Comment Set B1 – Joint Conservation Organizations

February 6, 2015

Michael Krausie, Associate Planner
c/o Aspen Environmental Group
235 Montgomery Street, Suite 935
San Francisco, CA 94104

Via Email: panochesolar@aspeneg.com

Re: Panoche Draft Supplemental EIR
State Clearinghouse No. 2010031008

Dear Mr. Krausie:

On behalf of the California Chapter of The Nature Conservancy, Defenders of Wildlife, the Center for Biological Diversity, the Sierra Club, Audubon-California, and Santa Clara Valley Audubon Society (collectively "Conservation Organizations") we thank you for the opportunity to comment on the Draft Supplemental Environmental Impact Report (SEIR) for the Panoche Valley Solar Farm Project (Project) proposed by Panoche Valley Solar LLC in San Benito County. Our organizations are deeply engaged in the statewide discussion of renewable energy facility siting and natural resource conservation.

B1-1

The Conservation Organizations recognize that the proposed Project – and any of the alternatives that propose a smaller project in the Panoche Valley – will have substantial, significant and unmitigable impacts to local populations of federally and state listed endangered giant kangaroo rat, blunt-nosed leopard lizard, and San Joaquin kit fox, state listed threatened California tiger salamander, Swainson's hawk and San Joaquin Valley antelope squirrel, and the fully protected golden eagle and white-tailed kite, among many other sensitive species in the Panoche Valley. Therefore, we continue to oppose the project and are providing the following comments on the multiple, substantive inadequacies of the draft SEIR.

Comment Set B1 – Joint Conservation Organizations (cont.)

Introduction

The Nature Conservancy ("Conservancy") is a global, non-profit organization dedicated to the conservation of biodiversity. The Conservancy seeks to achieve its mission through science-based planning and implementation of conservation strategies that provide for the needs of people and nature. The Conservancy has been actively involved in planning for renewable energy within the Western San Joaquin Valley of California. Most recently, the Conservancy has produced the report, *Western San Joaquin Valley Least Conflict Solar Energy Assessment*[1]. The results of this assessment, including a web map, are publicly available on the Conservancy's Science for Conservation website (link).

B1-2

Defenders of Wildlife ("Defenders") is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to prevent the extinction of species, associated loss of biological diversity, habitat alteration, and destruction. As part of that work Defenders produced the *Smart from the Start: Responsible Renewable Energy Development in the Southern San Joaquin Valley*[2] report.

Now in its second century, Audubon's national network of community-based nature centers, chapters, scientific, education, and advocacy programs engages millions of people from all walks of life in conservation action to protect and restore the natural world.

The Center for Biological Diversity is a non-profit environmental organization supported by over 800,000 staff, members and online activists throughout California and the western United States and dedicated to the protection of native species and their habitats through science, policy, and environmental law.

The Sierra Club is a national nonprofit organization of approximately 2.5 million members and supporters (approximately 250,000 of whom live in California) dedicated to exploring, enjoying, and protecting the wild places of the earth. The Sierra Club's concerns encompass protecting our lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to combat fossil fuels and climate change. Sierra Club members have long advocated for the rare species who call the Panoche Valley home. Many of our California members regularly visit the Panoche Valley to bird watch and enjoy nature.

Santa Clara Valley Audubon Society works to preserve, enjoy, restore, and foster public awareness of native birds in their ecosystems through education programs, recreational birding, and environmental advocacy in Santa Clara Valley its vicinity. Our 3000 members frequently visit Panoche Valley and have a deep interest in the protection of bird and wildlife species and the habitat they depend on in the valley.

[1] Butterfield, H.S., D. Cameron, E. Brand, M. Webb, E. Forsburg, M. Kramer, E. O'Donoghue, and L. Crane. 2013. Western San Joaquin Valley least conflict solar assessment. Unpublished report. The Nature Conservancy, San Francisco, California. 27 pages. http://scienceforconservation.org/downloads/WSJV_Solar_Assessment

[2] Defenders of Wildlife, *Smart from the Start: Responsible Renewable Energy Development in the Southern San Joaquin Valley*, http://www.defenders.org/sites/default/files/publications/smartfromthestartreport12_print.pdf

Comment Set B1 – Joint Conservation Organizations (cont.)

The Conservation Organizations strongly support the development of renewable sources of energy to mitigate the increasing threat of climate change. However, if not located, built, and operated responsibly, renewable energy projects can negatively impact biodiversity, harm wildlife and their important habitats, and diminish water resources. For these reasons, the Conservation Organizations support siting renewable energy facilities in locations where ecological impacts can be avoided, minimized, contained, and mitigated. There are many such locations in California. For example, the results of The Conservancy's 2013 *Western San Joaquin Valley Least-Conflict Solar Energy Assessment* identified 435,601 acres of Low Biodiversity Conservation Value / Salt-affected lands where solar projects could be sited without unnecessarily impacting biodiversity or agricultural values. The Conservation Organizations recognize that even though the draft SEIR indicates that the project size has been reduced from 420 megawatts (and 4,885 acres) to 247 megawatts (and 2,506 acres) the proposed Project can clearly be expected to have substantial, significant and unmitigable impacts to local populations of federally and state protected giant kangaroo rat, blunt-nosed leopard lizard, San Joaquin kit fox, and golden eagle, and many other rare species populations in the Panoche Valley.

B1-3

The Panoche Valley is significant as rich habitat for a suite of sensitive San Joaquin Valley species. These species have been in decline throughout their ranges due largely to increased fragmentation and loss of habitat. The Panoche Valley is designated by the United States Fish and Wildlife Service (USFWS) as one of the three core population areas essential to recovery of these San Joaquin Valley upland species[3]. The other two core recovery areas – the Carrizo Plain and natural areas of Western Kern County – have been significantly degraded by development, making conservation of the Panoche Valley core recovery area increasingly important. The results of The Conservancy's 2013 *Western San Joaquin Valley Least-Conflict Solar Energy Assessment* have identified the Panoche Valley as an area of high conservation value. Impacts from the proposed Project will have cumulative impacts far beyond the Panoche Valley that will threaten recovery of these species and the large public and private conservation investments that have been made by State and Federal Agencies and our Conservation Organizations to support recovery of these species over the last 30+ years.

Biological Resources

B1-4

According to the draft SEIR, Panoche Valley Solar LLC plans to construct a 247 megawatt solar photovoltaic power plant on 2,506 acres on the floor of Panoche Valley. The openness and flatness of the Panoche Valley are qualities that are indispensable for the survival of a suite of San Joaquin Valley species. Among those species dependent on valley floor habitat are federally and state endangered San Joaquin kit fox, giant kangaroo rat and blunt-nosed leopard lizard; state threatened San Joaquin antelope squirrel, Swainson's hawk and California tiger salamander; state endangered tricolored blackbird which was just recently emergency listed; and California fully protected golden eagle and white-tailed kite (blunt-nosed leopard lizard is also a fully protected species). Panoche Valley provides a critical refuge for many additional rare avian species that are state listed as California Bird Species of Special Concern, including: burrowing owl, mountain plover, short-eared owl, long-eared

[3] U.S. Fish and Wildlife Service. 1998. *Recovery plan for upland species of the San Joaquin Valley, California* . Region 1, Portland, OR. 319 pp.

