us">publicadviser@energy.state.ca.us</a></p>
<p>Billy Owens  Director, Project Development  Solar Millennium  1625 Shattuck Ave. #270  Berkeley, CA 94709-1161  <a href="mailto:owens@solarmillennium.com">owens@solarmillennium.com</a></p>	<p>Basin and Range Watch  Laura Cunningham  Kevin Emmerich  PO Box 70  Beatty, NV 89003  <a href="mailto:bluerockiquana@hughes.net">bluerockiquana@hughes.net</a></p>	<p>Western Watersheds Project  Michael J. Connor, Ph.D.  California Director  PO Box 2364  Reseda, CA 91337-2364  <a href="mailto:mjconnor@westernwatersheds.org">mjconnor@westernwatersheds.org</a></p>
<p>Tim Olson  Advisor to Commissioner Boyd  California Energy Commission  1516 Ninth Street  Sacramento, CA 95814-5512  <a href="mailto:tolson@energy.state.ca.us">tolson@energy.state.ca.us</a></p>	<p>Terri Middlemiss/D.Burnett  Kern Crest Audubon Society  PO Box 984  Ridgecrest, CA 93556  <a href="mailto:Catbird4@earthlink.net">Catbird4@earthlink.net</a>  <a href="mailto:imdanburett@verizon.net">imdanburett@verizon.net</a></p>	<p>Center for Biodiversity  Ileene Anderson  Public Lands Desert Director  PMB 447, 8033 Sunset Blvd.  Los Angeles, Ca 90046</p>
<p>Center for Biodiversity  Lisa T. Belenky, Sr. Atty.  351 California St. #600  San Francisco, CA 94104</p>		

2 JULY, (FRIDAY), 2010

DEAR JANET EUBANKS'

THE FOLLOWING - IS A (SLIGHTLY-REVISED) COPY  
 THE ORIGINAL LETTER - SENT TO YOU ON: 30 JUNE  
 2010 (VIA - E-MAIL). → \* A CC. WAS SENT TO: (CEC)

RECEIVED  
 BUREAU OF LAND MGMT.  
 MAIL ROOM  
 BLM RIDGECREST FO  
 10 JUL -8 AM 9:25  
 CALIF. DESERT DISTRICT  
 MORENO VALLEY, CA

\*FROM: MAGGIE GIRE:

ERIC\_SOLORIO

From: Dave Maggie <gire\_haggis\_hovel@yahoo.com>  
 To: Janet H. Eubanks <jeubanks@ca.blm.gov>  
 Cc: Eric K. Solorio <esolorio@energy.state.ca.us>  
 Sent: Wed, June 30, 2010 12:18:04 PM  
 Subject: Ridgecrest: SA/DEIS - Solar Millennium

SUBJECT: Solar Millennium's (Solar 1, LLC): Ridgecrest Solar Power Project Proposal:  
 Staff Assessment and Draft Environmental Impact Statement (SA/DEIS):  
 (CEC Docket #: 09-AFC, and BLM Docket #: CAC-49016):

ATTENTION: Janet H. Eubanks, Project Manager - [jeubanks@ca.blm.gov](mailto:jeubanks@ca.blm.gov)  
 California Desert District - Bureau of Land Management  
 22835 Calle San Juan De Los Lagos, Moreno Valley, CA 92553-9046

30 June, 2010

Dear Janet Eubanks

Thankyou for allowing the general public, and others the opportunity to share concerns and comments in regards to Solar Millennium's (Ridgecrest Solar Power Project) proposal, and The SA/DEIS.

After attending the December, April, May, and June public workshops, as well as researching further, and "trying" to look over the SA/DEIS, my concerns have increased to a greater-than-significant level !

#### IMPORTANT COMMENTS:

The more that comes to light about Solar Millennium's (latest) SITE and RIGHT-of-WAY location, and their most-up-to-date plans, (including late-made changes), and proposed methods of operation, (along with plans to try to mitigate the already long list of important, and sensitive, immitigable issues), the more alarmingly obvious it becomes...that Solar Millennium's Project...needs to go elsewhere.

SM's (latest) plans call for: on-site Fuel Depots for the "Temporary" 28-month Construction Phase, and the Power Plant's continuous-[30-year]-Operational Phase calls for: use of, and on-site storage of: Hazardous Materials: including Therminol VP-1, Liquid Propane Gas, Chemicals: Individual, and Suites of Chemicals: such as the "Soil-Binding-Stabalizing-Agents" -used in part, with gallons upon gallons of water: for ongoing DUST CONTROL mitigation measures.

One of the (late-made) changes to SM's plans...include the (WET) COOLING TOWER's daily operational hours, which will now be increased to (a continuous) 24 hours per day...rather than the 16 hours per day...Solar Millennium had earlier proposed.

There has also been an addition of 2 (Retention/Detention Basins): EVAPORATION PONDS...

which would cover an area of 4-acres each, and would be further-chemically-treated: RE: Mosquitos.

EVAPORATION PONDS such as the ones mentioned-above, can severely impact (entire populations of) BIRDS, and most-likely...BATS, as well as adversely affect other DESERT WILDLIFE that would undoubtedly be attracted to these sources of (CONTAMINATED) water.

I strongly support, and agree with CEC Staff in regards to the BIOLOGICAL findings, and their ultimate Project Siting conclusions ! I also agree with the VISUAL Resource findings:

...that the proposed project would result in significant, adverse impacts to Daytime, and Nighttime Scenic Views, Vistas, Sunsets, Twilighttime, Dark Skies, and Star Gazing, ...all of which, along with the GLINT-and-GLARE factor...are immitigable.

There are other areas in the SA/DEIS...that are of concern, and I hope that the BLM, and the CEC Staff will take another look, and perhaps will reconsider, and rethink their assessments, and findings.

I realize that the BLM, and the CEC Staff have certain guidelines that they must follow, including Local: Kern County, State, and Federal...Laws, Ordinances, Regulations, and Standards...that do not always relate, nor can they accurately be applied to certain, one of a kind, individual situations, such as what we have here.

This is a very unique situation !

As residents that live out in the desert, and reside in the surrounding area/near/in close-proximity to the Applicant: Solar Millennium's proposed utility-scale Power Plant Site and Right-of-Way, ...WE HAVE MANY SERIOUS CONCERNS !!!

Our residences are situated on the Eastern, and Western frontlines of the proposed project.

The prevailing winds would place us residents (on the Eastern frontline) directly downwind from SM's facility, which would make us the first recipients to receive any and all, FUGITIVE DUST, AIR-BORNE POLLUTANTS (visible or not), SMOKE and TOXIC VAPORS from Plant-related FIRES and EXPLOSIONS: due to HAZARDOUS MATERIALS, and CHEMICALS...for example.

From where we live, it is only a short distance to Ridgecrest, and the majority of the population.

We residents on the Eastern frontline, along with our pets, and the desert wildlife of this area would also be the first recipients to receive any (SM-related) fugitive Coccidiomycosis [VALLEY FEVER] Spores. The residents on the Western front would be very vulnerable to exposure as well. Next in line, (to the north) would be the employees that work at the Municipal Dump.

The potential threat of FIRE is another very real, and genuine concern for residents out here, not only for reasons of HEALTH-and-AIR QUALITY, but for reasons such as PERSONAL, and PUBLIC SAFETY, and PROTECTION of our Homes, and Properties.

Our well-being and quality of life could/would be threatened !

Solar Millennium's SAFETY, and FIRE PROTECTION measures are weak. SM's plans do not call for the use of individual, AUTOMATIC SHUT-OFF VALVES for the Heat Transfer Fluid: THERMINOL VP-1. It is very disconcerting to think that the "Permitting Government Agencies" would not make the inclusion of these shut-off valves...a mandatory requirement...

as far as "Precautionary Measures" for Safety and Fire, particularly when considering just how potentially dangerous Therminol VP-1 can be.

Even if Solar Millennium had an on-site Fire station and Pumper trucks, (or called Kern County for assistance)...it is questionable as to whether any fires of significant size, (with or without wind conditions attached)...could be responded to in a fast, efficient, effective, timely manner that would result in on-site containment...because of the enormity, complexity, and accessibility, (and perhaps inaccessibility) to all far-reaching areas of their Plant and Solar Fields.

Fire containment could also likely be difficult to achieve...due to the fact that there would be such large amounts of...volatile, ignitable, and flammable chemicals, and gases present on-site.

The Harper Lake Incident, (or a similar-type incident)...could easily be repeated here, but with far greater consequences. The (parabolic trough) Solar Power Plant: (operated by Luz International Ltd.) at Harper Lake... was a much smaller facility that produced 80 megawatts, rather than Solar Millennium's proposed 250 megawatts.

If any (SM) on-site fire was wind-driven,...which it very well could be in this area, we residents on the Eastern, and Western frontlines would be extremely vulnerable, and concerned, and so would the rest of the residents of Ridgecrest.

#### **NOISE and VIBRATION:**

For those of us residents on the Eastern frontline, that live out in this rich and thriving desert, we are keenly aware of just how quiet, and silent this desert area is. We seldom ever hear Highway Traffic. It happens so infrequently that we consider it, a significant rarity when it does actually occur.

It is obvious as to why this particular section of desert land is so abundant with sound-sensitive wildlife. We (human) residents that live out here...are also sound-sensitive receptors.

#### **VISUAL: (Daytime and Nighttime):**

Of course it is a given, that for those of us residents that would be living on the Eastern, and Western frontlines of SM's Project...would feel the extreme adverse impacts of what we would lose: ...unmarred and uncompromised: SCENIC VIEWS, (including SUNSETS), DARK SKIES, and STAR GAZING.

What we would gain...would be the sight of Solar Millennium's massive, Utility-scale Facility and far-reaching Solar Fields/Industrialized Site and Right-of-Way, which would include PERIMETER FENCING: (28-30 feet high), SM-related TRANSMISSION LINES and POLES, and a continuously-operating (WET) COOLING TOWER. This Cooling Tower would generate VERTICAL VELOCITY PLUMES...which are estimated to rise 1,000+ feet in the air (on non-windy days).

We would also gain the immitigable GLINT-and-GLARE from the Parabolic Mirrors, ...and regardless of SM's proposal of using hooded-light fixtures to minimize nighttime glare...there would still be a more-than-significant loss to our dark skies.

**(POTABLE) WATER: Part 1:**

Since we residents on the Eastern Front obtain our Domestic Water from the (Potable) Water Pumping Station/Storage Tank where Solar Millennium plans to source Water ...for their "Temporary" 28-month Construction Phase, WE HAVE CONCERNS:

How much Water would SM be using out of the Storage Tank per day ?

How long would it take the Water Storage Tank to recharge ?

Would SM's daily take, and over-all, (28-month) total take...lessen the quality of the water that we residents depend on to sustain our families, our pets, ourselves, our homes, and our properties ?

We already receive, (and have for quite some time now), water quality notices, sent out by the local IWVWD company...informing us about Arsenic being present in our water supply.

**TRAFFIC:**

We residents (from the Eastern front) have TRAFFIC CONCERNS in regards to Solar Millennium accessing water from the above-mentioned (Potable) Water Tank. The commercial water-hauling trucks would be making numerous trips to and from this Pumping Station, up until the time that SM's water pipeline was ready for use. They would heavily-impact those residents, that use the Water Tank road/Kendall Avenue as an access route to and from their homes, and properties.

This heavy, commercial truck traffic would more than significantly increase the risk of accidents...on South China Lake Boulevard, and on Hwy. 395 where they would be making frequent crossings.

**(POTABLE) WATER: Part 2:**

Solar Millennium's proposal for Water mitigation, which is mostly based on their limited, Off- Set Program: "Cash-for-Grass" (which SM proposes to pay for),...and would then have the local, privately owned & operated Water Company: (IWVWD)...become the overseers, and the enforcers of this program. The local (IWVWD) Water Company is planning on (very soon)... raising our water rates by a considerable amount, ...maybe they think this will encourage residents to cooperate, and comply with SM's (limited), "Cash for Grass" Off-Set Program... which would only partially help to enable them to mitigate...the "serious" Indian Wells Valley water issues at hand.

Solar Millennium's above-mentioned (limited) water mitigation plan, and the IWVWD's willing participation to help implement it, will probably not sit too well with residents of Ridgecrest !

IMPORTANT COMMENTS: continued:

The future of this uniquely special, (highly functioning) desert land, its wildlife, (rare, threatened, endangered, or not), and all the richly-diverse CULTURAL VALUES it contains, ...along with its scenic (daytime, and nighttime) views, vistas, sunsets, dark skies, ...and quiet silence, (...each aspect important, irreplaceable, and irretrievable), ...are now threatened, and presently lie in the path of JEOPARDY.

Thankyou again Janet Eubanks...for allowing me this opportunity to comment.  
It is greatly appreciated !

Signed, Maggie Gire

P.O. Box 880,  
Ridgecrest, CA,  
93556-0880

Cc. (HAND-DELIVERED) TO : HECTOR VILLALOBOS, FIELD MANAGER  
RIDGECREST FIELD OFFICE  
BUREAU OF LAND MANAGEMENT  
300 S. RICHMOND ROAD  
RIDGECREST, CA 93555

**From:** [Janet Eubanks](mailto:Janet.Eubanks@ca.blm.gov)  
**To:** [carspp@blm.gov](mailto:carspp@blm.gov)  
**Subject:** Fw: Ridgecrest: SA/DEIS - Solar Millennium  
**Date:** 07/06/2010 01:56 PM

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\* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \*

Janet Eubanks, Realty Specialist  
U.S. Department of the Interior  
Bureau of Land Management  
California Desert District  
22835 Calle San Juan de Los Lagos  
Moreno Valley, CA 92553  
(951) 697-5376 work  
(951) 697-5299 fax

\* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \*

----- Forwarded by Janet Eubanks/CASO/CA/BLM/DOI on 07/06/2010 01:55 PM -----

**Dave Maggie**  
<[gire\\_haggis\\_hovel@yahoo.com](mailto:gire_haggis_hovel@yahoo.com)>

06/30/2010 12:18 PM

To "Janet H. Eubanks"  
<[jeubanks@ca.blm.gov](mailto:jeubanks@ca.blm.gov)>  
cc "Eric K. Solorio"  
<[esolorio@energy.state.ca.us](mailto:esolorio@energy.state.ca.us)>  
Subject Ridgecrest: SA/DEIS - Solar Millennium

SUBJECT: Solar Millennium's (Solar 1, LLC): Ridgecrest Solar Power Project Proposal:  
Staff Assessment and Draft Environmental Impact Statement (SA/DEIS):  
(CEC Docket #: 09-AFC, and BLM Docket #: CAC-49016):

ATTENTION: Janet H. Eubanks, Project Manager - [jeubanks@ca.blm.gov](mailto:jeubanks@ca.blm.gov)  
California Desert District - Bureau of Land Management  
22835 Calle San Juan De Los Lagos, Moreno Valley, CA 92553-9046

30 June, 2010

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#### IMPORTANT COMMENTS:

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SM's (latest) plans call for: on-site Fuel Depots for the "Temporary" 28-month Construction Phase, and the Power Plant's continuous-[30-year]-Operational Phase calls for: use of, and on-site storage of: Hazardous Materials: including Therminol VP-1, Liquid Propane Gas, Chemicals: Individual, and Suites of Chemicals: such as the "Soil-Binding-Stabalizing-Agents" -used in part, with gallons upon gallons of water: for ongoing DUST CONTROL mitigation measures.

One of the (late-made) changes to SM's plans...include the (WET) COOLING TOWER's daily operational hours, which will now be increased to (a continuous) 24 hours per day...rather than the 16 hours per day...Solar Millennium had earlier proposed.

There has also been an addition of 2 (Retention/Detention Basins): EVAPORATION PONDS... which would cover an area of 4-acres each, and would be further-chemically-treated: RE: Mosquitos.

EVAPORATION PONDS such as the ones mentioned-above, can severely impact (entire populations of) BIRDS, and most-likely...BATS, as well as adversely affect other DESERT WILDLIFE that would undoubtedly be attracted to these sources of (CONTAMINATED) water.

I strongly support, and agree with CEC Staff in regards to the BIOLOGICAL findings, and their ultimate Project Siting conclusions ! I also agree with the VISUAL Resource findings: ...that the proposed project would result in significant, adverse impacts to Daytime, and Nighttime Scenic Views, Vistas, Sunsets, Twilighttime, Dark Skies, and Star Gazing, ...all of which, along with the GLINT-and-GLARE factor...are immitigable.

There are other areas in the SA/DEIS...that are of concern, and I hope that the BLM, and the CEC Staff will take another look, and perhaps will reconsider, and rethink their assessments, and findings.

I realize that the BLM, and the CEC Staff have certain guidelines that they must follow, including Local: Kern County, State, and Federal...Laws, Ordinances, Regulations, and Standards...that do not always relate, nor can they accurately be applied to certain, one of a kind, individual situations, such as what we have here.

This is a very unique situation !

As residents that live out in the desert, and reside in the surrounding area/near/in close-proximity to the Applicant: Solar Millennium's proposed utility-scale Power Plant Site and Right-of-Way, ...WE HAVE MANY SERIOUS CONCERNS !!!

Our residences are situated on the Eastern, and Western frontlines of the proposed project.

The prevailing winds would place us residents (on the Eastern frontline) directly downwind from SM's facility, which would make us the first recipients to receive any and all, FUGITIVE DUST, AIR-BORNE POLLUTANTS (visible or not), SMOKE and TOXIC VAPORS from Plant-related FIRES and EXPLOSIONS: due to HAZARDOUS MATERIALS, and CHEMICALS...for example.

From where we live, it is only a short distance to Ridgecrest, and the majority of the population.