Comment Set B1 – Joint Conservation Organizations (cont.)

owl, ferruginous hawk, loggerhead shrike, grasshopper sparrow, Northern harrier, and Oregon vesper sparrow. Additional rare species present in the Panoche Valley include short-nosed kangaroo rat, San Joaquin pocket mouse, Tulare grasshopper mouse, and the federally threatened California red-legged frog and vernal pool fairy shrimp. Because of its unique grasslands and the constellation of bird species attracted to them, Panoche Valley is designated a globally significant Important Bird Area by the National Audubon Society[4].

B1-4 cont.

Failure to Incorporate Recent Research: The Conservation Organizations recognize and appreciate that additional data has been collected by the project applicant's contractors since the initial EIR was approved in 2010. This was largely in response to requests by the California Department of Fish and Wildlife (CDFW) to more precisely describe the biological baseline at the project site. Despite these efforts, the biological baseline has not been adequately described. In addition to the data collected by the Project applicants' contractors in 2013 and 2014, to establish a biological baseline, the draft SEIR failed to include more recent species-specific biological resource data, as the Conservation Organizations suggested in response to the Notice of Preparation (NOP) for the SEIR and in person when they met with the project applicant and their contractors. Specifically, the SEIR should have incorporated biological resource monitoring, current research data, and expert review from:

B1-5

- Giant kangaroo rats at the Carrizo Plain (research leads: Dr. Laura Prugh, University of Alaska-Fairbanks, and Dr. Justin Brashares, UC-Berkeley) and Panoche Valley (research leads: Dr. Tim Bean, Humboldt State University, Dr. Mike Westphal, Bureau of Land Management, and Dr. Mark Statham, UC-Davis);
- Blunt-nosed leopard lizards at the Panoche Valley (research leads: Dr. Barry Sinervo and Joseph Stewart, UC-Santa Cruz, Dr. Mike Westphal, Bureau of Land Management, Dr. Scott Butterfield, The Nature Conservancy, Dr. Chris Lortie, York University, and Dr. Jonathan Richmond, United States Geological Survey);
- San Joaquin kit fox at the Carrizo Plain (research lead: Bob Stafford, CDFW).

Baseline Failed to Reflect Effects of Multi-Year Drought: The most recent monitoring and research data for all of these species suggests that the current drought (2012-present) has pushed populations to their lowest levels in the past 30+ years. Despite these conditions, and their potential impact on endangered species recovery, the applicant stated that the Environmental Setting was essentially unchanged at the Panoche Valley from 2010, when the EIR was approved by San Benito County. The extreme drought conditions have changed the Environmental Setting of the Panoche Valley, and therefore environmental baseline should have been updated and the analysis of project-specific and cumulative impacts should have been updated and included much greater detail. The draft SEIR did not explicitly address the issues with establishing biological baselines using data collected in drought years. There are serious issues with using data collected in 2013 and 2014, when populations of giant kangaroo rats and blunt-nosed leopard lizards, for example, were at their lowest levels in the past 30+ years. The draft SEIR should have assessed the viability of populations of

B1-6

[4] The Important Bird Areas Program, administered by the National Audubon Society in the United States, is part of an international effort to designate and support conservation efforts at sites that provide significant breeding, wintering, or migratory habitats for specific species or concentrations of birds. Panoche Valley was labeled as "globally significant" because of the presence of a significant portion of the global population of mountain plover wintering there. The Panoche Valley Important Bird Area (IBA) is also notable for providing breeding and wintering habitat for multiple sensitive grassland bird species (including burrowing owl), and for its high concentrations of wintering raptors and enormous sparrow flocks in fall and winter. The Panoche Valley is an important destination for bird lovers in all seasons.

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giant kangaroo rat, San Joaquin kit fox, blunt-nosed leopard lizard, California tiger salamander, San Joaquin antelope squirrel and others at the Panoche Valley, considering current (and projected) population size, range, existing and proposed land uses (cumulative effects), drought-induced effects, and the project's direct and indirect habitat impacts. B1-6 cont.

Blunt-Nosed Leopard Lizard: Recent climate change extinction modeling for blunt-nosed leopard lizards[5] suggests that areas like the Panoche Valley will likely serve even more important recovery roles, as areas previously suitable become unsuitable as climate change progresses. Given the current stress these species are experiencing, further reducing habitat and fragmenting this core recovery area could be a tipping point that could prevent species recovery. Because of the potential severity of these impacts and the availability of new data to assess the potential impacts of the Project within different climate change scenarios, the draft SEIR must incorporate this new climate change extinction modeling into the biological baseline and impact analysis. The preparers of the draft SEIR should have contacted, and incorporated into the draft SEIR, expert review from the project leads for this ongoing work. Together these steps would have provided a more complete, and necessary, treatment of the potential implications of project development on blunt-nosed leopard lizard recovery. Without this information and analysis, the draft SEIR falls short of meeting its' purpose to provide informed decision making and leaves it vulnerable to challenge. B1-7

Recent genetic evidence from blunt-nosed leopard lizards[6] at the Panoche Valley calls into question the validity of the draft SEIR's claim throughout the Biological Resources section that the project and conservation lands are "considered likely to contain the same genetically distinct populations of these species." Genetic data collected across the Panoche Valley demonstrates that there is significant blunt-nosed leopard lizard genetic variability, and that valley floor (just east of the project site) populations are more similar to the Panoche Hills population than to the Silver Creek Ranch population, which is distinct from the valley floor and Panoche Hills populations. The project applicant does not provide any data of their own to support their assertions that these populations are likely the same. Because of this and the importance of genetic diversity to species recovery, it is not possible to offset valley floor Project site impacts to blunt-nosed leopard lizard by protecting blunt-nosed leopard lizard populations elsewhere in the Panoche Valley.

Giant Kangaroo Rat: Similarly, the draft SEIR did not incorporate recent genetic work on giant kangaroo rats at the Panoche Valley[7] into the draft SEIR. Based on their initial work from 2013, Drs. Statham and Westphal identified distinct giant kangaroo rat populations at the northern and southern limits in the Panoche Valley. In addition, they examined one valley floor site in 2013, and found preliminarily that the small number of animals from this location were different from the Northern Panoche Hills population and more closely related to the Tumey Hills population. Although these are preliminary findings, they call into question the draft SEIR's conclusion that individuals on the Project site and conservation lands belong to the "same genetically distinct population." Because of this, and the importance of genetic diversity to species recovery, it is not possible to offset valley floor B1-8

[5] Research leads: Barry Sinervo and Joseph Stewart, UC-Santa Cruz, Mike Westphal, Bureau of Land Management, Scott Butterfield, The Nature Conservancy
[6] Research leads: Jonathan Richmond, United States Geological Survey, Mike Westphal, Bureau of Land Management
[7] Research leads: Mark Statham, UC-Davis, Mike Westphal, Bureau of Land Management

Comment Set B1 – Joint Conservation Organizations (cont.)

Project site impacts to giant kangaroo rat by protecting giant kangaroo rat populations elsewhere in the Panoche Valley.

B1-8 cont.