We residents on the Eastern frontline, along with our pets, and the desert wildlife of this area would also be the first recipients to receive any (SM-related) fugitive Coccidiomycosis [VALLEY FEVER] Spores. The residents on the Western front would be very vulnerable to exposure as well. Next in line, (to the north) would be the employees that work at the Municipal Dump.

The potential threat of FIRE is another very real, and genuine concern for residents out here, not only for reasons of HEALTH-and-AIR QUALITY, but for reasons such as PERSONAL, and PUBLIC SAFETY, and PROTECTION of our Homes, and Properties.

Our well-being and quality of life could/would be threatened !

Solar Millennium's SAFETY, and FIRE PROTECTION measures are weak. SM's plans do

not call for the use of individual, AUTOMATIC SHUT-OFF VALVES for the Heat Transfer Fluid: THERMINOL VP-1. It is very disconcerting to think that the "Permitting Government Agencies" would not make the inclusion of these shut-off valves...a mandatory requirement... as far as "Precautionary Measures" for Safety and Fire, particularly when considering just how potentially dangerous Therminol VP-1 can be.

Even if Solar Millennium had an on-site Fire station and Pumper trucks, (or called Kern County for assistance)...it is questionable as to whether any fires of significant size, (with or without wind conditions attached)...could be responded to in a fast, efficient, effective, timely manner that would result in on-site containment...because of the enormity, complexity, and accessibility, (and perhaps inaccessibility) to all far-reaching areas of their Plant and Solar Fields.

Fire containment could also likely be difficult to achieve...due to the fact that there would be such large amounts of...volatile, ignitable, and flammable chemicals, and gases present on-site.

The Harper Lake Incident, (or a similar-type incident)...could easily be repeated here, but with far greater consequences. The (parabolic trough) Solar Power Plant: (operated by Luz International Ltd.) at Harper Lake... was a much smaller facility that produced 80 megawatts, rather than Solar Millennium's proposed 250 megawatts.

If any (SM) on-site fire was wind-driven,...which it very well could be in this area, we residents on the Eastern, and Western frontlines would be extremely vulnerable, and concerned, and so would the rest of the residents of Ridgecrest.

#### NOISE and VIBRATION:

For those of us residents on the Eastern frontline, that live out in this rich and thriving desert, we are keenly aware of just how quiet, and silent this desert area is. We seldom ever hear Highway Traffic. It happens so infrequently that we consider it, a significant rarity when it does actually occur.

It is obvious as to why this particular section of desert land is so abundant with sound-sensitive wildlife. We (human) residents that live out here...are also sound-sensitive receptors.

#### VISUAL: (Daytime and Nighttime):

Of course it is a given, that for those of us residents that would be living on the Eastern, and Western frontlines of SM's Project...would feel the extreme adverse impacts of what we

would lose: ...unmarred and uncompromised: SCENIC VIEWS, (including SUNSETS), DARK SKIES, and STAR GAZING.

What we would gain...would be the sight of Solar Millennium's massive, Utility-scale Facility and far-reaching Solar Fields/Industrialized Site and Right-of-Way, which would include PERIMETER FENCING: (28-30 feet high), SM-related TRANSMISSION LINES and POLES, and a continuously-operating (WET) COOLING TOWER. This Cooling Tower would generate VERTICAL VELOCITY PLUMES...which are estimated to rise 1,000+ feet in the air (on non-windy days).

We would also gain the immitigable GLINT-and-GLARE from the Parabolic Mirrors, ...and regardless of SM's proposal of using hooded-light fixtures to minimize nighttime glare...there would still be a more-than-significant loss to our dark skies.

(POTABLE) WATER: Part 1:

Since we residents on the Eastern Front obtain our Domestic Water from the (Potable) Water Pumping Station/Storage Tank where Solar Millennium plans to source Water ...for their "Temporary" 28-month Construction Phase, WE HAVE CONCERNS:

How much Water would SM be using out of the Storage Tank per day ?

How long would it take the Water Storage Tank to recharge ?

Would SM's daily take, and over-all, (28-month) total take...lessen the quality of the water that we residents depend on to sustain our families, our pets, ourselves, our homes, and our properties ?

We already receive, (and have for quite some time now), water quality notices, sent out by the local IWVWD company...informing us about Arsenic being present in our water supply.

TRAFFIC:

We residents (from the Eastern front) have TRAFFIC CONCERNS in regards to Solar Millennium accessing water from the above-mentioned (Potable) Water Tank. The commercial water-hauling trucks would be making numerous trips to and from this Pumping Station, up until the time that SM's water pipeline was ready for use. They would heavily-impact those residents, that use the Water Tank road/Kendall Avenue as an access route to and from their homes.

This heavy, commercial truck traffic would more than significantly increase the risk of accidents...on South China Lake Boulevard, and on Hwy. 395 where they would be making frequent crossings.

(POTABLE) WATER: Part 2:

Solar Millennium's proposal for Water mitigation, which is mostly based on their limited, Off-Set Program: "Cash-for-Grass" (which SM proposes to pay for),...and would then have the local, privately owned & operated Water Company: (IWWVD)...become the overseers, and the enforcers of this program. The local (IWWVD) Water Company is planning on (very soon)... raising our water rates by a considerable amount, ...maybe they think this will encourage residents to cooperate, and comply with SM's (limited), "Cash for Grass" Off-Set Program... which would only partially help to enable them to mitigate...the "serious" Indian Wells Valley water issues at hand.

Solar Millennium's above-mentioned (limited) water mitigation plan, and the IWWVD's willing participation to help implement it, will probably not sit too well with residents of Ridgecrest !

IMPORTANT COMMENTS: continued:

The future of this uniquely special, (highly functioning) desert land, its wildlife, (rare, threatened, endangered, or not), and all the richly-diverse CULTURAL VALUES it contains, ...along with its scenic (daytime, and nighttime) views, vistas, sunsets, dark skies, ...and quiet silence, (...each aspect important, irreplaceable, and irretrievable), ...are now threatened, and presently lie in the path of JEOPARDY.

Thankyou again Janet Eubanks...for allowing me this opportunity to comment.  
It is greatly appreciated !

Signed, Maggie Gire

P.O. Box 880,  
Ridgecrest, CA,  
93556-0880

**From:** [Janet Eubanks](#)  
**To:** [O'Gara, John E CIV NAVFACSW, GRDK39/OPDK](#)  
**Cc:** [Hector Villalobos](#); [Florence Smith](#)  
**Subject:** Re: Navy Comments on Ridgecrest Solar Millennium DEIS  
**Date:** 07/08/2010 03:13 PM

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Good Morning John,  
I received your comments and have made them part of the official file. My contact information is below.

\* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \*

Janet Eubanks, Realty Specialist  
U.S. Department of the Interior  
Bureau of Land Management  
California Desert District  
22835 Calle San Juan de Los Lagos  
Moreno Valley, CA 92553  
(951) 697-5376 work  
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\* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \* ~ ~ ~ ~ \*

▼ "O'Gara, John E CIV NAVFACSW, GRDK39/OPDK" <[john.ogara@navy.mil](mailto:john.ogara@navy.mil)>

**"O'Gara, John E CIV  
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<[john.ogara@navy.mil](mailto:john.ogara@navy.mil)>  
To <[Janet\\_Eubanks@blm.gov](mailto:Janet_Eubanks@blm.gov)>, <[hvillalo@ca.blm.gov](mailto:hvillalo@ca.blm.gov)>  
cc  
Subject Navy Comments on Ridgecrest Solar Millennium  
DEIS  
07/07/2010 11:01 AM

Janet,

Hello. I am the environmental director at the Naval Air Weapons Station, China Lake. Spoke with Hector recently regarding the SM project. We will be submitting comments on this project later today or early tomorrow and forwarding you both a pdf of our cover letter w/ comments.

We understand SM has filed a hold-request on their application but we want to get our comments on record with BLM and CEC as we want to remain actively engaged in the project solutions regarding Navy's operational, ground water and biological concerns with the proposed undertaking.

My contact information is provided below. Please forward me your phone # at the CDD. We look forward to working with you on this effort.

Hector,  
Thanks for Janet's contact information. Will give you a call next week.

V/r,  
John O'

John O'Gara  
Environmental Program Director  
Naval Air Weapons Station  
China Lake, CA 93555  
W-760-939-3213, C-760-382-6991



**DEPARTMENT OF THE NAVY**  
NAVAL AIR WARFARE CENTER WEAPONS DIVISION  
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CHINA LAKE, CA 93555-6100      POINT MUGU, CA 93042-5049

IN REPLY REFER TO:

5800  
Ser 400000D/2118  
May 5, 2010

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Project Manager Siting  
Transmission and Environmental Protection Division  
California Energy Commission (CEC)  
1516 Ninth Street, MS-15  
Sacramento, CA 95814-5504

Ms. Janet Eubanks  
BLM California Desert District  
22835 Calle San Juan de los Lagos  
Moreno Valley, CA 92553

**SUBJECT:      POTENTIAL MISSION IMPACTS POSED BY SOLAR MILLENNIUM SOLAR  
POWER PROJECT, DOCKET NUMBER 09-AFC-9, CACA-49016**

Thank you for the opportunity to review and provide comment regarding the Solar Millennium Solar Power Project, under current SA/DEIS review under CEC Docket 09-AFC-9, and BLM case file CACA-49016. Please add the Naval Air Warfare Center Weapons Division (NAWCWD) to the list of "Interested Agencies" regarding this project.

Established in 1943 as the Naval Ordnance Test Station, NAWCWD China Lake is the Navy's premier facility for the development and test of weapon systems. Since its inception, nearly every significant airborne weapon system has been either developed or tested at NAWCWD. Today, NAWCWD China Lake is designated the national Center of Excellence for Naval Weapons and Armament Research, Development, Acquisition, Test and Evaluation (RDAT&E). The proposed Solar Millennium Solar Power Project site is located directly south from the China Lake main site and ranges, and underlies the R-2508 airspace. The proposed Solar Millennium site is also approximately 4 miles south-southwest of the China Lake airfield. The NAWCWD staff has reviewed the project documentation uploaded to the California Energy Commission webpage. From this initial review, NAWCWD has the following concerns, detailed in enclosure (1), regarding the Solar Millennium Solar Power Project's potential impacts to NAWCWD's mission.

Again, thank you for the opportunity to review and provide comment regarding the Solar Millennium Solar Power Project. We look forward to future cooperation for land use management with both the BLM and the CEC.

Sincerely,

SCOTT M. O'NEIL

Executive Director

By direction of the Commander

Enclosure: 1. Potential Mission Impacts

**POTENTIAL MISSION IMPACTS POSED BY SOLAR MILLENNIUM SOLAR  
POWER PROJECT, DOCKET NUMBER 09-AFC-9, CACA-49016**

**1. AIR CLARITY IMPACTS ASSOCIATED WITH COOLING TOWER PLUME.**

Based on the Solar Millennium documentation, the cooling plant associated with the proposed site is expected to dissipate in excess of the 250 MW power plant nameplate rating of waste heat, depending on the solar flux and the ambient air temperature. The resulting thermal plume associated with the cooling plant is expected to generate non-homogenous thermal mixing as it extends far upward and outward into the atmosphere. This thermal plume is expected to demonstrate plume rise an order in magnitude larger than the visible plume.<sup>i</sup> A key physical effect associated with this plume is a high degree of visible and infrared shimmer and refraction. For instrumentation systems or sensors looking through the plume, shimmer will result in reduced target contrast and resolution. This effect is often called optical haze. The refractive effects will result in changes in line-of-sight and will not be stationary, but rather varying in both time and position within the plume. The thermal plume is expected to rarely act as a purely vertical plume due to prevalent winds; the resulting "bent over" plume and its corresponding optical haze is expected to span a significant portion of the southern Indian Wells Valley. This degradation is a concern for systems at the China Lake Range Complex, especially for instrumentation systems tracking or acquiring systems under test ingressing to the China Lake Range Complex from the south.

**2. THERMAL SIGNATURE**

Thermal signature is often a key physical attribute that weapon systems and sensors utilize to successfully conduct their mission, hence the prevalence of infrared sensors in use throughout military technologies. The Solar Millennium Solar Power Project presents a large-scale industrial facility with substantial thermal signature generated both by the solar field and the large cooling tower associated with the plant. The thermal signature of the thermal plume as discussed previously is also expected to reduce the available contrast for instrumentation systems operating in the infrared bands. Given the proposed placement of the solar plant under the R2506 airspace, the emergence of a large thermal signature is a concern to the Naval Air Warfare Center Weapons Division (NAWCWD) test and evaluation mission due to its potential effect on sensor acquisition and performance of systems under test.

**3. GLINT**

Light scattering and glint associated with the power plant's mirror and collector system is a concern as a result of its impact on NAWCWD's mission to test systems utilizing sensors, missile seekers, and airborne systems. These concerns are over and beyond prior studies that solely considered glint from the perspective of evaluating health hazards associated with glint and glare from solar projects.<sup>ii</sup> Glint effects are of particular concern as a result of the close proximity of test aircraft and sensors to the power plant mirrors and other hardware that will

occur. The site is located under airspace used by military aviation in support of the NAWCWD mission. Sun glint from collecting mirrors will be visible to passing aircraft from the Solar Millennium Solar Power Project field as a result of direct reflections from the parabolic trough mirrors at certain aircraft positions during all hours of the day. These reflections will appear as a line of intense reflected sunlight running down the length of the mirrors. There will also be a glint associated with a recollimation of stray (reflected and scattered) light sources from the target tube assembly back to the reflecting mirrors apparent for certain aircraft and mirror positions. There will also be glare produced directly from the collecting tubes that will be visible over a wide range of angles. The net effect of this combined sun glint is expected to include both a noticeable flash, coupled with glint demonstrating an apparent duration as different zones of mirrors come into play. The emergence of a potentially substantial glint source is a concern for pilot distraction, testing of weapon systems, sensors, and airborne platforms, as it has effect across both the visible and infrared wavelengths. Additionally, the scattering effect similar to that experienced in the optical bands is expected to be evident in the radio-frequency bands relative to airborne systems. The scattering in the radio-frequency bands is expected to impact the Center's electronic warfare and mission systems testing programs as they utilize the airspace surrounding the proposed power plant.

#### **4. FUGITIVE DUST**

The mission impacts to NAWCWD associated with fugitive dust emissions are well documented in the literature, particularly in relationship with fugitive dust associated with the exposed playa of Owens Lake.<sup>iii</sup> Health impacts associated with fugitive dust emissions are well recognized, particularly relative to the China Lake site and the Owens Valley. An element of this mission impact is the degradation of air clarity and its resulting direct degradation of instrumentation and sensor system performance. This degradation can directly result in failed and cancelled test events. The NAWCWD is concerned that the proposed Solar Millennium Solar Power Project may yield a large fugitive dust storm immediately up-prevailing-wind from the China Lake main site, potentially resulting in conditions similar to those associated with Owens Lake dust-storms. These particular concerns are amplified as a result of CEC staff discoveries that the Solar Millennium documentation indicates construction water consumption during construction approximately 3.3-5.5 times lower than other projects. From this observation, NAWCWD is particularly concerned that the project as defined will potentially result in large scale fugitive dust emissions, with the corresponding direct impact to the NAWCWD mission. The Solar Millennium Solar Power Project must directly address measures to identified shortfalls in their dust mitigation schemes, and ultimately prevent the negative effects associated with a growth in fugitive dust emissions.

#### **5. LIGHT POLLUTION.**

The NAWCWD is concerned about scattered and emitted light in both the visible and infrared bands from this project, as this light scattering has the potential to reduce the effectiveness of instrumentation and sensor systems in night-time tests. Solar Millennium's documentation indicates the adoption of "Dark Skies" compliant lighting, which is

commendable. The project documentation does not, however, indicate which “Dark Skies” standard the project will be adopting for its light pollution approach. An additional concern is the mitigation of light pollution in the infrared bands, which “Dark Skies” standards do not address at all.

## **6. RADIO-FREQUENCY ENCROACHMENT.**

The growth in use of radio-frequency devices in the areas surrounding NAWCWD are an encroachment source of concern, due to its negative impact to NAWCWD’s test and evaluation mission. Solar Millennium’s documentation indicates the willingness to coordinate their use of radio-frequency emitting devices with NAWCWD to minimize impact, which is appreciated. Nonetheless, NAWCWD requests that Solar Millennium minimize the use of radio-frequency devices for the control and telemetry of the site as much as possible (favoring alternative technologies such as fiber optic communications, for example).

## **7. IMPACT TO NAVY WATER RESOURCES.**

A major concern relative to the proposed Solar Millennium Solar Power Project is its projected water consumption. The aquifer associated with the Indian Wells Valley is generally recognized to be in a long standing overdraft condition. The continuing growth in consumption of the Valley’s scarce groundwater resources is a clear concern to the viability of the Navy’s interests in its own water well network. As a relative measure, it is noted that the water consumption projected by CEC staff required to prevent fugitive dust emissions during construction (6-8,000 acre-feet) is approximately equivalent to the annual consumption of the Indian Wells Valley Water District (IWVWD), the largest provider of domestic potable water for the Indian Wells Valley. This quantity is also very nearly equal to the estimated annual groundwater recharge for the entire valley.

The Navy has previously taken issue<sup>iv</sup> with the IWVWD’s previous plans to expand its water production as part of its “2007/2008 Water Supply Project” due to concerns of the effect the project’s increase in water harvesting would have to Navy wells. The increase in water consumption associated with the Solar Millennium Solar Power Project, sourced from the IWVWD, appears to exacerbate the Navy’s previous concerns relative to protecting its water interests. The water that Solar Millennium will use will come directly from potable groundwater sources that are already in serious decline.

In concurrence with the previous Navy response to the Indian Wells Valley Water District, it is our recommendation that any increase in water production required to meet the Solar Millennium Solar Power Project must first be further clarified to what extent the Navy wells will be affected. It is particularly noted that a similar solar power plant project, the “Calico” project in San Bernardino County, was required to substantially retire water rights in the affected aquifer prior to project approval. This approach, for a similar project in a nearby Mojave Desert location, seems to be a reasonable means to mitigate water concerns for the Indian Wells Valley aquifer.

## **8. ENCROACHMENT INTO MILITARY INFLUENCE AREAS.**

The Solar Millennium documentation discusses the supply water pipeline to the project site from IWVWD facilities that will pass through and be available to supply potable water to privately owned properties in the area of South China Lake Blvd. and US Highway 395. This area underlies a defined Military Influence Area.<sup>v</sup> Development within this area has been a previous encroachment concern to the Navy. The Navy has taken issue with recent proposals for development of residential properties under this Military Influence Area within the City of Ridgecrest. The Navy's position in favor of limiting development or growth within Military Influence Areas has not changed.

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<sup>i</sup> Uthe, Edward E. "Cooling Tower Plume Rise Analyses by Airborne LIDAR." *Atmospheric Environment*, Volume 18, Issue 1, 1984, Pages 107-119.

<sup>ii</sup> Ho, Clifford K., Ghanbari, Cheryl M., Diver, Richard B. "Hazard Analyses of Glint and Glare from Concentrating Solar Power Plants," SolarPACES Sept 15-19 2009, Berlin, Germany.

<sup>iii</sup> Saint Amand, P., L. Mathews, C. Gaines, and R. Reinking. "Dust storms from Owens and Mono Lakes," TP-6731. Naval Weapons Center, China Lake, CA. 1986.

<sup>iv</sup> NAWS Memo to Indian Wells Valley Water District, 13 August 2007. N45NCW/374.

<sup>v</sup> Final Air Installation Compatible Use Zone Study, Naval Air Weapons Station, China Lake. 2007.

5800  
Ser 400000D/2118  
May 5, 2010

**SUBJECT: POTENTIAL MISSION IMPACTS POSED BY SOLAR MILLENNIUM SOLAR  
POWER PROJECT, DOCKET NUMBER 09-AFC-9, CACA-49016**

**Copy to:  
NAVAIRWPNSTA China Lake, CA (N00)**

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Ridgecrest, CA 93555**

**City of Ridgecrest  
100 West California Avenue  
Ridgecrest, CA 93555**

**STATE OF CALIFORNIA**

**Energy Resources Conservation  
and Development Commission**

In the Matter of:

The Application for Certification of the  
(Solar Millennium) Ridgecrest Solar Power Project

Docket Number 09-AFC-9

**DESERT TORTOISE COUNCIL COMMENTS ON  
“DRAFT RIDGECREST SOLAR POWER PROJECT DESERT TORTOISE CLEARANCE  
AND RELOCATION/TRANSLOCATION PLAN. ATTACHMENT DR-BI0-54”**

April 19, 2010

Desert Tortoise Council  
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(909) 946-5027  
[gssilliman@csupomona.edu](mailto:gssilliman@csupomona.edu)

April 19, 2010

Janet Eubanks, Project Manager  
Bureau of Land Management  
California Desert District  
22835 Calle San Juan de los Lagos  
Moreno Valley, California 92553

Eric Solorio, Project Manager  
California Energy Commission  
1516 Ninth Street, MS-15  
Sacramento, California 95814

**Re: (Solar Millennium) Ridgecrest Solar Power Project (09-AFC-9). "Draft Ridgecrest Solar Power Project Desert Tortoise Clearance And Relocation/Translocation Plan. Attachment DR-BI0-54"**

Dear Ms. Eubanks and Mr. Solorio:

Central to the Applicant Solar Millennium's "Draft Ridgecrest Solar Power Project Desert Tortoise Clearance and Relocation/Translocation Plan" (2010) are definitions of relocation and translocation that the Desert Tortoise Council believes are not well grounded in science, fail to lessen the impacts to desert tortoises from moving the animals, and, if applied at the Ridgecrest site, could imperil the health of both the tortoises to be moved and the resident populations into which tortoises will be released.

The traditional understanding is that relocating desert tortoises means moving the animals to an area adjacent to where they were discovered, while "translocating desert tortoise is defined as moving them from harm's way to a location outside their home range" (e.g., moving them more than 1,000 feet or 305 meters (USFWS 2009, 7.9)). Solar Millennium's "Draft...Clearance and Relocation/Translocation Plan" proposes to define translocation as when a desert tortoise must be moved more than 5 kilometers to clear it from the Project site, while relocation is defined as moving a tortoise less than 5 kilometers (2010, 4).

Expanding the maximum distance for relocating desert tortoises is not well grounded in science, despite appearances to the contrary. The White Paper "Understanding Disease in Desert Tortoise Populations..." states that the 5 kilometer maximum distance for relocation "is based on the diameter of a 1-2 year home range estimate of 5 hectares.... Five hectares per home range multiplied by 10 home ranges results in a 5 km-radius area" (2009, 4). Five hectares is merely an "estimate" of desert tortoise home ranges that does not adequately incorporate the evidence that home ranges vary by locale and by sex. Furthermore, it is arbitrary to then multiply that estimate by a factor of ten (the basis for which is unexplained).

Extending relocation to encompass a distance that is traditionally considered translocation is merely a redefinition that does not lessen the negative impacts to animals caused by moving them from one location to another. Moving desert tortoises as Solar Millennium proposes may exceed the carrying capacity of the habitat to which tortoises are moved, may increase the incidence of disease among the tortoises resident on and adjacent to the Ridgecrest site, and it will almost certainly lead to the death of some percentage of the animals.

Defining relocation as moving desert tortoises less than 5 kilometers and then transferring tortoises in accordance with that definition could imperil the health of both the animals to be moved and the resident populations into which tortoises will be released because, according to the "Draft...Clearance And Relocation/Translocation Plan," desert tortoises "that are relocated would not require additional health assessments prior to relocation" (2010, 10). Based on the reports of Berry, et al. (2008), Mack, et al. (2008) and Mack and Berry (2009) that disease is not uniformly distributed across geographical areas, it is reasonable to assume that there will be pockets of diseased animals and pockets of healthy animals within the 5 kilometer range of the Ridgecrest site. Not fully testing animals that are to be "relocated" could result in the introduction of diseases into otherwise healthy populations. And not testing the host populations within the 5 kilometer range could result in the introduction of healthy tortoise from the project site into a population that is diseased.

The *Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise* (2008) recognizes that the translocation of tortoises from one site to another can introduce *Mycoplasma* that may invade host populations and cause a significant die-off among otherwise healthy tortoises (2008, 156). The document's recommendations for the control of *Mycoplasma* include undertaking "a full health evaluation of all tortoises prior to translocation" (2008, 156). The health evaluation should include two ELISA tests for *Mycoplasma* at six week intervals and testing for secondary infections. The Applicant, however, seems intent on avoiding the recommended tests by lengthening the maximum distance for relocating desert tortoises. Testing both animals that are to be moved any distance beyond the 305 meters specified in the *Desert Tortoise Field Manual* (2009) and the resident populations into which tortoises are to be released is absolutely necessary in order to meet the goal of the *Desert Tortoise Recovery Plan* to control *Mycoplasma* disease and aid recovery of the threatened desert tortoise.

To the extent that the Applicant's redefinition of translocation is derived from the "interim guidelines" set by public agencies (Draft...Clearance And Relocation/Translocation Plan 2010, 4), it is apparent that those guidelines require considerable revision. Our highest priority must be to ensure the health of desert tortoise populations and that responsibility cannot be avoided by an arbitrary redefinition of translocation.

While the Desert Tortoise Council's comments here focus on the problem posed by redefining translocation, it should not be concluded that we find the remainder of the translocation plan to be satisfactory. We reserve the right to comment on other elements of Solar Millennium's "Draft...Clearance And Relocation/Translocation Plan" at a future date.

Sincerely,

Original Signed By

Sidney Silliman, Ph.D.  
Chair, Ecosystems Advisory Committee  
Desert Tortoise Council

## References

- Berry, Kristin H., Jeremy Mack, Mary Brown, Kemp Anderson, John Roberts, and Elliott Jacobson. "Decision Time for Desert Tortoises in the Fort Irwin Translocation Project: Health and Disease Issues." Abstracts. Thirty-Third Annual Meeting And Symposium. The Desert Tortoise Council. Sam's Town Hotel and Casino, Las Vegas, NV. February 22–25, 2008.
- Desert Tortoise Science Advisory Committee. "Understanding Disease in Desert Tortoise Populations: A Brief Summary of Knowledge and Recommendations Pertinent to Conservation." A White Paper Presented to the U.S. Fish and Wildlife Service. June 2009.
- "Draft Ridgecrest Solar Power Project Desert Tortoise Clearance And Relocation/Translocation Plan. Attachment DR-BI0-54" Prepared by AECOM for the Ridgecrest Solar Power Project. January 2010.
- Mack, Jeremy and Kristin H. Berry. "Development of an Epidemiological Model of Upper Respiratory Tract Disease (Mycoplasmosis) in Desert Tortoises Using the Daggett Study Area: Year 2, 2008." Abstracts. Thirty-Fourth Annual Meeting And Symposium. The Desert Tortoise Council. Casa Blanca Resort And Casino, Mesquite, NV. February 20–22, 2009.
- Mack, Jeremy, Kristin H. Berry, Mary Brown, and John Roberts. "Epidemiology of Upper Respiratory Tract Disease in Desert Tortoises At the Daggett Study Area, California, in 2007." Abstracts. Thirty-Third Annual Meeting And Symposium. The Desert Tortoise Council. Sam's Town Hotel and Casino, Las Vegas, NV. February 22–25, 2008.
- U.S. Fish and Wildlife Service *Desert Tortoise Field Manual*. December 2009.  
([http://www.fws.gov/ventura/speciesinfo/protocols\\_guidelines/](http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/))
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**STATE OF CALIFORNIA**

**Energy Resources Conservation  
and Development Commission**

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In the Matter of:

The Application for Certification of the  
(Solar Millennium) Ridgecrest Solar Power Project

Docket Number 09-AFC-9

**INTERVENOR DESERT TORTOISE COUNCIL COMMENTS TO THE CALIFORNIA  
ENERGY COMMISSION ON THE "STAFF ASSESSMENT AND DRAFT  
ENVIRONMENTAL IMPACT STATEMENT AND DRAFT CALIFORNIA DESERT  
CONSERVATION AREA PLAN," (SOLAR MILLENNIUM) RIDGECREST SOLAR POWER  
PROJECT (09-AFC-9)**

May 21, 2010

Desert Tortoise Council  
Sidney Silliman  
1225 Adriana Way  
Upland, California 91784  
(909) 946-5027  
[gssilliman@csupomona.edu](mailto:gssilliman@csupomona.edu)

May 21, 2010

**Via Email and U.S. Mail**

Eric Solorio  
Siting Project Manager  
California Energy Commission  
1516 Ninth Street, MS-15  
Sacramento, California, 95814

**Re: "Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan," (Solar Millennium) Ridgecrest Solar Power Project (09-AFC-9)**

Dear Mr. Solorio:

The Desert Tortoise Council welcomes the opportunity to comment on the "Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan" (SA/DEIS) for the proposed Ridgecrest Solar Power Project in Kern County.

The Desert Tortoise Council is a private, non-profit organization made up of hundreds of professionals and lay-persons who share a common fascination with wild desert tortoises and a commitment to advancing the public's understanding of them. Established in 1976 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the goal of the Council is to assure the perpetual survival of viable populations of desert tortoise within suitable areas of its historical range. Accordingly, our comments will focus on the potential impacts of the Ridgecrest Solar Power Project (Ridgecrest SPP) to Mojave desert tortoise habitat and the tortoise population on the proposed site. Yet we are concerned with the layer of problems that Ridgecrest SPP poses for all species of wildlife found on the site, especially the potential and significant impacts to the Mohave Ground Squirrel (MGS). In addition, we believe that the concerns of the community must be taken in account in any California Energy Commission (CEC) decision on whether to certify the Solar Millennium application and in any Bureau of Land Management (BLM) decision on whether to issue a right-of-way and amend the California Desert Conservation Area Plan.

We concur with the conclusions of CEC Staff that the proposed Ridgecrest SPP would result in substantial impacts to biological resources, that these significant impacts cannot be fully mitigated, and that is more to appropriate preserve and protect the site as habitat for the desert tortoise and the MGS (BLM and CEC 2010, C.2-120).

First, we agree with CEC Staff in the "Land Use, Recreation, and Wilderness" section of the SA/DEIS that Ridgecrest SPP will have significant and immitigable impacts to existing natural resource use with the loss of desert tortoise habitat, the loss of designated MGS Conservation Area acreage, and the loss of migratory access (BLM and CEC 2010, C.5-1). While Staff

somewhat qualifies its conclusion on this point, we assert that these impacts to Land Use will be more or less permanent because desert lands recover very slowly. Robert Webb explains that -- depending on the assumptions of the model -- “the extrapolated amount of time for complete or 90% recovery of compacted [desert] soils ranges from 80 to 120 years for course-grained soils...” He adds that severely disturbed sites “may require as little as a century or as long as several thousand years for full recovery of species composition” (2009). By way of illustration, Wilshire, Nielson and Hazlett report that “severely compacted soils at 29 of 31 abandoned military bases and mining town sites have not recovered even after 91 years without human occupation” and recovery of plants and animal species “is likely to take much longer, on the order of a millennium” (2008, 305).

Second, we believe that the potential impacts of Ridgecrest SPP to biological resources cannot be reduced to less than significant levels because the acreage provides especially valuable habitat for the conservation and recovery of the Federal- and State-listed Mojave desert tortoise. The soil types at the Ridgecrest SPP site allow tortoises to construct good burrows, permit the growth of plant cover that protect juvenile tortoises from predators, and nourish the growth of plants that desert tortoises eat. The Creosote Ring Sub Chapter of the California Native Plant Society reports that eight of the top ten plant species preferred by the adult tortoises and ten of the sixteen plant species preferred by juvenile tortoises grow within the possible disturbance area (2010). The number of juvenile tortoises surveyed in 2009 is evidence that this is uniquely valuable habitat as it supports a reproducing population of desert tortoises and provides food and protection for juveniles. While the proposed site is not within a Wildlife Management Area (DWMA), the *Desert Tortoise Recovery Plan* states: “Habitat outside DWMA’s may provide corridors for genetic exchange and dispersal of desert tortoises among DWMA’s” (1994, 60). Valleys are especially valuable for species connectivity and, in this respect, the Ridgecrest SPP site provides a corridor for genetic exchange and dispersal among tortoise populations at the northern edge of their range in California.

The Mojave Desert Tortoise was listed as a “threatened species” under the Federal Endangered Species Act in 1990 because of the precipitous decline in desert tortoise numbers due to human-caused mortality and the destruction and fragmentation of desert tortoise habitat. Siting Ridgecrest SPP on occupied desert tortoise habitat would contribute directly to the continued decline of the Mojave desert tortoise. Given that desert tortoise populations have been extirpated or almost extirpated from large portions of the western and northern parts of their geographical range in California, it is reasonable that this valuable habitat be protected for desert tortoise conservation rather than for energy generation.

Nor do we believe that the impacts of Ridgecrest SPP can be reduced to less than significant levels. The southern portion of the project would eliminate a segment of the MGS Conservation Area established by the West Mojave Plan of 2006, an Area, ironically, established as mitigation for human impacts to other MGS habitat. Given the difficulty of trapping MGS and the absence of a MGS translocation protocol, siting Ridgecrest SPP even as modified will likely result in the complete loss of the squirrels resident south of Brown Road. There must be a limit to human take of habitat if the MGS is ever to be removed from the threatened species list in California.

Philip Leitner clearly identifies the core populations of the MGS in his “Current Status of the

Mohave Ground Squirrel” (2008) and it is evident from his maps that the proposed geographical location of the Ridgecrest SPP site is the likely and best habitat for connectivity with the MGS population at Coso/Olancho and for connectivity between the Dixie Wash and the Highway 395 populations. Even the modified Ridgecrest SPP would reduce the habitat for MGS connectivity to two small slivers west of the project and down El Paso Wash. These are not sufficient areas for MGS to live, reproduce and disperse. Furthermore, the lights and maintenance activities in and around Ridgecrest SPP – to say nothing of the seasonal flow of waters – are likely to reduce the quality of the El Paso Wash as habitat

Third, the concentration of desert tortoises at the proposed site relative to the historic decline in tortoise populations and the lower tortoise densities in nearby areas underscores the conclusion that biological impacts cannot be fully mitigated.

Since the early 1970s, biologists have recorded the decline of desert tortoise populations throughout much of their range (Desert Tortoise Recovery Team 1994, 2). Where there were once one-hundred or more tortoises per square kilometer in areas of the tortoise’s historic range, the *Range-Wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report* (USFWS 2009, 38-39) documents that densities today in monitored areas of the Desert Tortoise Recovery Units are less than 15 tortoises per square kilometer, and the average density of all but one Recovery Unit is less than 6. Furthermore, the *Range-Wide Monitoring Report* documents the continued decline in population densities; ranging from a 9 percent decline in the Northeastern Recovery Unit to a 58 percent decline in the Northern Colorado Recovery Unit between 2005 and 2007. Whether we use a figure of 9.8 tortoises per square kilometer (BLM and CEC 2010, C.2-19) or a density of 8.1 tortoises per square kilometer as calculated by Alice Karl (2010), the adult desert tortoise density at the site is significantly greater than the average density of 4.7 desert tortoise per square kilometer within the West Mojave Recovery (USFWS 2009, 38-39). The importance of the desert tortoise population at the proposed site and the necessity of protecting it is further supported by scientific evidence that the population density there is comparatively higher than in nearby areas. The reported densities within the nearby Fremont-Kramer DWMA are reported to be 5.3 to 7.6 desert tortoises per kilometer (BLM and CEC 2010, C.2-19). Kristin Berry and Kevin Keith (2008) report estimated population densities in the western portion of Red Rock Canyon State Park to be between 2.7 and 3.57 tortoises per square kilometer.