The draft SEIR lists a few additional giant kangaroo rat publications that were considered, but it is not clear where and how these studies were used in the biological baseline and analysis of impacts. For example, the draft SEIR lists Bean et al. (2012) from the journal Wildlife Society Bulletin in its list of additional studies that it considered, but does not 1) use the recommended giant kangaroo rat monitoring protocols from this multi-year study (which is now being used by land managers at the Carrizo Plain and Panoche Valley), and/or 2) compare the recommended giant kangaroo rat monitoring protocols from this study to those employed by the applicants' contractors. Also, no additional species experts that were recommended by the Conservation Organizations, especially those focused on blunt-nosed leopard lizard and giant kangaroo rat at the Panoche Valley were contacted and/or referenced during draft SEIR development.

Golden eagle: The mitigation measures BR-G.1 will not "reduce impacts to less than significant levels" for golden eagles. The draft SEIR did not properly calculate the potential acres of foraging habitat that would be lost if the proposed Project were developed or properly analyze the impact of the potential loss of a territory for a pair of golden eagles. USFWS has determined that territory loss or permanent abandonment of a territory is a greater impact to populations than temporary abandonment of a nest[8]. The draft SEIR must calculate the impact of loss of foraging habitat not only for the Project, but also for a one mile radius around the Project because golden eagles will not forage on habitat between solar panels or in an area highly impacted by humans or disturbance[9]. The draft SEIR must identify more specific mitigation measures, including treatment of how USFWS/CDFW is being consulted to determine the appropriate mitigation for take of foraging habitat for golden eagle. The Avian Conservation Strategy and Eagle Conservation Plan must be reviewed and approved by USFWS/CDFW prior to construction, and approval of the Plan must be a condition of the permit.

B1-9

Burrowing owl: CDFW released a revised staff report on burrowing owl mitigation in March 2012, after the EIR was certified by San Benito County. The draft SEIR failed to use these guidelines for survey protocols, in the analysis of impacts and in the development of mitigation measures. Burrowing owl impacts and mitigation measures must be included in the draft SEIR and cannot be deferred to an Avian Conservation Strategy, which must be provided as part of the public review process so that adequacy of that document can be evaluated in the public process.

B1-10

Tricolored Blackbird: The draft SEIR must be updated with the new data on tricolored blackbird nesting locations since 2010. The draft SEIR states that a known colony exists approximately 8 miles north of the project site. The UC Davis tricolored blackbird database (http://tricolor.ice.ucdavis.edu/) identifies multiple locations within fewer than 8 miles including a colony of 500 birds observed just 5.9 miles north of the project site in 2011 (see

B1-11

[8] Pagel, et al, Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance, U.S. Fish & Wildlife Service, February, 2010 (document provided with comments), p. 6.
[9] Pagel et al, p. 8.

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attached map). Because tricolored blackbirds often set up new colony locations each year depending on water, vegetation and food availability, annual surveys of nearby wetlands and streams must be conducted prior to, during, and after construction to determine presence and location of nearby colonies that might use the Project location for foraging and breeding. Because of the new state endangered species status of tricolored blackbird, annual species surveys must occur and data must be submitted to UC Davis and CDFW.

B1-11 cont.

Migratory Birds: The draft SEIR must include an analysis of the potential negative impacts on migratory birds associated with solar energy development. Even though impacts, including bird mortality, have been documented in and around solar energy plants in the Mojave Desert[10], the draft SEIR failed to analyze these potential impacts at the Panoche Valley or define specific potential mitigation measures to offset these impacts. The Avian Conservation Strategy and Eagle Conservation Plan must be provided as part of the public review process so that adequacy of that document can be evaluated in the public process. The Avian Conservation Strategy and Eagle Conservation Plan must be reviewed by USFWS/CDFW prior to construction, and approval of the Plan by these agencies must be a condition of the permit.

B1-12

Climate Change and Birds: Recent climate models suggest that over half of the birds in North America may be faced with extinction due to loss of wintering and/or breeding grounds (www.audubon.org/climate). These same models predict that the Panoche Valley will serve as important habitat for a number of rare birds, including tricolored blackbird and golden eagle. The draft SEIR failed to incorporate an analysis of these climate models for listed bird species, and failed to address how habitat loss associated with the Project may be mitigated to avoid potential future extinctions.

B1-13

Survey Issues: The timing and type of survey methods employed for establishing biological baselines and conducting impact analyses is especially important for this suite of San Joaquin Valley threatened and endangered species. In addition to the issues above regarding conducting surveys during drought conditions, the draft SEIR relies on inadequate or incorrect survey timing and methodology including:

B1-14

- Timing of giant kangaroo rat surveys – Project footprint and conservation lands were surveyed in February and March 2013 (and a subset of these sites was revisited in July 2013). These surveys were used to identify areas of higher giant kangaroo rat occupancy, and to determine population numbers and mitigation offsets. Based on work the Conservation Organizations have participated in at the Carrizo Plain and Panoche Valley, this timing is too early for this species, and therefore provides an inaccurate biological baseline for the Project. The long-term research project at the Carrizo Plain (2007-present; Prugh et al.) surveys for giant kangaroo rats April through May and July through August. Bean et al. use similar survey timing at the Panoche Valley.
- Survey methodology for giant kangaroo rats – It is problematic that no trapping was done as part of biological baseline development. Based on work the Conservation Organizations have participated in at the Carrizo Plain and Panoche Valley (e.g., Bean et al. 2012: *An evaluation of monitoring methods for the endangered giant kangaroo rat*)

B1-15

[10] Kagan et al, Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis, National Fish and Wildlife Forensics Laboratory, 2014.

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and considering the drought conditions in 2013 and 2014, trapping should have been part of the survey protocols, or the applicant should have at least addressed how their chosen survey methodologies could potentially impact the assessment of presence/absence, population density, and population extent for giant kangaroo rats. B1-15 cont.

- Vegetation surveys on PG&E upgrade sites – surveys occurred September through November 2014, which is far outside of the flowering period for most species, including many of the listed plant species mentioned in the draft SEIR, even in "normal" precipitation years, let alone in 2014, one of the worst droughts on record. Thus survey timing is inadequate for biological baseline development and impact analysis. B1-16
- Appropriate surveys were not done for California tiger salamander[11] although the draft SEIR recognizes that this species has "high" likelihood of occurrence on the project site. B1-17
- It is unclear if protocol level surveys were completed for San Joaquin kit fox[12] although the draft SEIR confirms that kit fox are present at the project site. B1-18
- The Blunt-Nosed Leopard Lizard Protection Plan, Habitat Restoration and Revegetation Plan, Wetland Mitigation and Monitoring Plan, and the Avian Conservation Strategy and Eagle Conservation Plan must be provided as part of the public review process so that adequacy of those documents can be evaluated in the public process. B1-19
- Protocol level surveys were not done for Swainson's hawk[13] although surveys found two dead Swainson's hawks adjacent to Interstate 5 in the PG&E upgrade route. B1-20
- Proposing to implement protocol level surveys for vernal pool fairy shrimp only as part of the mitigation measures fails to provide crucial information in the decision-making process and prevents one of the most important aspects of survey information to inform project siting to avoid and minimize impacts to listed species. B1-21

Cumulative Impacts

B1-22

In the intervening years since the EIR was certified by San Benito County, other conditions have changed as well, and a number of new solar photovoltaic power plants have been proposed, approved, or developed within the region as well as other types of projects. The draft SEIR should have comprehensively addressed and quantified cumulative impacts to special-status species, including from other projects along the western edge of the San Joaquin Valley, including, but not limited to, the Kern Solar Ranch and the California Flats Solar Project. Unfortunately, the draft SEIR failed to do so even though both the Kern Solar Ranch and California Flats Solar Projects are clearly located within the area considered for cumulative impacts by the draft SEIR and as shown in Figure D-1 of the 2010 Final EIR. The proposed Kern Solar Ranch is over 6,000 acres and the California Flats Project is over 2,000 acres. These are substantive projects which contribute significantly to the cumulative impacts to special status species in the region. The failure to consider these projects within the cumulative impacts analysis results in the draft SEIR again falling well short of

[11] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83915
[12] http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/kitfox_no_protocol.pdf
[13] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83990

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complying with CEQA and meeting its' purpose to provide informed decision making, leaving it and the proposed Project significantly vulnerable to challenge. B1-22 cont.

Biological Mitigation Measures B1-23

Bringing to bear the collective expertise of the Conservation Organizations, visits to the Panoche Valley, a thorough review of Panoche Valley Solar LLC's biological studies, thorough reviews of all new additional biological resource and monitoring data (including those studies referenced above, which were not included in the draft SEIR), it is clear to the Conservation Organizations that no project with a footprint of thousands of acres in the Panoche Valley could be sufficiently mitigated to result in no net loss to endangered species populations.

Passive, Ambiguous, and Ineffective Mitigation Terms: The biological mitigation measures as proposed in the draft SEIR host a suite of problems which result in substandard mitigation for biological resources. Throughout the mitigation measures proposed in the draft SEIR, the language used is not clear, defers judgment, or creates ambiguity in determining adequate compliance with the mitigation measures. Mitigation measures drafted with passive terms such as "should," "avoid," or "will" must be revised to be fully enforceable as required by CA Public Resources Code 21081.6(b). As such, the draft SEIR preparers must thoroughly review the mitigation measure language and revise this language to eliminate ambiguity and to create enforceable mitigation measures. B1-24

Further, the use of the term "construction" is ambiguous. Does "construction" refer to any development of the proposed Project site, issuance of improvement or grading permits for the proposed Project site, or the actual on-site construction of the solar facility components which requires a building permit? Construction must be clearly defined and the mitigation measures reviewed and revised to provide clearly defined milestones which are related to specific impacts to achieve the mitigation objectives.

A number of mitigation measures (e.g.MM BR-14.2, MM BR-16.1, MM BR-17.1) require submittal of a plan to the County for approval but the milestone does not require that the plan **be** approved prior to construction. The mitigation measures and their milestones must be reviewed and revised to assure that required plans for best management practices and mitigation be reviewed and approved **prior** to the construction activities.

Additional Recommended Revisions to Mitigation Measures: B1-25

- MM BR-G.2 appears to prohibit all domesticated animals, which would include sheep and goats, but allows for horses, cattle, and working dogs. This appears to be a conflict.

- MM BR-G.5 proposes that the mitigation lands and mechanism of protection be identified "prior to disturbance of vegetation" but defers the actual acquisition and protection of the mitigation lands via the recordation of conservation easement(s) to prior to "construction." As a result the proposed Project site can be stripped of vegetation without the mitigation lands actually being acquired and protected. Thus, B1-26

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a project developer could eliminate the habitat values of the site and then walk away from the project without ever beginning construction and the lands to mitigate the impacts resulting from site disturbance would never be acquired and protected. MM BR-G.5 must be revised to require the mitigation lands be acquired and protected by **recorded** conservation easement(s), including funding for the perpetual management and defense of those easements, to the satisfaction of the County, CDFW, and USFWS **prior** to ground or vegetation disturbance, whichever occurs first.

B1-26 cont.

Alternatives

B1-27

The California renewable energy market has matured considerably since the EIR was certified by San Benito County. Therefore, the draft SEIR should have evaluated at least two additional new alternatives:

- A wholesale distributed generation alternative: In the four years since the EIR was certified, distributed generation has made considerable advancements in deployment; over 1,000MW of capacity has been added through the California Solar Initiative[14] and contracts representing 739MW of capacity have been executed through the Renewable Auction Mechanism (a simplified market-based procurement mechanism for renewable distributed generation (DG) projects greater than 3 MW and up to 20 MW)[15]. Renewable Auction Mechanism projects are used to meet California's 33% Renewable Portfolio Standard.
- A utility-scale alternative on lands of low biodiversity conservation value: In 2013, the Conservancy's *Western San Joaquin Valley Least-Conflict Solar Energy Assessment* identified 435,601 acres of Low Biodiversity Conservation Value / Salt-affected lands, which includes land outside of the Westlands CREZ that was considered in the EIR, where solar could be sited where neither biodiversity nor agricultural values are unnecessarily impacted.

B1-28

Conclusion

B1-29

In closing, the Conservation Organizations remain strongly supportive of the development of renewable energy when appropriately sited in places that meet renewable energy development needs and also ensure that local and regional conservation values are retained and enhanced. In order to meet these two goals, facilities must not be sited in places of critical ecological importance. Regrettably, the Panoche Valley Solar Project is proposed for an area that is wholly inappropriate for industrial development, as it is core recovery habitat for a suite of species listed as threatened or endangered and many other sensitive species.

Our decisions to oppose the Project were not made lightly and reflect the fundamental importance of the Panoche Valley to California's rare and unique plant and animal species and to Californians who enjoy and care deeply about these species. It is our conviction that the proposed solar project in the Panoche Valley site could extirpate genetically unique populations and species from the site and no amount of mitigation can fully remedy the Project's significant impacts.

[14] http://www.californiasolarstatistics.ca.gov/
[15] http://www.cpuc.ca.gov/PUC/energy/Renewables/hot/Renewable+Auction+Mechanism.htm

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B1-30

Finally, for reasons provided above the draft SEIR fails to meet CEQA's most basic purposes of informing decision makers and the public about the potential, significant environmental effects of proposed activities, identifying the ways that environmental damage can be avoided or significantly reduced and preventing significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures. The Conservation Organizations strongly recommend the draft SEIR be substantially revised and recirculated per CEQA Guidelines[16].

Thank you again for the opportunity to provide comments on the draft SEIR. Please include us in any future notices for the proposed Project.