Protecting this tortoise population – part of the West Mojave Desert Tortoise Recovery Unit -- will contribute to ensuring the genetic diversity of the Mojave desert tortoise. The West Mojave Recovery Unit is one of six Recovery Units designated in the *Desert Tortoise Recovery Plan* (1994). These populations were appropriately identified based on genetics, behavior, ecology, geographic isolation, and morphology. Since the *Recovery Plan* was published, a number of studies have compared tortoises between different Recovery Units and confirmed biological differences among the populations. Most recently, “*A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise...*” (Murphy, et al. 2007) presents new evidence that desert tortoises in the Recovery Units constitute distinct populations, confirming the validity of the 1994 Plan’s six Recovery Units. Each of these evolutionary significant population units faces a distinct suite of past and ongoing impacts to tortoises and supporting habitat, and each

Unit must be protected for its genetic diversity. The Murphy study identifies, as well, at least three genetically diverse desert tortoise populations within the West Mojave Recovery Unit.

The CEC and the BLM Government should not be sanguine that Ridgecrest tortoises might be “protected” by translocating or relocating the animals to another area. Translocation of desert tortoises is a salvage operation fraught with risks for the animals.

Moving desert tortoises from their home ranges could increase the incidence of disease among the tortoises resident on and adjacent to the Ridgecrest site. The *Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise* recognizes that the translocation of tortoises from one site to another can introduce *Mycoplasma* that may invade host populations and cause a significant die-off among otherwise healthy tortoises (2008, 156). Not fully testing animals that are to be “relocated” (moved less than 5 kilometers) could result in the introduction of diseases into otherwise healthy populations. And not testing the host populations within the 5 kilometer range could result in the introduction of healthy tortoise from the project site into a population that is diseased (Silliman 2010). Moving the tortoises from the construction site will almost certainly lead to the death of some percentage of the animals. Timothy Gowan and Kristin Berry (2010) report a mortality rate of 44 percent among a sample of 158 tortoises translocated from Fort Irwin’s Southern Expansion Area in the Spring of 2008. Dr. Berry reported at the May 3, 2010 CEC workshop on the Ridgecrest SPP that the death rate among that sample of desert tortoises is nearly 61 percent. Obviously, high mortality rates conflict with the objective of the *Desert Tortoise Recovery Plan* to conserve and recover the Mojave desert tortoise. Moving animals from their home ranges carries too high a risk of mortalities. That risk cannot be justified given the valuable habitat and the large concentration of desert tortoises at the site.

In sum, based on our assessment of the project’s potential impacts to biological resources, the Desert Tortoise Council recommends the No Project/No Action Alternative with respect to Solar Millennium’s application for certification. This is the environmentally preferred alternative as it would preserve the area for the conservation and recovery of the threatened Mojave desert tortoise and the threatened Mohave Ground Squirrel. Previously disturbed lands are more suitable to energy generation than the proposed Ridgecrest SPP site and California can meet its renewable energy goals by siting solar thermal power plants on those sites.

As an added note, in a democratic political system such as ours, it is incumbent upon governmental officials to be responsive to the citizenry. We urge, therefore, that CEC give careful and full consideration to the issues raised by numerous members of the Ridgecrest and Inyokern communities. We share their concern for the threat to the community posed by Valley Fever from construction disturbance of soils, the potential impacts to the Indian Wells Valley aquifer, and impacts to cultural resources. It is essential that the CEC consider these concerns and shape the certification decision accordingly rather than merely acknowledging them. After all, the proposed site is located within their community and Ridgecrest SPP will affect their lives for decades.

Thank you for the opportunity to comment on the SA/DEIS. Please contact me by telephone at (909) 946-5027, by e-mail at [gssilliman@csupomona.edu](mailto:gssilliman@csupomona.edu), or by U.S. mail at the address below if you wish clarification of these comments.

Sincerely,



Sidney Silliman, Ph.D.  
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#### References

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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
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**APPLICATION FOR CERTIFICATION**  
**For the *RIDGECREST SOLAR***  
***POWER PROJECT***

**Docket No. 09-AFC-9**

**PROOF OF SERVICE**  
**(Revised 5/12/2010)**

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**INTERESTED AGENCIES**

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Janet Eubanks, Project Manager,  
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**ENERGY COMMISSION**

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Hearing Officer  
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10 May, 2000

Captain,

I really appreciate the personal and rapid response to my concerns and email. Thank you.

I've been doing a little research through the Kern County Dept. of Public Health and into their records of Valley Fever incidence in Ridgecrest.

They do maintain records of reported cases by locality that I'll tell you about here.

My point of contact for this data is Kirt Emery, the epidemiologist for the Dept.

A summary of their data follows:

For the years 1995 through 1998 there were 14 cases reported. Of these, 8 were reported in 1998. There were no more than 4 cases in any of the years 1995, 1996 or 1997. This upswing continued into 1999 with another 8 cases reported that year. So far in 2000 there have been 3 cases reported.

A fair question would address changes occurring late in 1997 or early in 1998 to cause this increase in "Cocci Morbidity".

I do believe 1) the Navy should be extremely interested in finding out if they are playing a part in the problem, 2) that military personnel stationed here should have training on this disease and its source and effects, and 3) that this increase and potential connection to the NAWS demolition shouldn't be "advertised" for fear of creating undo panic. I've talked with my doctor about these fears and he agrees that where health issues are concerned a cautious approach is best.

I'm hopeful that a plan of action that addresses my concerns and all of our safety can be instituted soon.

Thanks,

Monte Frisbee

Code 452310D

939-4511

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eMail Transcription

April 22, 2010

Dear Mr. Frisbee:

Thank you contacting me regarding this issue. As you are well aware with cystic fibrosis being a chronic respiratory condition where airway defense mechanisms are faulty, any conditions that could increase the risk of infection or airway irritation could have significant consequences in the health of a CF patient. Certainly a large earth removal project such as the one in question will produce aerosol dispersion of particulate material including fungal spores. Both coccidioidomycosis and air pollution have been reported to impact significantly the lungs of CF patients and lead to detrimental outcomes. Anything that can be done to avoid these exposures is highly advisable.

I will be glad to provide more detailed information if you feel necessary.

With best regards,

Carlos E. Milla, MD  
Associate Professor  
Center for Excellence in Pulmonary Biology  
Stanford University

**DECLARATION OF  
Dr. Robert Schumacher**

I, Robert Schumacher, declare as follows:

1. I am presently practicing as a medical doctor and member of Pediatric Partners in Ridgecrest, California.
2. I have professional experience treating San Joaquin Valley Fever (Coccidioidomycosis) patients.
3. The prepared testimony that I have signed is the result of my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue(s) addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: April 18, 10

Signed: Robert Schumacher MD

At: Ridgecrest, California

**From:** [Sidney Silliman](#)  
**To:** [carspp@ca.blm.gov](mailto:carspp@ca.blm.gov)  
**Subject:** Desert Tortoise Council Comments - Ridgecrest Solar Power Project DEIS  
**Date:** 07/08/2010 04:02 PM  
**Attachments:** [DTC comments to BLM on RSPP DEIS 7\\_8\\_10 \(final\).pdf](#)

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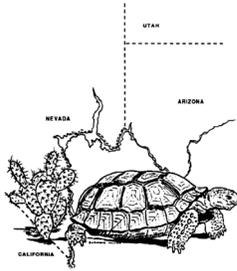
Janet Eubanks  
RSPP Project Manager  
Bureau of Land Management

Dear Ms. Eubanks:

Please find attached comments from the Desert Tortoise Council on the Draft Environmental Impact Statement for the (Solar Millennium) Ridgecrest Solar Power Project. A printed copy of the letter is being forwarded via U.S. mail.

Sincerely,

Sid Silliman  
Member, Board of Directors  
Desert Tortoise Council



## DESERT TORTOISE COUNCIL

P.O. Box 3273  
Beaumont, California 92223  
[www.deserttortoise.org](http://www.deserttortoise.org)

July 8, 2010

### Via Email and U.S. Mail

Janet Eubanks  
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### **Re: Draft Environmental Impact Statement/Draft California Desert Conservation Area Plan Amendment/Staff Assessment, (Solar Millennium) Ridgecrest Solar Power Project**

Dear Ms. Eubanks:

The Desert Tortoise Council welcomes the opportunity to comment on the “Draft Environmental Impact Statement/Draft California Desert Conservation Area Plan Amendment/Staff Assessment” (Draft EIS) for the Ridgecrest Solar Power Project (RSPP) proposed by Solar Millennium and to share our views as to (1) whether the Bureau of Land Management (BLM) should approve, approve with modification, or deny issuance of a right-of-way grant to Solar Millennium and (2) whether the BLM should amend the California Desert Conservation Area (CDCA) Plan to designate the RSPP area as either available or unavailable to solar energy projects (BLM 2010).

The Desert Tortoise Council is a private, non-profit organization made up of hundreds of professionals and laypersons who share a common fascination with wild desert tortoises and a commitment to advancing the public’s understanding of them. Established in 1976 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the goal of the Council is to assure the perpetual survival of viable populations of desert tortoise within suitable areas of its historical range. Our primary concern relative to RSPP is its potential impacts to the desert tortoises occupying the proposed right-of-way and their habitat. The Desert Tortoise Council is concerned, as well, with the layer of problems that RSPP poses for all species of wildlife found on the site, especially the potential and significant impacts to the Mohave Ground Squirrel (MGS).

In light of Solar Millennium's June 2010 letter to Field Manager Hector Villalobos and Project Manager Eric Solorio requesting that the BLM and the California Energy Commission (CEC) "suspend" the application of the Ridgecrest Solar Power Project, the Desert Tortoise Council urges the BLM to postpone any decision on a right-of-way grant and an amendment to the CDCA Plan for the proposed project. Simply put, it is illogical to proceed to a decision given the applicant's formal request for project suspension. In addition, the Desert Tortoise Council urges the BLM to rewrite and re-circulate the Draft EIS if and when the two-year MSG connectivity study planned by Solar Millennium is completed. A report of that study -- including its methodology, the data gathered and any conclusions drawn -- must be incorporated in any environmental impact statement for RSPP. It should also be noted that special status species surveys conducted in the spring of 2009 are now outdated, as the involved regulatory agencies generally consider such survey data valid for only one year. A new Draft EIS could incorporate the additional survey data that will be needed to account for changed conditions at the RSPP site.

Should the BLM proceed to a decision on the RSPP application despite Solar Millennium's project suspension request, the Desert Tortoise Council recommends selection of the No Action Alternative and amending the CDCA Plan to classify the area as unsuitable for future solar development (BLM and CEC 2010, B.2-16). We feel that this is the only course of action indicated by the environmental consequences of the proposed action as outlined in the Draft EIS.

First, we agree with CEC Staff in the "Land Use, Recreation, and Wilderness" section of the Draft EIS that the Ridgecrest Solar Power Project would have significant and immitigable impacts to existing natural resource use with the loss of desert tortoise habitat, the loss of designated MGS Conservation Area acreage, and the loss of migratory bird access (BLM and CEC 2010, C.5-1). These impacts to Land Use will be more or less permanent because desert lands recover very slowly. As Dr. Robert Webb (2009) explains, "the extrapolated amount of time for complete or 90% recovery of compacted [desert] soils ranges from 80 to 120 years for course-grained soils...." This renowned U.S. Geological Survey researcher also found that severely disturbed sites "may require as little as a century or as long as several thousand years for full recovery of species composition." By way of illustration, Wilshire, Nielson and Hazlett (2008) report that, "severely compacted soils at 29 of 31 abandoned military bases and mining town sites have not recovered even after 91 years without human occupation" and recovery of plants and animal species "is likely to take much longer, on the order of a millennium".

Second, we believe that the potential impacts of RSPP to biological resources cannot be reduced to less than significant levels because the acreage provides especially valuable habitat for the conservation and recovery of the desert tortoise. The soil types at the RSPP site allow tortoises to construct good burrows, permit the growth of plant cover that protect juvenile tortoises from predators, and nourish the growth of plants that desert tortoises eat. The California Native Plant Society (CNPS) reports that eight of the top ten plant species preferred by the adult tortoises and ten of the sixteen plant species preferred by juvenile tortoises grow within the proposed project's disturbance footprint (2010). The number of juvenile tortoises surveyed in 2009 is evidence that this is uniquely valuable habitat as it supports a reproducing population of desert tortoises and provides food and protection for juveniles.

While the proposed site is not within a Desert Wildlife Management Area (DWMA), the *Desert*

*Tortoise Recovery Plan* states: “Habitat outside DWMAs may provide corridors for genetic exchange and dispersal of desert tortoises among DWMAs” (USFWS 1994). The RSPP site provides just such a corridor for genetic exchange and dispersal among tortoise populations at the northern edge of their range in California.

The desert tortoise was listed as a “threatened species” under the Federal Endangered Species Act in 1990 due to a precipitous decline in numbers, as well as habitat loss and fragmentation. Siting RSPP on occupied tortoise habitat would not contribute tortoise recovery pursuits. Given that tortoise populations have been extirpated from large portions of their geographical range in California, it is reasonable that habitat supporting moderate to high tortoise densities be protected rather than used for energy generation purposes.

Nor do we believe that the impacts of RSPP to Mohave ground squirrels and their habitat can be reduced to less than significant levels. The southern portion of the project would eliminate a segment of the MGS Conservation Area established by the West Mojave Plan. This area, ironically, was established as mitigation for human impacts to other MGS habitat. The siting of RSPP, even as modified, would likely result in the complete loss of the resident squirrels south of Brown Road. A continued reduction in extent and quality of habitat for this species has already resulted in a re-examination of this species for Federal listing. Additional impacts to occupied and previously designated reserves for this species will likely underscore the need to list this State-listed species under the Endangered Species Act.

Dr. Philip Leitner (2008) clearly identifies the core populations of the MGS in his recent summary of Mohave ground squirrel status. It is evident from his maps that the proposed geographical location of the RSPP site is the likely and best habitat for connectivity with the MGS population at Coso/Olancho and for connectivity between the Dixie Wash and the Highway 395 populations. Even the modified RSPP would reduce the habitat for MGS connectivity to two small slivers west of the project and down El Paso Wash. These are not sufficient areas for MGS to remain as long-term populations. In addition, the lights and maintenance activities in and around RSPP – to say nothing of the seasonal flow of waters – are likely to reduce the quality of the El Paso Wash as habitat for this species.

Third, we contend that the concentration of desert tortoises at the proposed site relative to the historic decline in tortoise populations and the lower tortoise densities in nearby areas underscores the conclusion that biological impacts cannot be fully mitigated.

Since the early 1970s, biologists have recorded the decline of desert tortoise populations throughout much of their range (USFWS 1994). Where there were once one hundred or more tortoises per square kilometer in areas of the tortoise’s historic range, the *Range-Wide Monitoring of the Mojave Population of the Desert Tortoise: 2007 Annual Report* (USFWS 2009, 38-39) documents that densities today in monitored areas of the Desert Tortoise Recovery Units are less than 15 tortoises per square kilometer. The average density of all but one Recovery Unit has been reported as less than 6.

The *2007 Range-Wide Monitoring Report* has documented a continued decline in population

densities, ranging from a 9 percent decline in the Northeastern Recovery Unit to a 58 percent decline in the Northern Colorado Recovery Unit, between 2005 and 2007. Whether we use a figure of 9.8 tortoises per square kilometer (BLM and CEC 2010, C.2-19) or a density of 8.1 tortoises per square kilometer as calculated by Dr. A. Karl (2010), the adult desert tortoise density at the site is significantly greater than the average density of 4.7 desert tortoise per square kilometer within the West Mojave Recovery Unit (USFWS 2009, 38-39).

The importance of the desert tortoise population at the proposed site and the necessity of protecting it is further supported by scientific evidence that the population density there is comparatively higher than in nearby areas. The reported densities within the nearby Fremont-Kramer DWMA are reported to be 5.3 to 7.6 desert tortoises per kilometer (BLM and CEC 2010, C.2-19). Dr. Berry and Kevin Keith (2008) report estimated population densities in the western portion of Red Rock Canyon State Park to be between 2.7 and 3.57 tortoises per square kilometer.

Protecting this tortoise population – part of the West Mojave Desert Tortoise Recovery Unit -- will contribute to ensuring the genetic diversity of the tortoise. The West Mojave Recovery Unit is one of six recovery units designated in the *Desert Tortoise Recovery Plan* (1994); but it arguably the one most at risk from various anthropogenic impacts. Since the recovery plan for this species was initially prepared, a number of studies have confirmed biological differences among the populations.

Most recently, “*A Genetic Assessment of the Recovery Units for the Mojave Population of the Desert Tortoise...*” (Murphy et al. 2007) presents new evidence that tortoises in the recovery units constitute distinct populations. Each of these evolutionary significant population units faces a distinct array of past and ongoing impacts to tortoises and supporting habitat. Each of these units must be protected if we are to protect the species’ genetic diversity.

We are not reassured that the tortoises might be “protected” by translocating or relocating the animals to another area. Translocation of desert tortoises is a salvage operation fraught with risks involved for animals moved, and tortoise populations where these animals may be moved to. Moving desert tortoises from their home ranges could increase the incidence of disease among the tortoises resident on and adjacent to the Ridgecrest site. The *Draft Revised Recovery Plan for the Mojave Population of the Desert Tortoise* recognizes that the translocation of tortoises from one site to another can introduce *Mycoplasma* that may invade host populations and cause a significant die-off among otherwise healthy tortoises (2008, 156). Not fully testing animals that are to be “relocated” (moved less than 5 kilometers) could result in the introduction of diseases into otherwise healthy populations. And not testing the host populations within the 5 kilometer range could result in the introduction of healthy tortoise from the project site into a population that is diseased (Silliman 2010).

Moving the tortoises from the construction site will almost certainly lead to the death of some percentage of the animals. Timothy Gowan and Kristin Berry (2010) report a mortality rate of 44 percent among a sample of 158 tortoises translocated from Fort Irwin’s Southern Expansion Area in Spring 2008.

Dr. Berry reported at the May 3, 2010 CEC workshop on the Ridgecrest SPP that the death rate among that sample of desert tortoises is nearly 61 percent. Obviously, high mortality rates conflict with the objective of the *Desert Tortoise Recovery Plan* to conserve and recover the species. Moving tortoises from their home ranges carries too high a risk of mortality. That risk cannot be justified given the valuable habitat and the large concentration of desert tortoises at the subject site under consideration for solar energy development.

In sum, the Desert Tortoise Council urges the Bureau to postpone any decision on a right-of-way grant for RSPP and to rewrite and re-circulate the Draft EIS. Should the BLM proceed to a decision, we urge the Bureau to opt for “No Action” on the RSPP project and amend the CDCA plan to classify the area as “unsuitable for future solar development.” This is the preferred alternative, as it would promote the conservation and recovery of both the desert tortoise and the Mohave ground squirrel. Previously disturbed lands are more suitable to energy generation than the proposed RSPP site. California can meet its renewable energy goals with a focus on siting solar thermal power plants on disturbed lands and/or lands with less critical conservation value.

Thank you for the opportunity to comment on the Draft EIS. Please contact me by telephone at (909) 946-5027, by e-mail at [gssilliman@csupomona.edu](mailto:gssilliman@csupomona.edu), or by U.S. mail at the address below if you wish clarification of these comments.

Sincerely,



Sidney Silliman, Ph.D.  
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**From:** [Don Decker](#)  
**To:** [Janet Eubanks](#)  
**Subject:** DEIS comment letter on the Ridgecrest Solar Project  
**Date:** 07/08/2010 11:43 AM  
**Attachments:** [letter to Eric Solario 41910.pdf](#)

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Dear Ms Eubanks, please find a Draft Environmental Assessment comment letter for the Ridgecrest Solar project as proposed by Solar Millennium enclosed. (CEC Docket No. 09-AFC-9). This letter was previously submitted to the CEC (CEC Docket No. TN-56425). This letter primarily relates to the water use of the proposed project which would come from the critically overdrafted groundwater supplies of the Indian Wells Valley. I have also contacted the State Department of Water Resources with my concerns over the complete lack of any groundwater management in this valley and the very negative consequences for additional extraction. Please distribute this letter to the appropriate BLM staff for consideration.

Sincerely, Judie Decker

4/19/2010

Judith Decker  
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Subject: Comments on Docket Number 09-AFC-9, "Solar Millennium, Ridgecrest Solar Power Project"

Dear Sir,

In studying the CEC SA/DEIS, a number of serious misstatements/misunderstandings of the management, conservation and use of groundwater in the IWV are offered. These errors have a critical impact on the proposed Conditions of Certification.

On page C.9-35 a pair of sentences are given and are quoted below.

**"However, groundwater is being supplied by IWWVD (water purveyor) under a basin management program. Consequently, any impacts related to groundwater level changes would be managed as part of the overall groundwater management of the IWVGB."**

As I pointed out in my scoping letter, The Indian Wells Valley Cooperative Groundwater Management Group (IWVCGMG) is a self-appointed organization that has no legal authority to do anything. This organization has in fact misrepresented itself to the County of Kern and to the State of California Water Resources Board. There is no groundwater management underway at all, and the IWVCGMG serves primarily as a cover for some of the major pumpers. There is no representative for the private, coop or mutual water well owners nor is there anyone representing the public. This is the principal reason the basin overdraft is not under control. The overdraft simply continues decade after decade in free fall with the inaction of this impotent group.

The Indian Wells Valley Water District (IWWVD) is the principal public agency pumping and serving water (groundwater). The IWWVD has never been required to perform a water assessment and simply continues to sign up new customers in small developments. The rate of water declines in the SW wellfield area have accelerated with the concentrated pumping that the IWWVD is now exercising. This is the precise area that the water for the RSPP would be taken from. The impacts on private and community wells in the area that have overlying use water rights are already significant and in some cases threatening. The water level monitoring program conducted by the Kern County Water Agency documents these declines. The IWWVD has been declared by Kern County to have appropriative rights only for water produced from any new projects unless it can be shown that no damage to the overlying water rights will occur. In a seriously overdrafted basin there is no "surplus" water to be had. The IWWVD is continuing to plan for its Water Supply Improvement Project that in part is being driven by the new requirements for water by the RSPP. This project would double the capacity of certain SW wells and add an additional high capacity well in the same area. The IWWVD appears to be ignoring the Kern County appropriator declaration. There can be no doubt that the basin will be adjudicated to resolve these conflicts.

It is simply not acceptable or legal to use water obtained by a conservation program (cash for grass, low flow shower heads, etc) conducted by the existing property owners within the service area of the IWWVD

to enable yet another new customer. In fact, the California Water Plan (SB 610) requires an approximately 20% reduction in per capita water use against baseline data. Any IWVWD customer conservation water would be actually accounted for in this new requirement and in a functional sense would be used to reduce the overdraft. Where is it stated in any of the Applicant's or CEC's documentation how the applicant will comply with this conservation requirement?

The California Water Code prohibits a serving entity from providing water to new customers at the expense of existing customers. In the case of the RSPP we are talking about a new project that is not a current IWVWD customer and in fact is outside of the service area of the District. Any conserved water should without question be used to offset the overdraft. To try to use this approach as mitigation for water use by Solar Millennium (SM) in a critically overdrafted basin is in contradiction to the proposed Kern County Specific Plan for the IWV that requires an actual offset (e.g., fallowing farm land) in order to accommodate a new water demand.

A source of water for the RSPP that is not discussed in the SA/DEIS would be the wastewater from the Ridgecrest Water Treatment facility. Claims are made that this water is not available. That claim is specious. The water, its treatment and the 15 mile pipeline would be more expensive than getting potable water directly from the IWVWD but given the dire financial situation of the City of Ridgecrest, there is no doubt that water from their facility could be obtained. However, in this critically overdrafted basin even the wastewater is very valuable to our future. I will argue that since the power consumed from the RSPP will be by residents of the cities to the south, the water should actually be supplied by those benefiting. The obvious water source to tap is that being carried by the LA DWP aqueducts that pass through the IWV approximately 10 miles to the west of the project site.

The sole reason the IWVWD entered into the MOU with SM was to secure a new pipeline down S China Lake Blvd. In spite of all kinds of claims to the contrary, the purpose of the peculiar route chosen and the oversized pipe is to serve new housing in the "highland area" of S China Lake Blvd. This land has been coveted by developers for decades (cheap land -no water except to haul and great views). So in fact the RSPP is a growth enabler.

The IWVCGMG has had nothing to say publicly about the District's MOU with Solar Millennium. I can say this with certainty since I have attended virtually all of the meetings of this group for years. I am offering this comment to further emphasize my statement that the IWVCGWMG is not in fact managing the groundwater here in spite of the implications of the name. I know what I am talking about. I served as an elected Board member of the IWVWD for nearly 18 years. I spent most of my energy in fact trying to convince other Board members of the absolute need to address our groundwater overdraft. Please reread my comments in my scoping letter. I respectfully ask that this letter be docketed and posted. Signed, Judie Decker

**From:** [Don Decker](#)  
**To:** [Janet Eubanks](#)  
**Subject:** DEIS comment letter on the Ridgecrest Solar Project  
**Date:** 07/08/2010 11:59 AM  
**Attachments:** [comment letter 51710.pdf](#)

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Dear Ms Eubanks, please find a Draft Environmental Assessment comment letter for the Ridgecrest Solar project as proposed by Solar Millennium enclosed. (CEC Docket No. 09-AFC-9). This letter was previously submitted to the CEC (CEC Docket No. TN-56781). This letter discusses several critical aspects of the DEIS mitigation analysis including water use, dust mitigation, Cultural aspects and project timeleline definition. Please distribute this letter to the appropriate BLM staff for consideration.

Sincerely, Don Decker

5/21/2010

**From:** Don Decker  
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**To:** Eric Solorio  
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**Subj:** Comments on the draft SA/DEIS Document, Docket Number 09-AFC-9, “Solar Millennium, Ridgecrest Solar Power Project”

Mr Solorio and Ms Eubanks:

This letter is being written to offer constructive criticism of the California Energy Commission (CEC)/ Bureau of Land Management (BLM) Staff Assessment/Draft Environmental Impact Statement (SA/DEIS) Document for the Ridgecrest Solar Power Project (RSPP). I want to offer to yourself, the CEC and BLM staff authors my appreciation for the efforts made during the very compressed schedule in assessing the AFC put forth by Solar Millennium (SM) for the RSPP. I strongly support the CEC Staff Assessment of “No Project”. I submit that although this assessment is based entirely on the findings in the biological values section, C.2, other sections if examined as critically would also have presented an assessment that inadequate mitigation was being offered by Solar Millennium for other environmental impacts as well.

### **General Comments and Criticisms**

The stage was set for these less critical evaluations when the Commission accepted the Application for Certification (AFC) as "data adequate" on 11/18/2009. I realize that the “fast track” process itself undoubtedly led directly to this circumstance. However, I believe that a more critical evaluation by staff at that point would have been appropriate. I have been manager for many DoD programs and am completely familiar with the content and appearance of well-organized and complete proposals. That said, I offer the observation that the AFC and its amendments are very weak, incomplete and contradictory in many critical areas. It is clear that standard industry practices and standards for a proposal of this magnitude have not been followed. To what standards has the SM AFC and amendments been held? **Many of the omissions and**

**contradictions make it impossible to assess whether or not a given mitigation is a real offering or is even possible.**

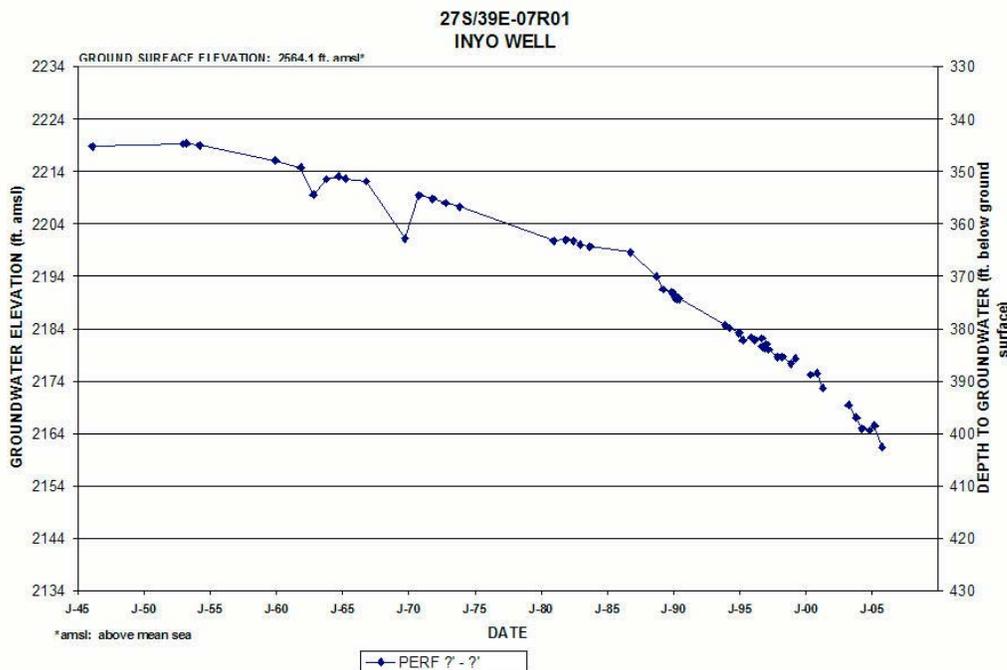
The most serious omission in the AFC is the complete lack of a timeline for the tasks comprising the engineering design, mitigation and construction of the project. Many if not virtually all of the tasks are interrelated and interlocked. With this level of complexity, a “Gantt” type flow chart with several levels of detail is essential to just provide a top-level analysis of the project. It was very apparent from the oral response that Mr. S. Galati offered to my question at the workshop on 5/4/2010 concerning when SM expected to start construction after project approval, that SM does not have more than a rudimentary timeline worked out. In regard to mitigation, it is critical that the project task timeline register with the mitigation requirements for removal of tortoise or trapping of Mojave ground squirrels. I submit that making the assumption that “everything will fall into place” once the project gets started is not acceptable.

### **Traffic, Air Quality and Soil and Water Resources**

From a project perspective, it is essential to identify the critical path and the items associated with it. This is far from being just a question for SM management to be concerned with. The omission of a top-level task timeline directly impacts the viability of many of the proposed mitigations. For example, in my scoping letter I pointed out that a huge number per day of truck crossings of US 395 would be required to bring construction water to the RSPP site for dust mitigation, at least initially. It will take months to complete the water supply pipeline to the project site and to provide a distribution system within the site itself. Judging from other similar projects in the Indian Wells Valley (IWV) area it is likely that more than 6 months will be required. The project sequence will involve working up a detailed engineering design of the project, pulling permits, ordering and receiving materials, obtaining Right of Way (ROW) easements, writing Statements of Work (SOW)’s, advertising for bids, securing a contractor, and completing the pipeline that is described in the Indian Wells Valley Water District (IWWVD)/ SM Memorandum of Understanding (MOU). Is SM going to hold up project construction for the pipeline completion? Apparently they are, as there is no mention whatsoever of any water truck traffic *across* US 395 in the traffic section of the AFC. However, Mr. Galati indicated in his answer to my schedule question at the workshop on May 4<sup>th</sup> that construction might start in as short a time as a month or two after project approval. To demonstrate how inconsistent the AFC really is, here is a quote from the Soils and & Water Data Request 132-192 page 24: “Onsite wells will not be used for construction water. Construction water will be provided by Indian Wells Valley Water District initially by trucking and then through the water supply pipeline.” The existing IWWVD facility for obtaining bulk water is a very low flow rate facility and not in any way suited to filling hundreds of water trucks per day. How can an assessment be made of this confused situation? **An assessment that the SM proposed construction methods including water use will mitigate dust and other impacts to less than significant when the number of truck crossings of US 395 will be in the hundreds per day doesn’t seem warranted.** A more specific number of crossings cannot be stated because we do not know what the grading construction period will be or when grading will start. Depending on what section of the AFC you are reading you can get stated durations from 12 months to 28 months. Please see my scoping letter for more

detail on this aspect with references into specific sections of the AFC. **I pointed out these inconsistencies in my scoping letter and am pointing them out again here to make sure the CEC staff is aware of the implications.**

There are many more examples where the omission of a task timeline makes the mitigations proposed completely uncertain or even invalid. By ignoring the timeline SM is apparently free to prorate construction water use over the life of the project. This was done by incrementally adding of the construction water to the annual operational water use. However, the construction water impacts occur in the earliest phases of the project, and these impacts demand not only a quantitative mitigation but a *timely* mitigation as well. This is not a casual criticism, as the construction water use will increase the annual quantity of groundwater pumped from the IWVWD SW well-field during construction by as much as 50%. The percentage increase depends upon the length of the construction period. The IWVWD has in recent years shifted a major portion of its pumping for existing customers into the very area that the water for SM will also be taken. Wells in the area were showing declines of about 1 foot per year through the 1980's and into the 90's. As the IWVWD pumping has increased in this area, water levels in monitoring wells in the area have experienced accelerating declines in water levels. These same wells are now showing water level drops of approximately 3 feet per year.



Hydrograph of the “Old Inyo well” in the vicinity of the IWVWD SW wellfield area. This well is especially important as a reference since the well data dates to the 1940's. The well shows a very consistent decline of somewhat less than 1ft/yr from the 50's into the 80's with an accelerating decline since. The recent decline is at a rate of about 3 ft/yr. This behaviour is the very definition of overdraft. This plot is taken from: [http://www.iwvgroundwater.org/data/hydorgraphs\\_histograms/hydrograpy\\_07r.html](http://www.iwvgroundwater.org/data/hydorgraphs_histograms/hydrograpy_07r.html)

The pumping of SM construction water will place an additional *immediate* burden on the already overdrafted aquifer and would have a serious negative impact on the overlying

water right well owners in the greater vicinity. **Spreading out the construction water mitigation over the life of the project completely ignores this reality and is not a mitigation that meets CEQA requirements for a *timely* and accurate mitigation of impact.**

Many comment letters have been written over concerns with dust that would be primarily produced during construction. These comments are based on observations by residents who have directly observed how hard it is to control dust on disturbed soils in this valley. The AFC is notably lacking any detail concerning the methods to be actually used to control dust during construction and any explanation of the apparent very low water use that is being claimed compared to other similar projects. In my scoping letter, I did give a real example of water use on disturbed soil at a rate entirely comparable to that proposed by SM that resulted in a serious lack of dust control on a windy day. At the CEC/BLM Workshop in April, SM provided a verbal description of the actual cut and fill methods they intend to use. The following paragraph (in italics) is taken directly from my notes of that workshop. *The plan is to work a small area of land at a time, perhaps 20 acres. A special drip type irrigation system will be installed on the area where the rock and dirt removal will be made. The watering system will be allowed to operate for many hours so as to soak the soil to a depth of perhaps 12 inches. The drip system will then be removed and the earthmoving commenced. Only wet soil would be cut and immediately placed in the fill areas. Since only wet soil would be handled, no dust would be produced.* Although this plan seems to be viable, there are many assumptions implicit in these ideas that are not realistic. **These plans are not consistent with standard grading industry practice.** In the next paragraph I will provide a top level analysis of the methods proposed by SM.