Respectfully submitted,

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16 California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15088.5

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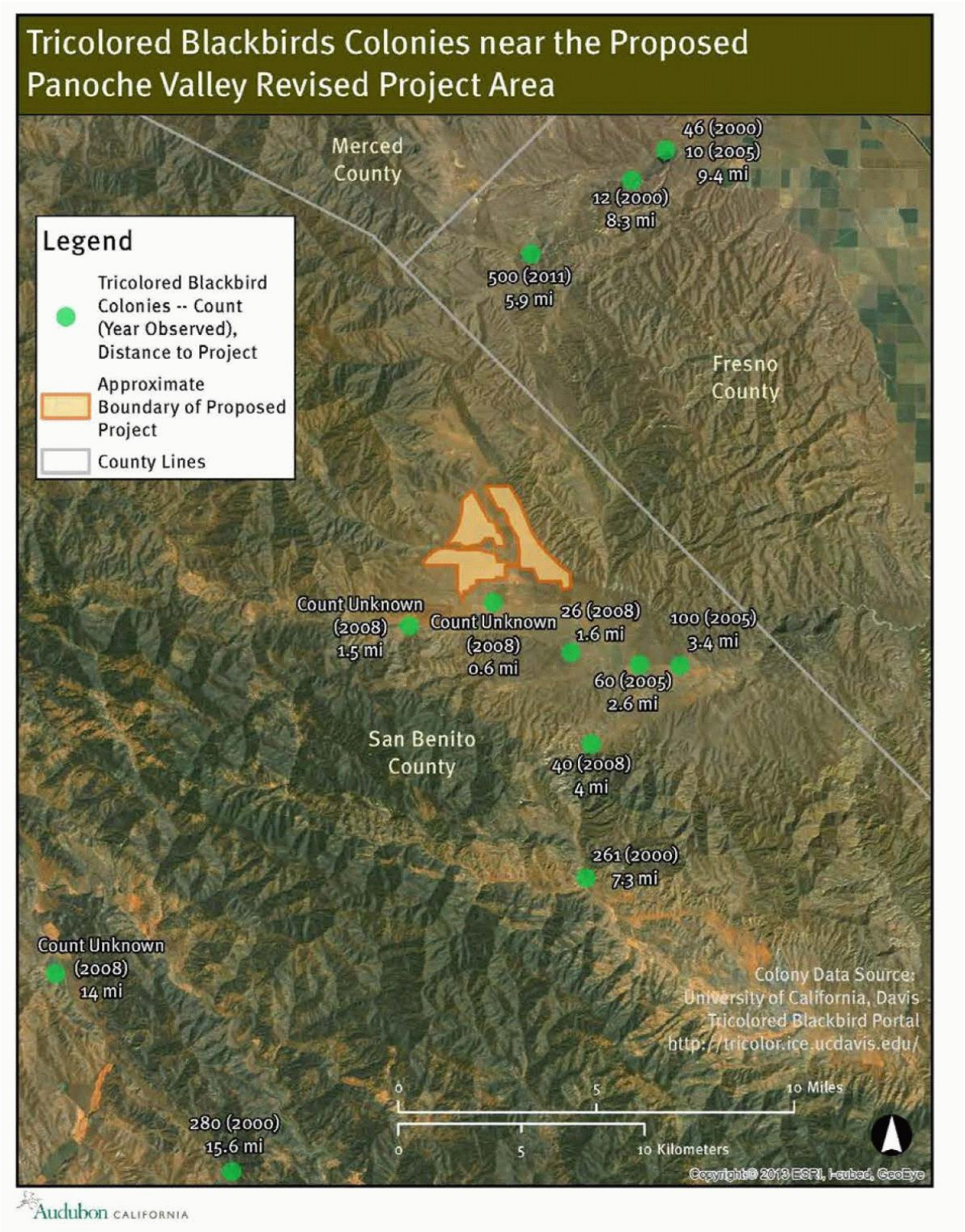
Douglass Cooper, USFWS (via email)
Katerina Galacatos, ACOE (via email)
Debra Mahnke, Central Valley Regional Water Quality Control Board (via email)
Billie Blanchard, CPUC (via email)

References (provided on disc with comments)

Comment Set B1 – Joint Conservation Organizations (cont.)



Comment Set B2 – Mercey Hot Springs

Mercey Hot Springs
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February 9, 2014

Re: Response to Draft SEIR for Panoche Valley Solar Project

Dear Mr. Krausie,

Please find below a list of my concerns that are either inadequately or not addressed in the original EIR and/or Draft SEIR.

1. **Section C.04 – Air Quality**
   a. There is no mention of increased vehicle emissions pollution due to significantly increased traffic on Little Panoche Road and, in particular how the increased emission would negatively affect guests and business at the Mercey Hot Springs resort. **B2-1**

2. **Section C.11 – Noise**
   a. On page ES-12 under **Recreation**, there is mention that the Mercey Hot Springs business could be disrupted, but **in whose opinion** was it determined that "**This impact would be less than significant**"? **B2-2**

   b. No one has ever discussed with us how the increased noise due to the significantly increased traffic on Little Panoche Road would negatively affect guest's enjoyment at the resort. **B2-3**

   c. As you may know, much of the business at the resort is derived from guests comprised of campers, RV, Day Use and cabins and other activities all of which are within 100 – 750 feet of Little Panoche Road. The smell of diesel and the resulting noise from the projected traffic will surely have a negative impact on the business. **B2-4**

3. **Section C.13 Public Services, Utilities and Service Systems**
   a. Discussion in this section addresses emergency services needed for San Benito County but there is no mention of what is needed for Fresno County along Little Panoche Road. **B2-5**

Comment Set B2 – Mercey Hot Springs (cont.)

b. Little Panoche Road has no functional telecommunications services of any kind.
   i. Cell phone – no available service
   ii. 2-way radio for sheriff, CHP or other emergency personnel – no available service
   iii. Phone (VoIP) only available at Mercey Hot Springs used for the operation of the business but is NOT available for public or emergency services.

B2-6

c. Table C.13.1 does not adequately show this need in the Summary of Impacts and Mitigation: Public Services, Utilities and Service Systems.

B2-7

4. **Section C.14 – Transportation and Circulation**
   a. Although there is mention of a Traffic Safety plan, there is no indication of when the plan would be available, how it will be developed and how the public will have an opportunity to provide input. It should include;
      i. Increasing the number of traffic control signage along the length of Little Panoche Road especially at or near hazardous areas such as driveway entrances at residences or businesses.
      ii. Installation of signs for:
         1. Speed Limits in both directions especially for large trucks
         2. Prohibited use of "Jake" brakes on downhill portions of the road for noise mitigation
         3. Appropriate signage at road locations where there are blind curves especially in areas where the road is less than 18-feet wide.

B2-8

   b. Although emergency services and additional personnel for the sheriff's office is planned for patrolling Little Panoche Road, there is no mention of the NEED FOR TYPICAL EMERGENCY COMMUNICATIONS; if not appropriately addressed, there will be inadequate emergency services available to respond to ANY emergency situation or condition in a timely manner.

B2-9

5. **ES-11, Panoche Valley Solar Project – Executive Summary**
   Hazards and Hazardous Materials – *"Grading and other soil disturbing activities associated with construction of the Revised Project could mobilize the fungus that causes Valley Fever. This impact would be less than significant with implementation of mitigation to educate workers and the public, and to protect construction workers. "*

B2-10

To say that "**this is impact would be less than significant**" completely glosses over and grossly simplifies a complex issue. Nothing is mentioned or provided to demonstrate how workers and the public will be protected from the fungus causing "Valley Fever". Typically, anyone that gets infected becomes "educated" after they find out from an infection specialist that they are, in fact infected. I suggest that this element of the Draft SEIR be significantly expanded on to describe in more detail:

   a. What steps will be done to detect valley fever fungus.
   b. What steps will be done to eradicate it (at the project site) when and if it's detected.
   c. What steps will be done to monitor construction workers to determine if they have gotten Valley Fever while working on the project.
   d. Provide a reporting system available to the public (in particular the surrounding residents and anyone living at, near or along the roadways to and from the project site) if anyone has been determined to have gotten Valley while the project is being worked on.

Comment Set B2 – Mercey Hot Springs (cont.)

e. Provide a list of infection specialists in the area that are readily available for early diagnosis and treatment.

B2-10 cont.

In closing, I want to be very clear that the Panoche Valley Solar Project will definitely have an extremely negative affect(s) on our business which needs to be addressed and must not be ignored by the project's developers. We have significant documentation that clearly and irrefutably illustrates consistent growth year after year. Thank you in advance for addressing the issues above and I look forward to your reply as well as hearing from the PVSP developers.

B2-11

Sincerely,

Larry Ronneberg

Comment Set B3 – San Benito Residents for Responsible Development

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February 10, 2015

Via Overnight and Electronic Mail

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Re: Comments on the Draft Supplemental Environmental Impact Report for the Panoche Valley Solar Project CUP No. UP 1023-09-A (SCH# 2010031008)

Dear Mr. Turner and Mr. Krausie:

We write on behalf of San Benito Residents for Responsible Development ("San Benito Residents") to provide comments on the Draft Supplemental Environmental Impact Report ("DSEIR") prepared by San Benito County ("County"), pursuant to the California Environmental Quality Act ("CEQA"),[1] for the Panoche Valley Solar Project ("Project") proposed by Panoche Valley Solar, LLC ("Applicant").[2] The Applicant seeks modification of a 2010 Conditional Use Permit ("CUP") to develop a 247 megawatt ("MW") photovoltaic ("PV") solar power plant on approximately 2,506 acres of land in San Benito County.

[1] Pub. Resources Code, §§ 21000 et seq.
[2] Aspen Environmental Group, Draft Supplemental Environmental Impact Report Panoche Valley Solar Project, County of San Benito Department of Planning and Building Inspection Services (December 2014) (*hereinafter* DSEIR).
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

I. INTRODUCTION

The Project is comprised of the construction of a 247-MW solar array field, an on-site electrical substation, telecommunications upgrades, including the construction of three microwave towers, upgrades to 17 miles of transmission lines, and an access road, which will traverse multiple waters of the United States and of the State. The Project would be constructed on approximately 2,506 acres of resource-rich land in unincorporated San Benito County, including land under the jurisdictions of San Benito County, Fresno County and the Bureau of Land Management ("BLM").[3] B3-1

The County claims that the revised Project, which has been reduced in size from 399 MW to 247 MW will address the concerns raised by environmental groups and concerned citizens.[4] However, the County is incorrect. The Project is proposed on thousands of acres of land that is home to multiple endangered, threatened and special status species. For example, the Project would be constructed on the last remaining, undisturbed core recovery area for the Federally and State endangered San Joaquin Kit Fox.[5] Initially, three core recovery areas were designated by the United States Fish and Wildlife Service (USFWS), as essential for recovery of the species; however, multiple solar projects and other leap frog developments have encroached upon these areas, leaving only the Panoche Valley as the last refuge for a species facing increasing environmental strain. B3-2

The purpose of a supplemental environmental impact report is to inform the public of and address changes in a project, changes in circumstances and the availability of new information, which may result in previously unidentified, and unmitigated significant impacts, among other information.[6] However, the DSEIR omits much of this information and fails to serve its purpose under CEQA. For example, information, which was not available at the time of the Final Environmental Impact Report ("EIR's") certification, is now available regarding solar PV projects' significant impacts on sensitive mammals and bat and avian species. Furthermore, changes in circumstances related to drought conditions in California have made clear that the development of solar projects has the potential B3-3 B3-4

[3] DSEIR, p. B-27.
[4] DSEIR, p. C.6-1.
[5] Endangered Species Recovery Program: Recovery Plan for Upland Species of the San Joaquin Valley, California (last visited Jan. 31, 2015) *available at* http://esrp.csustan.edu/publications/pubhtml.php?doc=sjvrp&file=chapter02L00.html.
[6] Pub. Res. Code § 21166.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

to substantially deplete groundwater supplies or interfere substantially with groundwater recharge. In addition, over the past four years, construction of power plants and other developments throughout the state have substantially interfered with habitat connectivity throughout the range of various endangered and threatened species, and many projects, such as this one, pose substantial adverse effects directly on threatened and endangered species. However, data and analysis regarding this new information and changed circumstances has been omitted from the DSEIR. As a result, the DSEIR fails to comply with CEQA. B3-4 cont. B3-5

As explained more fully below, the DSEIR (1) fails to set forth a stable and finite project description; (2) fails to set forth the environmental baseline for hazardous materials and biological and hydrological resources, among other resources; (3) lacks substantial evidence to support its conclusions regarding the Project's significant impacts; (4) fails to identify, analyze and mitigate to the extent feasible Project impacts on public health and the state's limited hydrological, biological and other resources; (5) improperly defers formulation of mitigation measures to post approval studies; and (6) fails to adequately identify and analyze the Project's cumulative impacts. As a result of these shortcomings, the DSEIR lacks substantial evidence to support its conclusions and fails to properly mitigate the Project's significant environmental impacts. The DSEIR's numerous defects render it inadequate as an informational document. B3-6

These comments will demonstrate that the DSEIR for the Project is fatally flawed. The DSEIR is a classic example of bare conclusions without appropriate prior analysis or due consideration. In light of the DSEIR's fundamentally flawed nature, the comments contained in this letter should be viewed as illustrative of the problems with the document, rather than as a comprehensive catalogue of the document's deficiencies. A number of the conclusions contained in the DSEIR are not supported by facts, reasonable assumptions predicated on facts, or expert opinion supported by facts. Based on the findings of this comment letter, a revised DSEIR must be written and recirculated before the County may legally approve the Project.

We have reviewed the DSEIR and its technical appendices with assistance from technical consultants, whose comments and qualifications are attached as follows: Scott Cashen, with the assistance of Michael Morrison (**Attachment A**); Petra Pless (**Attachment B**); and Tom Myers **(Attachment C)**. The County must respond to these consultants' comments separately and individually.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

II. STATEMENT OF INTEREST

B3-7

San Benito Residents for Responsible Development is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The association includes San Benito County residents, such as John Barber, Wallace Barnes, James Brown, Miguel Bustos, Bryan Daniel, L. Earl Davis, Randall Dike, Heath Guaracha, Richard Hodges, Valentin Ivanov, Andres Laureano, Steven Luiz, Jose Martinez, Robert Rovella, Gilbert Sanchez, Charles Schlesinger, Jaime Urzua, and California Unions for Reliable Energy ("CURE") and its members and their families and other individuals that live, recreate and/or work in San Benito County (collectively, "San Benito Residents"). The association was formed to advocate for responsible and sustainable solar development in San Benito County and nearby surrounding areas in order to protect public health and safety and the environment where the association members and their families live, work and recreate.

The individual members of San Benito Residents and the members of the affiliated labor organizations live, work, recreate and raise their families in the San Benito County. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work constructing the Project itself. They will be first in line to be exposed to any health and safety hazards that may be present on the Project site. They each have a personal interest in protecting the Project area from unnecessary, adverse environmental and public health impacts.