As stated earlier, we do not have a consistent answer from SM for the duration of the grading phase. I will use 24 months as is stated in AFC Section 2.5.7. SM has stated that the total volume of rock and dirt to be moved is 7.5 million cubic yards or about 10,000 cubic yards per day assuming a 7 day work week. For a work area of 20 acres (10 acres of cut, 10 acres of fill) a depth of 0.64 feet would be removed and placed every day on average. There are several problems immediately obvious with these ideas. If the soil were very uniform, a consistent depth of penetration of the dust controlling water could be anticipated. However, the soil at the RSPP site is very nonuniform and contains a significant content of extreme particle sizes- from boulders to clays. The deeper soils are very compact and in many zones are cemented (caliche). It will be impossible to get consistent water penetration and accurate cut depths over the working area. Even with a drip-type irrigation system, the top layer of soil will in many areas be saturated with some water ponding and in the summer months will lose water to evaporation at rates even higher than an inch per day. **Water application efficiency will be much lower than projected. Every scraper pass will expose some unwetted soil and with the mechanical action of the scraper on the rocks and exposed soil, dust will be produced.**

The standard emitter spacing for an expected 12 inch penetration is 24 inch centers. A ten acre field would require over 100,000 emitters with this spacing. The logistics of operating such a drip system that would be deployed and then picked up and moved out of the way every day is seriously impractical with standard components –

especially when the lines are full of water. Even if a “soaker hose” approach were to be used, 24 inch spacing would still be observed between hoses. The manifolding to pressurize the soaker hose would be complex and unwieldy since the commercially available hose is intended for use in lengths not exceeding 150 ft. Even at that length, the flow reduction from the inlet to the end of the hose is a factor of two for standard supply pressures. The flow rates that will exist for the emitter scheme are far too high and the required water delivery will take place over such a short amount of time as to guarantee ponding. Even for the soaker hose plan, the delivery rates are too high and ponding will occur. The supply pressure could be reduced but then the soaker hose performance becomes unreliable as the smaller pores simply no longer provide any flow at all. **To summarize: there is simply no commercial hardware available to assemble a low flow rate portable system to irrigate a large area reliably and uniformly.**

If the grading contractor were to use standard midsize self-loading scrapers, which typically have a can volume of 34 cubic yards, 306 roundtrip loads would be required per day to cut and place 10,000 cubic yards of material. In the rocky and nonuniform soil of the site it could easily take 15 minutes just to take up a load. This is based on observations made at the Kern County Landfill in identical soil and using similar equipment. Neither elevating or auger loaders can reliably handle the larger rocks that continually jam up the loading mechanisms. Clearly several scrapers would be necessary under even optimum conditions. Assuming the cut and fill part of the operation could work as long as 10 hours per day, 10 or 11 machines would be necessary. It would pose a major logistical problem to operate these machines on such a small area with safety and efficiency. In addition, these large machines could not be used at the margins of either the cut or fill areas. Large front loaders would necessarily also be present and working on the pads. **This scenario is not realistic either in the available hours or in the capabilities of the equipment. The ideas offered by SM are not based on standard grading industry practices, and there is no reason to expect they would be effective.**

The standard methods of using water trucks to deliver water to the soils to be worked will be resorted to and larger areas worked than described. As I offered in my scoping letter, approximately 850 ac-ft of water will be consumed by compaction requirements alone. If we assume that 1500 ac-ft of construction water is all that is available, that leaves 650 ac-ft for dust control itself. This number is totally unrealistic. This leads to the conclusion that water use will be much higher as a result of evaporation losses and ineffective attempts at dust control. **How can the SA/DEIS claim that construction impacts can be reduced to less than significant using mitigation measures that involve nonstandard practices where there is no evidence they could actually be employed and could work?**

A thorough AFC would have a detailed grading plan for examination not just a plot diagram of the final layout. Specific locations where the cuts would be made as well as the corresponding placements would be shown with the grading cross-sections provided. Every section would have an annotated table showing material to be removed and material to be placed. Although for simplification I assumed that the material from each cut would be immediately placed on a corresponding fill area this is not usually possible and much material will have to be stored until a later time for placement in a suitable area. Water for dust control of these piles would be accounted for in detail. A far

more detailed examination of site soils would also be included to assess the proposed grading techniques.

### **Cultural resources**

I submit to staff that another critical SA/DEIS omission is the failure to fully recognize the significance of cultural findings at and near the RSPP site. I will summarize comments that I made in the 5/3/2010 workshop, concerning cultural resource values at the RSPP site and the significance of the area in a regional context that includes the Coso petroglyph area to the north<sup>1</sup>. **The Coso petroglyphs have been extensively studied and represent the premier petroglyph assemblage in all of North America<sup>2</sup>. The Coso petroglyph area is about 25 miles N-NE of the RSPP site in the Coso Range.** The assessment made in the cultural section, C.3, is based on a regional evaluation of prehistoric Indian activity. Only National Registry databases were consulted. There is no mention even of the presence of the incredibly rich nearby Coso sites. There are many published papers concerning the Coso area and several on a Coso style site in the Black Mountain complex very close to the RSPP site itself<sup>3</sup>. There are many more Coso style sites in the Black Mountain complex that have not been described or registered. The full understanding of the interrelationships of the occupancy and use of these sites and others nearby in the Coso Hot Spring area is yet to be made. It is clear that the story includes human travels for ceremonial or spiritual purposes on a very large scale. It is another interconnectivity story, now involving humans instead of ground squirrels or desert tortoise. If even a casual examination is made of a map it will be seen that the El Paso Wash provides a nearly direct route for most of the distance from “North” Coso to “South” Coso, at the Black Mountain complex. In earlier days, when the western climate was wetter, washes such as the El Paso would have run year around. China Lake would have been at least partially full. Actually, many washes in the IWV did run year around even into the 20'th Century and this water was the basis for the agricultural homesteading activity in the early 1900's. A careful examination of the El Paso Wash further north than the RSPP site reveals significant evidence of prehistoric Indian use all along its route.

The mitigation proposed for the cultural resources within or near to the RSPP is careful mapping, photography and curation of significant artifacts. However, such an approach would totally destroy any possibility of studying the regional interrelationships which clearly do exist on the RSPP site. The physical connectivity to the spectacular North Coso petroglyphs is an important thread to preserve. Further study of South Coso will undoubtedly also lead to important discoveries as its secrets are revealed - but only if the areas to study are preserved. There were two scoping letters besides my own that addressed the cultural value of the Black Mountain complex. I would like to respectfully direct staff attention to the letters by Mr.Matt Boggs and by Ms.Jane McEwan.

### **Public Health and Safety**

I will close my comments by pointing out another serious omission in the SM AFC that appears to also have escaped recognition in the SA/DEIS. In the AFC and then in SA/DEIS there is inadequate recognition of the inherent fire danger posed by the heat transfer fluid (HTF) at operating (high) temperature. There is at least one example of a disastrous fire in a facility very similar to that proposed for the RSPP<sup>4</sup>. There is no detail

concerning fluid control methods to minimize fire danger except the statements that isolation valves would be present in the HTF loop lines which would allow for the control of the HFT in the event of a break. Since the HTF is pyrophoric at the elevated operating temperatures, any leakage will result in instant flame. The potential for serious public health impacts has not been adequately discussed in the AFC nor has the brief discussion of mitigation in the SA/DEIS HAZ-4 been adequate. The problem is that the RSPP is not in a low population density area. The heart of the Ridgecrest community is less than 5 miles away. For the prevailing SW wind direction, this community is directly downwind from the proposed site. In a fire, the plume of smoke and hazardous gases would be carried directly into inhabited areas. A large scale HTF fire would rapidly deplete the available oxygen resulting in a smoke plume with a lot of partially oxidized components. There would be a huge amount of soot, carbon monoxide, partially oxidized aromatic compounds coming directly from the phenol molecules as well as vaporized biphenol molecules themselves. This plume would be especially noxious and at even low concentrations would be dangerous to human health. The fire itself cannot be controlled with water alone. Some benefit could be obtained by the use of a foaming agent but at the high temperatures of the fire this effort would not be of much additional benefit. The fire would be a lot like a petroleum refinery fire and in the end would burn itself out.

In reading the AFC very carefully, there is only a listing of the applicable American Society of Mechanical Engineers (ASME) boiler and pressure vessel codes and no detail whatsoever as to how these codes would be applied. More critically, there is no mention or discussion of the applicable American Petroleum Institute (API) piping and fire codes. Given the similarity of the circulating hot oil in the SM power plant design to conditions in a petroleum refinery it is totally apparent that API codes directly apply here and should be rigorously followed<sup>5</sup>. The SA/DEIS does list the API codes on C.4-28 but there is no mention of applicability. The one aspect that the API codes do bring forth very clearly is the use of excess flow valves (EFV) in providing a critical degree of fire protection for control of leaks of flammable liquids and gases. An EFV provides a nearly instantaneous closure of a fluid line in the event of a break. The EFV provides this function by sensing the increase in flow that results from the break. The valve does not depend on any outside sensors for closure. The EFV can limit the quantity of fluid lost and can thus minimize the consequences of a leak including fire. The EFV does not replace manual and automated shutoff valves but is a supplement. It provides an added level of safety. **All HTF loops for the RSPP should be protected by suitable excess flow valves as a specific condition of certification.** I would go further in this recommendation that all solar power plants that are currently being proposed to the CEC be specifically required to employ this additional protection. It is in the best interest of the plant owners, the plant workers and the public.

There are many more sections in the SA/DEIS that I would like to comment on but there is inadequate time to do so. I will close by saying again that my comments have been offered in the spirit of trying to clarify and strengthen the SA/DEIS assessments. I hope staff will find them to be useful.

Signed, Don Decker

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<sup>1</sup> Paradigm Shifts, Rock Art Studies, and the “CosoSheep Cult” of Eastern California by Alan P Garfinkel, published in North American Archeologist Spring 2007

<sup>2</sup> Dating “Classic” Style Sheep Petroglyphs in the Coso range and El Paso Mountains: Implications for Regional Prehistory, by Alan P Garfinkel, at [http://petroglyphs.us/article\\_the\\_terese\\_site.html](http://petroglyphs.us/article_the_terese_site.html);

<sup>3</sup> Progress Report of the Terese Site (CA-KER-6188) by Sandy and Fran Rogers in California Archeological Site Stewardship Program Newsletter, Vol 2, issue 3, Dec 2003, p7

<sup>4</sup> LA Times article: [http://articles.latimes.com/1990-01-11/news/mn-202\\_1\\_solar-power-plant](http://articles.latimes.com/1990-01-11/news/mn-202_1_solar-power-plant)

<sup>5</sup> see for example, section 12.25.3 in Lees’ loss prevention in the process industries: hazard ..., Volume 1 By Sam Mannan, Frank P. Lees, Elsevier press, 3’rd ed, Dec2004.

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**Subject:** Comments on the SA/EIS for the RIDGECREST SOLAR POWER PROJECT (09-AFC-9)  
**Date:** 05/04/2010 08:32 AM  
**Attachments:** [Comment Letter MJ McEwan 20100503.doc](#)  
[El Paso Wash Plant List 4-17-10-1.xls](#)

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Dear Mr. Solorio and Ms. Eubanks, I have attached my additional comments with photographs on the SA/EIS for the Ridgecrest Solar Power Project (09-AFC-9) as well as an updated plant list from the proposed location. Thank you, Jane McEwan -- Jane McEwan Law Office of M.J. McEwan 350 E. Ridgecrest Blvd. Ste. 102 Ridgecrest, CA 93555 760 384 2615

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May 4, 2010

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RE: RIDGECREST SOLAR POWER PROJECT (09-AFC-9)

Dear Mr. Solorio and Ms. Eubanks,

The plant list that was compiled from our local subchapter of the California Native Plant Society's field trip on April 17<sup>th</sup> to the proposed Ridgecrest Solar Power Project sites has been updated to include observations made by Kathy LaShure, our subchapter leader on a return visit to the "South Site" on April 30<sup>th</sup>. One of the interveners had asked her if our group had over looked *Krascheninnikovia lanata*, Winter Fat, since it was not listed on our first list. Mrs. LaShure did find it on the "South Site" and took the following photographs.

I went back to check for Winter Fat on the "North Site" on May 2<sup>nd</sup> and did not see it on the west side. I did not have time to look at the east side of the "North Site." However I did note that the broad flat areas on the west end of the "North Site" was still green and that the area which looked relatively barren in January was covered with *Chorizanthe brevicornu* which is one of the species consumed by tortoises in the studies by Jennings and Oftedal, et. al. Other plants consumed by tortoises were also still green: Hairy Lotus, Lupine and *Mirabilis bigelovii*. Five of my photographs of the "North Site" follow Mrs. LaShure's photographs of Winter Fat on the "South Site".

Sincerely,

*Mary Jane McEwan*

Mary Jane McEwan

Cc: [Hector\\_Villalobos@ca.blm.gov](mailto:Hector_Villalobos@ca.blm.gov), RFO



Winter Fat on "South Site" Photo by Kathy LaShure 4/30/10



Winter Fat on "South Site" Photo by Kathy LaShure 4/30/10



“North Site” *Chorizanthe brevicornu* in the foreground 5/02/10 Photo by M.J. McEwan



*Mirabilis bigelovii* 5/02/10 Photo by M.J. McEwan



Hairy Lotus, growing on the flats above the wash on the “North Site” 5/02/10 Photo by M.J. McEwan



Lupines on the “North Site” were blooming 4/17/2010. These had gone to seed by 5/02/10 but still had green leaves. Photos by M.J.McEwan



One of several cholla on the “North Site” that are over four & five feet tall. Several cholla had bird nests in them. 5/02/10

**Plant List for the Vicinity Surrounding El Paso Wash**

**Prepared by Creosote Ring Sub Chapter, Bristlecone Chapter,  
of the California Native Plant Society**

April 17, 2010 Field Trip to Proposed Sites for Solar Power Plant  
Proposed by Solar Millenium, near Ridgecrest, California

This area is west & east of El Paso Wash, and north and south of Brown Road,  
Approximately Two Miles Northeast of the El Paso Wilderness Area  
in the Indian Wells Valley, Mojave Desert, California

**Plants Eaten b**  
Numbers refer t  
below & indicat  
proposed sites c  
been observed t

70 Species from 25 Plant Families were observed

<b>DICOTYLEDONAE</b>		<b>h Site</b>	<b>Sout h Site</b>		<b>Henen</b>
<b>Asteraceae</b> (Compositae)					
<i>Ambrosia dumosa</i>	Bur-sage	✓	✓		
<i>Chaenactis fremontii</i>	Fremont's Pincushion	✓	✓		
<i>Ericameria cooperi</i> var. <i>cooperi</i>	Cooper Goldenbush	✓			
<i>Eriophyllum pringlei</i>	Pringle's Eriophyllum		✓		
<i>Eriophyllum wallacei</i>	Wallace's Wooly Daisy		✓		
<i>Filago depressa</i>	Dwarf Filago	✓			
<i>Glyptopleura marginata</i>	Keysia	✓			
<i>Hymenoclea salsola</i> var. <i>salsola</i>	Cheesebush	✓	✓		
<i>Lasthenia californica</i>	Goldfields	✓	✓		
<i>Lomatium mohavensis</i>	Mojave Wild Parsley		✓		
<i>Malacothrix coulteri</i>	Snake's Head	✓	✓		
<i>Malacothrix glabrata</i>	Desert Dandelion	✓	✓		
<i>Stephanomeria pauciflora?</i>	Desert Straw		✓		
<i>Tetradymia axillaris</i>	Cottonthorn		✓		
<i>Xylorhiza tortifolia</i> var. <i>tortifolia</i>	Mojave Aster	✓			
<b>Boraginaceae</b>					

<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Fiddleneck	✓	✓		
<i>Cryptantha micrantha</i>	Purple-rooted Forget-me-not	✓			
<i>Cryptantha pterocarya</i>	Winged-Nut Forget-Me-Not		✓		
<i>Pectocarya platycarpa</i>	Broad-margin Combseed	✓	✓		1
<b>Brassicaceae</b>					
<i>Brassica tournefortii</i>	Sahara Mustard		✓		
<i>Lepidium fremontii</i>	Desert Alyssum		✓		
<i>Lepidium</i> sp.	Peppergrass	✓	✓		
<i>Tropidocarpum gracile</i>	Slender Keel-Fruit		✓		
<b>Cactaceae</b>					
<i>Opuntia echinocarpa</i> var. <i>echinocarpa</i>	Golden Cholla	✓	✓		1
<b>Chenopodiaceae</b>					
<i>Grayia spinosa</i> *	Spiny Hop-Sage		✓		
<b>Cucurbitaceae</b>					
<i>Cucurbita palmata</i>	Coyote Melon		✓		
<b>Cuscutaceae</b>					
<i>Cuscuta denticulata</i>	Toothed Dodder		✓		
<b>Euphorbiaceae</b>					
<i>Chamaesyce albomarginata</i>	Rattlesnake Spurge	✓	✓		
<b>Fabaceae</b>					
<i>Astragalus acutirostris</i>	Beaked Rattle Weed		✓		
<i>Astragalus didymocarpus</i> var. <i>dispermus</i>	Twin-fruit Locoweed ?	✓	✓		
<i>Astragalus laynae</i>	Layne's	✓			
<i>Lotus humistratus</i>	Hairy Lotus	✓	✓		
<i>Lupinus concinnus</i>	Bajada Lupine	✓	✓		1
<i>Lupinus microcarpus</i> v. <i>horizontalis</i>	Chick Lupine		✓		