The organizational members of San Benito Residents also has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for the union organization's members that they represent. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses to locate and people to live there. This in turn jeopardizes future development by causing construction moratoriums and otherwise reducing future employment opportunities for construction workers. The labor organization members of San Benito Residents therefore have a direct interest in enforcing environmental laws to minimize the adverse impacts of projects that would otherwise degrade the environment.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

III. THE PROJECT DESCRIPTION IS INADEQUATE

B3-8

The DSEIR does not meet CEQA's requirements because it fails to include a complete and accurate project description, rendering the entire impact analysis unreliable. An accurate and complete project description is necessary to perform an evaluation of the potential environmental effects of a proposed project.[7] Without a complete project description, the environmental analysis will be impermissibly narrow, thus minimizing the project's impacts and undercutting public review.[8] The courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]."[9] "Only through an accurate view of the project may affected outsiders and public decision makers balance the proposal's benefit against its environmental costs."[10]

CEQA Guidelines section 15378 defines "project" to mean "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."[11] Courts have explained that for a project description to be complete, it must address not only the immediate environmental consequences of going forward with the project, but also all "*reasonably foreseeable* consequence[s] of the initial project."[12] "The term 'project' refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term project does not mean each separate governmental approval."[13] Accordingly, CEQA requires that the project description contain a brief statement of the intended uses of an EIR, including a list of agencies which will use the EIR, along with the permits and approvals required for implementation of a proposed project.[14]

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[7] *See, e.g., Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376.
[8] *See id.*
[9] *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193.
[10] *Id.*, at 192-193.
[11] 14 Cal.Code Regs, tit. 14, §15378 ("CEQA Guidelines").
[12] *Laurel Heights*, 47 Cal.3d 376, emphasis added; *see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-50.
[13] CEQA Guidelines, § 15378(c).
[14] CEQA Guidelines § 15124(d).
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

A. The DSEIR Fails To Provide an Accurate List of the Intended Uses of the DSEIR.

B3-9

The DSEIR's project description fails to list the agencies that are expected to use the EIR in their decisionmaking and all the permits and approvals required to implement the Project.[15] The DSEIR fails in this regard for two reasons.

First, the DSEIR fails to include Fresno County as a responsible agency. "'Responsible agency' means a public agency, other than the lead agency, which has responsibility for carrying out or approving a project."[16] Fresno County is a responsible agency because its approval is required for two actions necessary for carrying out the Project. The DSEIR's failure to list Fresno County as a responsible agency violates CEQA and fails to inform the public regarding the extent of approvals required for the Project.

B3-10

Second, the DSEIR fails to identify the two Fresno County approvals required for Project implementation. According to the Fresno County Zoning Code, construction of communications equipment facilities and microwave relay structures in the Exclusive Agricultural District requires "Director Review and Approval,"[17] and private use airports, heliports and crop dusting strips require a CUP.[18] According to the DSEIR, the PG&E upgrades necessitate the construction of up to three telecommunications towers.[19] Furthermore, the Applicant is proposing the construction of multiple helipads for the construction of the Pacific Gas & Electric Company ("PG&E") upgrades.[20] Accordingly, Fresno County must consider two discretionary approvals required for implementation of the Project. The DSEIR's failure to list the required approvals violates CEQA and fails to inform the public regarding the extent of approvals required for the Project.

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[16] Pub. Res. Code § 21069.
[17] Fresno County Zoning Ordinance, § 816.2 subd. C.
[18] *Id.* § 816.3 subd. K.
[19] DSEIR, p. B-29.
[20] DSEIR, p. B-28.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B. The Project Description Fails to Adequately Describe the Extent of Grading and Trenching Required for Project Construction

B3-11

The DSEIR fails to provide a sufficiently detailed account of the extent of grading and trenching required for Project construction. This information is necessary to fully assess Project impacts on vernal and ephemeral pools, as these features are known breeding grounds for Vernal Pool Fairy Shrimp and California Tiger Salamanders, which have been documented at the Project site.[21] According to the DSEIR, the Project requires only "limited grading;" however, the DSEIR goes on to clarify, that 392 acres will be graded to accommodate the solar panels.[22] This extent of grading is by no means "limited." In fact, the area to be graded is nearly double that of the previously-approved project.[23] The DSEIR's description of grading and trenching is inadequate for two reasons.

B3-12

First, the DSEIR's statement that grading will be minimal due to the nearly flat terrain at the Project site is inaccurate and misleading.[24] The Project actually requires trenching for the installation of underground electrical lines and 185,000 support post foundations.[25] The DSEIR does not clarify the depth of the grading and trenching required for installation of the Project components. Furthermore, while the DSEIR states that each of the posts has an approximately 4.5 inch circumference, the DSEIR fails to provide the length of the posts or the depth that they will be installed into the ground. Given the numerous hydrological and biological features on the Project site, more information is required so Project impacts can be assessed and mitigated.

B3-13

Second, it is unclear what Project components are included in the estimated 392 acres of grading. For example, the DSEIR sets forth several Project features, such as support post foundations, concrete foundations associated with inverters and MV transformers, and switchgear foundations.[26] These features will

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[21] *See* Letter from Jeffrey R. Single, Regional Manager California Department of Fish and Wildlife, to Kate Kelly, Kelly Group Consulting, Re: Inquiry Regarding Permitting Status of the Panoche Solar Project (October 10, 2014). **Attachment D.**
[22] DSEIR, p. B-8.
[23] *Id.*
[24] DSEIR, p. B-8.
[25] *See* p. B-8.
[26] DESIR, pp. B-8, 9.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

collectively impact approximately 105,000 square feet.[27] The DSEIR goes on to state that each of the areas impacted by these components is included in Table B-3. Table B-3 includes multiple Project components and concludes that the total *disturbance area* of these components is 857 acres.[28] However, no information is provided regarding the relationship between the 857 acres to be "disturbed" and the area that will be graded. This clarification is necessary, as grading and trenching are required for the installation of concrete foundations and steel support beams, respectively. The DSEIR's description is unnecessarily confusing and misleading. Without information that clarifies the relationship between the disturbance areas, project components that require trenching and foundation installation, and the calculated area for grading the public and decision makers cannot fully determine and assess Project impacts on the environment.

B3-13 cont.

C. The Project Description Fails to Provide Information Regarding the Timing of PG&E Upgrade Construction

B3-14

The DSEIR fails to set forth when the PG&E upgrades will be constructed and whether their construction will overlap with construction of the solar array. This information is required to assess Project impacts on air quality. The PG&E upgrades will require the installation of up to twelve new tubular steel poles and their foundations, four new workstations, up to three telecommunications towers, the installation of new optical ground wire ("OPGW"), and 12 temporary pull/reel and splice sites, which will each require a work area along the 17 mile transmission line corridor.[29] The DSEIR states that the installation of the OPGW can be completed in approximately 12 – 16 weeks.[30] Helicopters, which will require helipads, will be used for the delivery of materials, and the transportation of workers, given the remote location of the upgrades.[31] Project impacts cannot be properly assessed without information regarding the timing of the PG&E upgrades. A DSEIR that provides adequate information regarding when the PG&E upgrades will be constructed is required so that Project impacts on air quality may be fully identified and mitigated.