<i>Psoralea arborescens</i> var. <i>minutifolia</i>	Indigo Bush	✓			
<i>Senna armata</i>	Desert Senna	✓	✓		
<b>Geraniaceae</b>					
<i>Erodium cicutarium</i>	Red-stemmed Filaree	✓	✓		1
<b>Hydrophyllaceae</b>					
<i>Nama demissum</i>	Purple Mat	✓			
<i>Phacelia distans</i>	Fern Phacelia		✓		
<i>Phacelia fremontii</i>	Fremont Phacelia	✓	✓		
<i>Phacelia tanacetifolia</i>	Lacy Phacelia	✓			
<i>Pholistoma membranaceum</i>	White Fiesta Flower	✓			
<b>Lamiaceae</b>					
<i>Salvia carduacea</i>	Thistle Sage	✓	✓		
<i>Salvia columbariae</i>	Chia	✓			
<b>Loasaceae</b>					
<i>Mentzelia albicaulis</i>	Little Blazing Star	✓	✓		
<b>Malvaceae</b>					
<i>Eremalche exilis</i>	White Mallow	✓	✓		
<b>Nyctaginaceae</b>					
<i>Mirabilis bigelovii</i> var. <i>retrorsa</i>	Wishbone Bush	✓	✓		
<b>Onagraceae</b>					
<i>Camissonia campestris</i> <i>campestris</i>	Mojave Sun Cup	✓	✓		
<i>Camissonia claviformis</i> <i>claviformis</i>	Brown-eyed Primrose	✓	✓		
<i>Camissonia palmeri</i>	Palmer's Primrose	✓			
<b>Papaveraceae</b>					
<i>Eschscholzia minutiflora</i> <i>minutiflora</i>	Small-flowered Poppy	✓	✓		
<b>Polemoniaceae</b>					
<i>Eriastrum eremicum</i>	Desert Woolly Stars?	✓			
<i>Gilia minor</i>	Little Gilia		✓		
<i>Gilia</i> sp. (at least 2 different)		✓	✓		

<b>Polygonaceae</b>					
<i>Chorizanthe brevicornu</i> var. <i>brevicornu</i>	Bristle Spine Flower	✓	✓		
<i>Chorizanthe rigida</i>	Rigid Chorizanth		✓		
<i>Chorizathe watsonii</i> ?	Watson Chorizanth		✓		
<i>Eriogonum gracillimum</i>	Rose & White Buckwheat		✓		
<i>Eriogonum inflatum</i> var. <i>inflatum</i>	Desert Trumpet	✓	✓		
<i>Eriogonum pusillum</i>	Yellow Turban		✓		
<i>Mucronea perfoliata</i>	Perfoliated Spineflower	✓			
<i>Oxytheca perfoliata</i>	Punctured Bract	✓	✓		
<b>Portulacaceae</b>					
<i>Calyptridium</i> sp.	Sand-cress	✓			
<b>Solanaceae</b>					
<i>Lycium andersonii</i>	Anderson Boxthorn		✓		
<b>Zygophyllaceae</b>					
<i>Larrea tridentate</i>	Creosote Bush	✓	✓		
<b>MONOCOTYLEDONAE</b>					
<b>Liliaceae</b>					
<i>Calochortus kennedyi</i> <i>kennedyi</i>	Desert Mariposa Lily	✓			
<i>Dichelostemma capitatum</i> <i>capitatum</i>	Blue Dicks	✓			
<b>Poaceae</b>					
<i>Bromus madritensis</i> var. <i>rubens</i>	Red Brome		✓		
<i>Schismus barbatus</i>	Mediterranean Sheep Grass		✓		1

### **Journal Articles Regarding Plants Eaten by the Desert Tortoise**

- 1: **Henen, Brian Thomas. 2002.** Energy and water balance, diet, and reproduction of female desert tortoises (*Gopherus agassizii*). *Chelonian Conservation and Biology*. 4(2): 319-329. Diet of female tortoises at Goffs, California, in study by Henen and Thomas, 2002. *Lupinus concinnus*, which was very prevalent on Solar Millenium site.
- 2: **Jennings, W. Bryan. 2002.** Diet selection by the desert tortoise in relation to the flowering phenology of ephemeral plants. *Chelonian Conservation and Biology*. 4(2): 353-358. Eight species of the Top 10 preferred species of plants in the Mojave Desert were present at the proposed Solar Millenium site. *Lotus humiflora* accounted for 29% of the bites observed by Jennings at the proposed site east of El Paso Wash.
- 3: **Oftedal, Olav T; Hillard, Scott; Morafka, David J. 2002.** Selective spring foraging by juvenile desert tortoises (*Gopherus agassizii*) in the Mojave Desert: evidence of an adaptive nutritional strategy. *Chelonian Conservation and Biology*. 4(2): 341-352. Ten of sixteen species eaten by juvenile tortoises in the Mojave Desert were present at the proposed Solar Millenium site. Of these *Cercaria claviformis claviformis* which is present at this site accounted for 34% of the bites taken by juvenile tortoises, at 346.

### **Mojave Ground Squirrels Diet**

- Leitner, P. and B.M. Leitner. 1998. Coso grazing enclosure monitoring study, Mohave ground squirrel study Coso Known Geothermal Resource Area, Major Findings 1988-1996. Final Report. \*Spiny hopsage was one of the most frequently consumed plants by Leitner and Leitner, 1998.









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lenium site.

desert tortoise dies  
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stratus which  
very prevalent on

il et al study are  
missionia  
ted for 50% of all

ed shrubs in study

**From:** [Jane McEwan](#)  
**To:** [Hector Villalobos@ca.blm.gov](mailto:Hector_Villalobos@ca.blm.gov); [Jim Weigand](mailto:Jim_Weigand); [carspp@blm.gov](mailto:carspp@blm.gov)  
**Subject:** Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of the Interior  
**Date:** 06/18/2010 08:36 PM

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Here is a case you will be interested in. This case note came in today on a service I receive.

**-Environmental Law-**

Where Bureau of Land Management's approved company's amendment to plan of operations for an existing mineral exploration project, and looked at cultural and environmental impacts and considered reasonable alternatives, it violated the National Environmental Policy Act by failing to address cumulative effects. BLM did not violate the National Historic Preservation Act where it consulted with tribe regarding the project for many years and tribe made no showing that it would have provided new information had it been consulted again earlier in the amendment's approval process, and where an exclusion zone protocol sufficiently protected the features that made designated "properties of cultural and religious importance" National Register eligible. Approval did not violate the Federal Land Policy and Management Act by failing to provide plan of operations components or failing to meet performance standards.

*Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of the Interior* - filed June 18, 2010

Cite as 07-16336

Full text <http://www.metnews.com/sos.cgi?0610%2F07-16336>

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**Subject:** Comments on the SA/EIS for the RIDGECREST SOLAR POWER PROJECT (09-AFC-9)  
**Date:** 04/29/2010 05:54 PM  
**Attachments:** [El Paso Alluvial Plain Plant List 4-17-10.xls](#)  
[Comment Letter MJ McEwan 20100429.doc](#)

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Dear Mr. Solorio and Ms. Eubanks,

I have attached my initial comments on the SA/EIS for the Ridgecrest Solar Power Project (09-AFC-9) as well as a plant list from the proposed location.

Thank you,

Jane McEwan

--

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**Plant List for the Vicinity Surrounding El Paso Wash**

**Prepared by Creosote Ring Sub-Chapter, Bristlecone Chapter,  
of the California Native Plant Society**

*assisted in the field by Amber Swanson, CNPS Rare Plant  
Treasure Hunt coordinator for the Mojave Desert*

April 17, 2010 Field Trip to Proposed Sites for Solar Power Plant  
Proposed by Solar Millenium, near Ridgecrest, California

This area is west & east of El Paso Wash, and north and south of Brown Road,  
Approximately Two Miles Northeast of the El Paso Wilderness Area  
in the Indian Wells Valley, Mojave Desert, California

70 Species from 25 Plant Families were observed

**Plants Eaten by Desert  
Tortoise**

*Numbers refer to the citations  
below & indicate presence on  
proposed sites of plants that  
have been observed to be  
eaten by the Desert Tortoise*

8 of top 10 species preferred by adult tortoises in Jennings' study were observed  
10 of 16 plants preferred by juvenile tortoises in Oftedal et. al

<b>DICOTYLEDONAE</b>		<b>North Site</b>	<b>South Site</b>	<b>Henen</b>	<b>Jennings</b>	<b>Oftedal et al.</b>
<b>Asteraceae (Compositae)</b>						
<i>Ambrosia dumosa</i>	Bur-sage	✓	✓			
<i>Chaenactis fremontii</i>	Fremont's Pincushion	✓	✓			3
<i>Ericameria cooperi var. cooperi</i>	Cooper Goldenbush	✓				
<i>Eriophyllum pringlei</i>	Pringle's Eriophyllum		✓			
<i>Eriophyllum wallacei</i>	Wallace's Wooly Daisy		✓			3
<i>Filago depressa</i>	Dwarf Filago	✓				
<i>Glyptopleura marginata</i>	Keysia	✓				
<i>Hymenoclea salsola var. salsola</i>	Cheesebush	✓	✓			
<i>Lasthenia californica</i>	Goldfields	✓	✓			
<i>Lomatium mohavensis</i>	Mojave Wild Parsley		✓			
<i>Malacothrix coulteri</i>	Snake's Head	✓	✓			
<i>Malacothrix glabrata</i>	Desert Dandelion	✓	✓			3
<i>Stephanomeria pauciflora?</i>	Desert Straw		✓			
<i>Tetradymia axillaris</i>	Cottonthorn		✓			
<i>Xylorhiza tortifolia var. tortifolia</i>	Mojave Aster	✓				
<b>Boraginaceae</b>						

<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Fiddleneck	✓	✓			
<i>Cryptantha micrantha</i>	Purple-rooted Forget-me-not	✓				
<i>Cryptantha pterocarya</i>	Winged-Nut Forget-Me-Not		✓			
<i>Pectocarya platycarpa</i>	Broad-margin Combseed	✓	✓	1		
<b>Brassicaceae</b>						
<i>Brassica tournefortii</i>	Sahara Mustard		✓			
<i>Lepidium fremontii</i>	Desert Alyssum		✓			
<i>Lepidium</i> sp.	Peppergrass	✓	✓			3
<i>Tropidocarpum gracile</i>	Slender Keel-Fruit		✓			
<b>Cactaceae</b>						
<i>Opuntia echinocarpa</i> var. <i>echinocarpa</i>	Golden Cholla	✓	✓	1		
<b>Chenopodiaceae</b>						
<i>Grayia spinosa</i> *	Spiny Hop-Sage		✓			
<b>Cucurbitaceae</b>						
<i>Cucurbita palmata</i>	Coyote Melon		✓			
<b>Cuscutaceae</b>						
<i>Cuscuta denticulata</i>	Toothed Dodder		✓			
<b>Euphorbiaceae</b>						
<i>Chamaesyce albomarginata</i>	Rattlesnake Spurge	✓	✓		2	
<b>Fabaceae</b>						
<i>Astragalus acutirostris</i>	Beaked Rattle Weed		✓			
<i>Astragalus didymocarpus</i> var. <i>dispermus</i>	Twin-fruit Locoweed ?	✓	✓		2	
<i>Astragalus layneae</i>	Layne's	✓			2	
<i>Lotus humistratus</i>	Hairy Lotus	✓	✓		2	
<i>Lupinus concinnus</i>	Bajada Lupine	✓	✓	1		
<i>Lupinus microcarpus</i> v. <i>horizontalis</i>	Chick Lupine		✓			
<i>Psoralea argemone</i> var. <i>minutifolia</i>	Indigo Bush	✓				
<i>Senna armata</i>	Desert Senna	✓	✓			

<b>Geraniaceae</b>						
<i>Erodium cicutarium</i>	Red-stemmed Filaree	✓	✓	1	2	3
<b>Hydrophyllaceae</b>						
<i>Nama demissum</i>	Purple Mat	✓				
<i>Phacelia distans</i>	Fern Phacelia		✓			
<i>Phacelia fremontii</i>	Fremont Phacelia	✓	✓			
<i>Phacelia tanacetifolia</i>	Lacy Phacelia	✓			2	
<i>Pholistoma membranaceum</i>	White Fiesta Flower	✓				
<b>Lamiaceae</b>						
<i>Salvia carduacea</i>	Thistle Sage	✓	✓			
<i>Salvia columbariae</i>	Chia	✓				
<b>Loasaceae</b>						
<i>Mentzelia albicaulis</i>	Little Blazing Star	✓	✓			
<b>Malvaceae</b>						
<i>Eremalche exilis</i>	White Mallow	✓	✓			
<b>Nyctaginaceae</b>						
<i>Mirabilis bigelovii var. retrorsa</i>	Wishbone Bush	✓	✓		2	3
<b>Onagraceae</b>						
<i>Camissonia campestris campestris</i>	Mojave Sun Cup	✓	✓			
<i>Camissonia claviformis claviformis</i>	Brown-eyed Primrose	✓	✓			3
<i>Camissonia palmeri</i>	Palmer's Primrose	✓				
<b>Papaveraceae</b>						
<i>Eschscholzia minutiflora minutiflora</i>	Small-flowered Poppy	✓	✓			
<b>Polemoniaceae</b>						
<i>Eriastrum eremicum</i>	Desert Woolly Stars?	✓				
<i>Gilia minor</i>	Little Gilia		✓			
<i>Gilia</i> sp. (at least 2 different)		✓	✓			

<b>Polygonaceae</b>						
<i>Chorizanthe brevicornu</i> var. <i>brevicornu</i>	Bristle Spine Flower	✓	✓		2	3
<i>Chorizanthe rigidida</i>	Rigid Chorizanth		✓			
<i>Chorizathe watsonii</i> ?	Watson Chorizanth		✓			
<i>Eriogonum gracillimum</i>	Rose & White Buckwheat		✓			
<i>Eriogonum inflatum</i> var. <i>inflatum</i>	Desert Trumpet	✓	✓			3
<i>Eriogonum pusillum</i>	Yellow Turban		✓			
<i>Mucronea perfoliata</i>	Perfoliated Spineflower	✓				
<i>Oxytheca perfoliata</i>	Punctured Bract	✓	✓			
<b>Portulacaceae</b>						
<i>Calyptridium</i> sp.	Sand-cress	✓				
<b>Solanaceae</b>						
<i>Lycium andersonii</i>	Anderson Boxthorn		✓			
<b>Zygophyllaceae</b>						
<i>Larrea tridentate</i>	Creosote Bush	✓	✓			
<b>MONOCOTYLEDONAE</b>						
<b>Liliaceae</b>						
<i>Calochortus kennedyi kennedyi</i>	Desert Mariposa Lily	✓				
<i>Dichelostemma capitatum capitatum</i>	Blue Dicks	✓				
<b>Poaceae</b>						
<i>Bromus madritensis</i> var. <i>rubens</i>	Red Brome		✓			
<i>Schismus barbatus</i>	Mediterranean Sheep Grass		✓	1		3

### References used for plant identification

Baldwin, et al. 2002 *The Jepson Desert Manual: Vascular Plants of Southeastern California*, University of California Press, Berkeley, CA.

Mackay, Pam. 2003. *Mojave Desert Wildflowers*. Falcon Press, Guilford, CT.

### Journal Articles Regarding Plants Eaten by the Desert Tortoise

1: **Henen, Brian Thomas. 2002.**

Energy and water balance, diet, and reproduction of female desert tortoises (*Gopherus agassizii*).

*Chelonian Conservation and Biology*. 4(2): 319-329.

*Diet of female tortoises at Goffs, California, in study by Henen included *Lupinus concinnus*, which was very prevalent on Solar Millenium site.*

2: **Jennings, W. Bryan. 2002.** Diet selection by the desert tortoise in relation to the flowering phenology of ephemeral plants. *Chelonian Conservation and Biology*. 4(2): 353-358.

*Eight species of the Top 10 preferred species of plants in desert tortoise diets during Jennings' spring 1992 study at Desert Tortoise Natural Area are present at the proposed Solar Millenium site. *Lotus humistratus* which accounted for 29% of the bites observed by Jennings was very prevalent on the proposed site east of El Paso Wash.*

3: **Ortega, Olav I; Niland, Scott; Morafka, David J. 2002.** Selective spring foraging by juvenile desert tortoises (*Gopherus agassizii*) in the Mojave Desert: evidence of an adaptive nutritional strategy. *Chelonian Conservation and Biology*. 4(2): 341-352.

*Ten of sixteen species eaten by juvenile tortoises in Oftedal et al study are present at the proposed Solar Millenium site. Of these *Camissonia claviformis claviformis* which is present at this site accounted for 50% of all bites taken by juvenile tortoises, at 346.*

### Mojave Ground Squirrels Diet

Leitner, P. and B.M. Leitner. 1998. Coso grazing exclosure monitoring study, Mojave ground squirrel study Coso Known Geothermal Resource Area, Major Findings 1988-1996. Final Report.

*\*Spiny hopsage was one on the most frequently consumed shrubs in study by Leitner and Leitner, 1998.*

Mary Jane McEwan  
Law Office of M.J. McEwan  
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Ridgecrest, CA 93555  
760 384 2615

April 29, 2010

Eric Solorio, Project Manager  
Siting, Transmission, and EPD  
California Energy Commission  
1516 Ninth Street, MS 15 22834  
Sacramento, CA 93814-5512  
[esolorio@energy.state.ca.us](mailto:esolorio@energy.state.ca.us)

Janet Eubanks, Project Manager  
California Desert District  
Bureau of Land Management  
Calle San Juan De los Lagos  
Moreno Valley, CA 92553  
[carspp@blm.gov](mailto:carspp@blm.gov)

RE: RIDGECREST SOLAR POWER PROJECT (09-AFC-9)

Dear Mr. Solorio and Ms. Eubanks,

Please be advised that the Fish and Wildlife Service has announced a 90-day finding on a petition to list the Mohave ground squirrel, *Xerospermophilus mohavensis*, as an endangered species under the Endangered Species Act of 1973, as amended (Act). Based on their review, the petition presented substantial scientific or commercial information indicating that listing the Mohave ground squirrel may be warranted. They have initiated a status review of the species to determine if listing the species is warranted. Federal Register: April 27, 2010 (Volume 75, Number 80) <http://edocket.access.gpo.gov/2010/2010-9377.htm>.

Since the proposed Ridgecrest Solar Power Project overlies desert habitat that is important for connectivity of Mojave ground squirrel populations, the California Energy Commission should delay any decisions regarding this site. The “fast-track” process should not be allowed to overrun the protection of this species or of the threatened Desert Tortoise *Gopherus agassizii*. While I have not had enough time to thoroughly review the Staff Assessment and Draft Environmental Impact Statement, I am concerned that on page eighteen of the Executive Summary it states that the BLM identified the February 2, 2010 amended application as the preferred alternative “because it avoids El Paso Wash, the surrounding floodplain, and related high quality habitat.” That statement is overbroad and is not supported by actual surveys to assess the quality of the habitat on the higher ground surrounding both sides of the wash.

The Creosote Ring subchapter of the Bristlecone Chapter of the California Native Plant Society, of which I am a member, made a field trip to both the “South Site” and the “North Site” of the proposed project on April 17, 2010. Our group split into two groups in order to cover both sites; and I participated in the survey of the “North Site.” A list of seventy species from twenty five plant families that were observed on those sites was

compiled and is attached to this letter. Eight of the top ten species preferred by desert tortoises in a study conducted on the Desert Tortoise Natural Area by Bryan Jennings were present on the proposed project site. These particular plants are noted on the attached list. Jennings noted that Desert tortoises are selective: Of 71 species of ephemeral plants available, although at least 44 species of plants were sampled, 10 species comprised 81.4% of their diet.

The number one species preferred by desert tortoises by Jennings was *Lotus strigosus*, Hairy Lotus, which accounted for 29.7% of the bites observed. I personally observed *Lotus strigosus* to be prevalent on the broad flat areas above the elevation of the main El Paso Wash, within the amended project area. It was also observed on the “South Site.” *Chamaesyce albomarginata*, Rattlesnake Spurge, which accounted for 10.7% of the tortoise bites observed by Jennings, and *Mirabilis bigelovii*, Four O’ Clock, which accounted for 10.8%, were also observed on both the “South Site” and the “North Site.” The other five of the top ten species observed on the project site were: *Astragalus layneae*, *Astragalus didymocarpus*, *Erodium cicutarium*, *Chorizanthe brevicornu*, and *Phacelia tanacetifolia*. Jennings, W. Bryan. 2002. *Diet selection by the desert tortoise in relation to the flowering phenology of ephemeral plants*. Chelonian Conservation and Biology. 4(2): 353-358.

In addition, ten of sixteen species eaten by juvenile tortoises in study at Fort Irwin are observed growing at the proposed Ridgecrest Solar Power Project site. Oftedal, Olav T; Hillard, Scott; Morafka, David J. 2002. *Selective spring foraging by juvenile desert tortoises (Gopherus agassizii) in the Mojave Desert: evidence of an adaptive nutritional strategy*. Chelonian Conservation and Biology. 4(2): 341-352. These plants are noted on the attached list. In another study by Henen the diet of female tortoises at Goffs, California, included *Lupinus concinnus*, which I personally observed to be prevalent on the “North site” and was also observed on the “South Site”.

From our survey on a single day this spring, and from the tortoise surveys already conducted by the CEC biologist, it is evident that both areas provide quality habitat for the Desert Tortoise. Simply shifting part of the proposed project out of the main wash does not make the amended application the preferred alternative. The preferred alternative is no project at this location, which is essential to the recovery of both the Desert Tortoise and the Mojave Ground Squirrel.

Sincerely,

*Mary Jane McEwan*

Mary Jane McEwan

Cc: [Hector\\_Villalobos@ca.blm.gov](mailto:Hector_Villalobos@ca.blm.gov), RFO

Attached: El Paso Alluvial Plain Plant List 4-17-10.xls

**From:** [Monte & Tina Frisbee](#)  
**To:** [carspp@blm.gov](mailto:carspp@blm.gov)  
**Subject:** Solar Millennium Ridgecrest Project  
**Date:** 06/14/2010 08:25 PM  
**Attachments:** [B.Frisbee Declaration.pdf](#)  
[Belmont Frisbee statement to BLM 042910.pdf](#)  
[Belmont Frisbee statement.pdf](#)  
[Capt. Langford Reply.pdf](#)  
[Cocci Morbidity 1995-1999.pdf](#)  
[Dr. Schumacher statement.pdf](#)  
[R.Schumacher Declaration.pdf](#)  
[Dr. Milla CF Letter.pdf](#)  
[Dr. Milla CF Letter.pdf](#)  
[Thanks to Langford.pdf](#)

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Hello Janet,

We need to get our comments and those of various interested medical doctors and naval personnel registered with your office. These have also been presented to the California Energy Commission for their formal public comment and decision making process for the subject project.

Please enter the enclosures into your project files and recording system as well.

Thank you,

Belmont & Christine Frisbee  
807 Howell Ave.  
Ridgecrest, CA 93555  
(760) 375-8353

**DECLARATION OF  
Belmont Frisbee**

I, Belmont Frisbee, declare as follows:

1. I am presently retired from the U.S. Navy where I was employed for more than 38 years as both a Physicist and Electronics Engineer.
2. I have personal, and family, experience with San Joaquin Valley Fever (Coccidioidomycosis) and Cystic Fibrosis and have contacted medical persons known to have experience with both.
3. I have lived in the Ridgecrest, California area for more than 55 years and have experienced weather extremes of this area and have dealt with the U.S. Navy both in a professional and personal way during that time.
4. I have correspondence with the Commanding Officer of the Naval Air Weapons Station, China Lake concerning the threat posed by their housing demolition and dust mitigation efforts taken during that time period.
5. I have gathered Coccidioidomycosis mortality information for the Ridgecrest jurisdiction as reported by the Kern County Department of Public Health.
5. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 4/19/2010

Signed: Belmont Frisbee

At: Ridgecrest, California

Janet Eubanks, Project Manager  
California Desert District  
Bureau of Land Management  
22835 Calle San Juan de Los Lagos  
Moreno Valley, CA 92553

Reference: Ridgecrest Solar Power Project (RSPP) (09-AFC-9) CEC Staff Assessment

Dear Janet,

These comments concern the proposed mitigation and perceived significance of the Coccidioidomycosis (Valley Fever) threat as represented in the Worker Safety and Fire Protection C.14-16 section of the SA/DEIS. From my other comments, both written and in the recent public workshop, I assume that this section will be moved to, or referred to, in the Public Health and Safety C.7 section as both the public and construction workers will be at extreme risk.

My first comment directly concerns the underlying assumption that watering of the site and of the addition of other more lasting dust control measures will contain disturbed spores that drift and cause Coccidioidomycosis. The applicant has presented specific construction plans to control and monitor dust during both the construction and operation of the project which appear, at first reading, to be adequate.

Extensive searching through the technical literature, going back to the early 1940s, yields nothing except the oft-repeated statement that the spores are carried along with dust. To the contrary, there is evidence available in the literature that dust control by watering can REDUCE the danger by up to 75%. This is great, but the 25% remaining can kill. There are a number of statements in the literature that the spores, being extremely small (2-4  $\mu\text{m}$  diameter), travel on the wind for distances greater than 100 km and that they can travel with no apparent dust cloud detectable. These documents not only show that the Coccidioidomycosis spore presence in the air from disturbed soil is uncontrollable using the mitigation methods planned, but also explain the Navy's difficulty with Coccidioidomycosis control during the housing demolition mentioned in an earlier comment of mine.

The second comment is a question on the subjective nature of the term "significant." I don't understand how a threshold of significance can be put on the taking of a human life. When a project is undertaken that can be demonstrated to raise the danger to the public from a known threat, it would seem that "significant" isn't a powerful enough word. The danger isn't the same as an unplanned construction accident, but the deliberate subjection of a threat on an unknowing public.

I include here a photo of a black Valley Fever victim, courtesy of Dr. John W. Rippon, not for its gory appearance, but to awaken all concerned to the extreme danger posed by the Valley Fever threat. One can only imagine the suffering and pain this man experienced. When people are fortunate enough not to have outwardly visible lesions, doctors, family and friends often do not realize the horrors that may be happening on the inside of the body.



Valley Fever can cause dangerous inflammation and lesions in virtually any part of the human body. In men it can infect the prostate and testicles, causing removal of the infected organs. If a young woman of childbearing age has to remain on lifelong antifungal drugs to keep the disease at bay, she may be told she can never have children.

Sincerely,

*Belmont Frisbee*

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Belmont Frisbee

April 29, 2010

I am a retired Physicist and Electronic Engineer who served more than 38 years for the U.S. Navy in the Ridgecrest and China Lake area of Kern County. I am familiar with the threat of Coccidioidomycosis, commonly called Valley Fever. My wife and my mother both suffered through long bouts of recovery from Valley Fever. In addition, I have two grandchildren with Cystic Fibrosis, who live in Ridgecrest, and I am extremely concerned about the public's safety with respect to the proposed Solar Millennium project.

About 12 years ago the U.S. Navy demolished housing at China Lake, immediately adjoining the community of Ridgecrest. Demolition happened from approximately 1-4 miles from the Ridgecrest town center. During that time period I was in contact with the most senior management at the China Lake facility with respect to public safety. I will introduce that correspondence with this testimony. In addition, I have the Kern County Department of Public Health report on Coccidioidomycosis Morbidity for the five-year period leading up to, and including, the period of Navy housing demolition. It can be seen that for the period 1995 through 1998 there were 14 deaths reported, with 8 of those being in 1998, the year of housing demolition.

It is interesting that the Navy took contractual precautions, including mandating water soaking, as called for by the National Environmental Policy Act, to limit dust exposure from their work. The Coccidioidomycosis spore is extremely small (2-4  $\mu\text{m}$  diameter), far below the PM10 monitoring conducted in dusty regions. It is rather obvious from the morbidity data and from local doctors reporting that there is direct temporal and spatial coincidence between the Navy demolition and a local increase in Valley Fever cases.

I have major concerns that not only is the proposed Solar Millennium work site close to Ridgecrest and huge quantities of soil will be moved, but also that we will see a large increase in the number of Valley Fever cases and the use of water will not be sufficient to control the spores, just as it wasn't in the China Lake demolition above. The known microscopic size of the spore even brings into question the efficacy of dust masks for workers.

Medical laboratory workers working with tissue and blood samples known to contain Coccidioidomycosis spores use a negative pressure (glove box) environment to maintain their safety. This is far above the level of protection planned for the Solar Millennium project.



Belmont Frisbee

April 19, 2010

19 April, 2000

Mr. Frisbee,

I share your concern over Valley Fever and want to provide you with the following feedback on how we control dust while we demolish buildings on the base.

Demolition is done by contract and each contract requires a form of dust suppression during demolition and at the end of the project when the site is finally cleared.

These requirements include: watering the site with a water truck or fire hose to keep dust down during demolition, covering dump trucks with tarps when the debris being hauled is small enough to become airborne, street sweeping to ensure that dirt and debris aren't spread off-site, and the application of a dust suppressant to encapsulate the site after demolition is complete.

My Environmental Projects Office conducted an environmental review of each proposed demolition project before plans and specifications were developed.

Pursuant to the National Environmental Policy Act's procedures, appropriate requirements were developed for dust, asbestos, lead based paint, and hazardous waste requirements. These requirements were incorporated into the plans and specifications for the demolition projects. In addition to controlling dust during demolition, we also have an active dust suppression program for other areas that are prone to dust. One aspect of this program is to take the slabs and chunks of concrete from demolished buildings and crushed them into gravel. This gravel is then spread over dirt roadways to keep down the dust from traffic on those roads.

Additionally, on the 10th of April 2000, we awarded a contract to apply a dust suppressant to various places around base, including the area across the street from the police station that you mentioned in your e-mail.

I hope this answers your concerns regarding dust control during demolition on base and helps explain what the Navy is doing to mitigate its portion of the dust problem in our valley.

Regards,

Capt. John D. Langford  
Commanding Officer  
Naval Air Weapons Station  
China Lake, CA  
DSN 437-2211 Comm (760) 939-2211  
[langfordjd@navair.navy.mil](mailto:langfordjd@navair.navy.mil)

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eMail Transcription

5/10/00

## Kern County Department of Public Health Cocci Morbidity Report

ReportingWeeks: 1 - 54	Cases Reported				Reporting Jurisdiction: Ridgecrest			Indicator Level**	Last Year 1999
	1995	1996	1997	1998	4-Year Total	4-Year AVG.	4-Year S.D.		
Disease									
Coccidioidomycosis	<5	<5	<5	8	14	3.5	3.0	9.4	8

\* Not every year has the same number of reporting weeks. For 1998, 1997, 1996, and 1995 there are 52, 53, 52, and 52 reporting weeks, respectively.

\*\*4-Year Average plus 2 standard deviations

Year-to-date for 2000: 3

I am a pediatrician and general practice doctor who has served the Ridgecrest community for 17 years and am familiar with the threat of Coccidioidomycosis, commonly called Valley Fever.

Normally, I diagnose and treat approximately one case every few years in my office, but I experienced a much larger influx of patients with this infection a number of years ago. This increase occurred during the period when the Naval facility at China Lake was removing old housing. I treated a total of six patients with Valley Fever symptoms during, and immediately after, that demolition work. Since the work involved an area immediately adjacent to Ridgecrest, at a distance of 1 to 3 miles from the occupied center of Ridgecrest, and this is the only large increase in Coccidioidomycosis during the period I've served here, I conclude that the two events are directly related.

The housing removal involved all aspects normally associated with demolition, including structure removal, cement pad destruction and removal and vegetation uprooting and removal. All aspects of the work, including final grading to level the disturbed area, were done with dust mitigation by water soaking by the government contractor. The medical community recognizes the danger of the Coccidioidomycosis spores, and uses extreme measures in their laboratories when dealing with blood, or tissue samples, from suspected Valley Fever patients. This experience leads me to believe that the simple act of water application to control dust may be inadequate to completely control the spread of these spores from disturbed earth.

Coccidioidomycosis is a fungal infection for which little knowledge is held. The infection can be recognized by blood test and symptoms, but little can be done to detect the presence of the fungi in the soil and few drugs are available to effectively control the resulting infection. Many, if not most, patients are rather asymptomatic and probably don't require a doctors care, while others may die from the infection.



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Dr. Robert Schumacher, MD

April 17, 2010

**DECLARATION OF  
Dr. Robert Schumacher**

I, Robert Schumacher, declare as follows:

1. I am presently practicing as a medical doctor and member of Pediatric Partners in Ridgecrest, California.
2. I have professional experience treating San Joaquin Valley Fever (Coccidioidomycosis) patients.
3. The prepared testimony that I have signed is the result of my professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issue(s) addressed therein.
5. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: April 18, 10

Signed: Robert Schumacher MD

At: Ridgecrest, California

April 22, 2010

Dear Mr. Frisbee:

Thank you contacting me regarding this issue. As you are well aware with cystic fibrosis being a chronic respiratory condition where airway defense mechanisms are faulty, any conditions that could increase the risk of infection or airway irritation could have significant consequences in the health of a CF patient. Certainly a large earth removal project such as the one in question will produce aerosol dispersion of particulate material including fungal spores. Both coccidioidomycosis and air pollution have been reported to impact significantly the lungs of CF patients and lead to detrimental outcomes. Anything that can be done to avoid these exposures is highly advisable.

I will be glad to provide more detailed information if you feel necessary.

With best regards,

Carlos E. Milla, MD  
Associate Professor  
Center for Excellence in Pulmonary Biology  
Stanford University

10 May, 2000

Captain,

I really appreciate the personal and rapid response to my concerns and email. Thank you.

I've been doing a little research through the Kern County Dept. of Public Health and into their records of Valley Fever incidence in Ridgecrest.

They do maintain records of reported cases by locality that I'll tell you about here.

My point of contact for this data is Kirt Emery, the epidemiologist for the Dept.

A summary of their data follows:

For the years 1995 through 1998 there were 14 cases reported. Of these, 8 were reported in 1998. There were no more than 4 cases in any of the years 1995, 1996 or 1997. This upswing continued into 1999 with another 8 cases reported that year. So far in 2000 there have been 3 cases reported.

A fair question would address changes occurring late in 1997 or early in 1998 to cause this increase in "Cocci Morbidity".

I do believe 1) the Navy should be extremely interested in finding out if they are playing a part in the problem, 2) that military personnel stationed here should have training on this disease and its source and effects, and 3) that this increase and potential connection to the NAWS demolition shouldn't be "advertised" for fear of creating undo panic. I've talked with my doctor about these fears and he agrees that where health issues are concerned a cautious approach is best.

I'm hopeful that a plan of action that addresses my concerns and all of our safety can be instituted soon.

Thanks,

Monte Frisbee

Code 452310D

939-4511

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eMail Transcription

**From:** [Monte & Tina Frisbee](#)  
**To:** [carspp@blm.gov](mailto:carspp@blm.gov)  
**Subject:** Public Comment on the Solar Millennium Project for Ridgecrest  
**Date:** 05/10/2010 09:52 PM

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Hello Janet,

I've been following and attending the workshops for this project that have been in Ridgecrest. I understand that the BLM is also doing an environmental impact statement for this project and that are entertaining public comment on the project.

If this is so, please tell me how to submit public comment to the BLM.

Thanks,

Belmont Frisbee  
Ridgecrest