[27] *Id.*
[28] DSEIR, p. B-9 (*emphasis added*).
[29] DSEIR, pp. B-26 – 27.
[30] DSEIR, p. B-28.
[31] *Id.*
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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

IV. THE DSEIR FAILS TO ADEQUATELY AND ACCURATELY SET FORTH THE ENVIRONMENTAL BASELINE AGAINST WHICH ENVIRONMENTAL IMPACTS SHOULD BE MEASURED

B3-15

The DSEIR describes the existing environmental setting inaccurately and incompletely, thereby skewing the entire impact analysis. The existing environmental setting is the starting point from which the lead agency must measure whether a proposed project may cause a significant environmental impact.[32] CEQA requires lead agencies to include a description of the physical environmental conditions in the vicinity of a project, as they exist at the time environmental review commences.[33] CEQA defines the environmental setting as the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and regional perspective.[34]

Describing the environmental setting accurately and completely for each environmental condition in the vicinity of the Project is critical to an accurate, meaningful evaluation of environmental impacts. The importance of having a stable, finite, fixed environmental setting for purposes of an environmental analysis was recognized decades ago.[35] Today, the courts are clear that, "[b]efore 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."[36] In fact, it is:

> a central concept of CEQA, widely accepted by the courts, that the significance of a Project's impacts cannot be measured unless the DEIR first establishes the actual physical conditions on the property. In

[32] *See, e.g., Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.* (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.
[33] CEQA Guidelines, § 15125(a); *see also Communities for A Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 321.
[34] CEQA Guidelines §15125(a) (*emphasis added*); *Riverwatch v. County of San Diego* (1999) 76 Cal.App.4th 1428, 1453 ("*Riverwatch*").
[35] *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185.
[36] *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.
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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

other words, baseline determination is the first rather than the last step in the environmental review process.[37]

B3-15 cont.

The DSEIR must also describe the existing environmental setting in sufficient detail to enable a proper analysis of Project impacts.[38] Section 15125 of the CEQA Guidelines provides that "[k]nowledge of the regional setting is critical to the assessment of environmental impacts."[39] This level of detail is necessary to "permit the significant effects of the Project to be considered in the full environmental context."[40]

The description of the environmental setting in the DSEIR is inadequate because it omits highly relevant new information and changed circumstances regarding biological resources, air quality and ground water resources. The County must gather the relevant data and provide an adequate description of the existing environmental setting in a revised and recirculated DSEIR.

B3-16

A. The DSEIR Fails to Adequately and Accurately Set Forth the Existing Environmental Setting Against Which Impacts to Biological Resources Must be Measured

B3-17

The DSEIR provides an inaccurate description of the existing environmental setting for multiple plant and animal species on the Project site. According to biological expert Scott Cashen, there is conflicting information in the DSEIR appendices and reports that must be resolved. The baseline for impacts to biological resources is inaccurate for at least five reasons.

i. *The DSEIR Fails to Provide the Existing Environmental Setting for Biological Resources at Panoche Mountain*

B3-18

The Project includes the construction of up to three microwave towers, with one tower potentially located at Panoche Mountain. However, the DSEIR fails entirely to describe the biological resources present. Instead, the DSEIR describes Panoche Mountain as having "developed habitat."[41] However, the information in the DSEIR conflicts with the information presented in the Water Resources chapter,

[37] *Save our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 125.
[38] *Galante Vineyards v. Monterey Peninsula Water Mgmt. Dist.* (1997) 60 Cal.App.4th 1109, 1121-22.
[39] CEQA Guidelines § 15125(d).
[40] *Id.*
[41] DSEIR, p. C.6-13.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

which states:

B3-18 cont.

> "Panoche Mountain (at approximately 2,100 feet of elevation), northeast of the project site, consists of uninhabited grassland and shrubland open space. Panoche Mountain currently has at least two existing microwave communication towers, and a new tower (up to 300 feet tall) is proposed within the developed site of one existing tower. The site is located at the summit of Panoche Mountain and is surrounded by steeply sloped ridges and valleys. The headwaters of several unnamed streams begin in the valleys that descend from the summit of Panoche Mountain. The nearest headwaters are located approximately 500 feet from the proposed tower site."[42]

Mr. Cashen clarifies, "the disturbed habitat at Panoche Mountain is limited to approximately 20,000 ft^{2}."[43] This area of disturbance is confined to the area beneath existing microwave towers. The DSEIR goes on to conclude that "[t]he construction of the new microwave tower [at Panoche Mountain] would be in an area that is already disturbed with similar equipment. Impacts to sensitive species are not anticipated from planned work in this existing disturbed area."[44] The DSEIR's conclusion is not supported by substantial evidence.

B3-19

The biological resources at the site of the proposed microwave tower were never assessed. However, there is information available that indicates the Project may substantially deplete habitat for special status plant and animal species. According to Mr. Cashen, "[t]he California Natural Diversity Database ("CNDDB") has a record of the blunt-nosed leopard lizard occurring at the site (i.e., the "Panoche Mtn Telephone Co Repeater Site). In addition to the blunt-nosed leopard lizard, there are other special-status wildlife, and special-status plant species, that may be affected by construction of the new tower."[45] Therefore, the DSEIR has omitted information regarding the incremental changes in the environmental setting for biological resources related to the changed project description.[46] A new DSEIR that provides information regarding the environmental baseline at Panoche

[42] SEIR, p. C.15-3.
[43] Cashen, p. 6
[44] Cashen, p. 7; *see also* Energy Renewal Partners, LLC, *Panoche Valley Solar Project Telecommunications Upgrades Modifications to PG&E Planned Disturbance Areas* (Oct. 2014).
[45] Cashen, p. 7 (*internal citation omitted*).
[46] *See Benton v. Bd. of Supervisors* (1991) 226 Cal. App. 3d 1467.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Mountain must be circulated so the public and decision makers can fully understand the Project's potential impacts on endangered species, such as the blunt-nosed leopard lizard ("BNLL"). B3-19 cont.

ii. *The DSER Fails to Provide a Consistent Description of the Existing Environmental Setting for Plants on the Project Site* B3-20

The DSEIR's description of the environmental setting for special status plants is inadequate for three reasons. First, biological expert Scott Cashen points out, "[f]ocused botanical surveys were conducted for the Project during the fall of 2009 and the spring of 2010. The results of those surveys are now outdated."[47] USFWS requires that project sites that have inventories older than three years need additional surveys.[48] Mr. Cashen explains the reason USFWS requires new surveys is that "[a]dditional special-status plant species may have colonized the Revised Project site."[49] Five years have lapsed since surveys for rare plants on the Project site were conducted; therefore, additional surveys are required in order to establish the existing environmental baseline.

Second, the DSEIR fails to provide any data or analysis to substantiate its conclusion that suitable habitat for special plant species is unlikely to occur within disturbance limits associated with the PG&E upgrades.[50] Indeed, Mr. Cashen's independent review of the Project, and evidence in the DSEIR's Transmission Line Natural Resource Assessment ("TLNRA") indicate that there is potential habitat for special status plant species on the Project site. However, the appendix referred to in the TLNRA was improperly omitted from the DSEIR, preventing the public and decisionmakers from completing an independent review of the information that the DSEIR relied upon to reach its conclusion. B3-21

Mr. Cashen explains that, "there is evidence that at least some special-status plant species have a higher potential of occurring in the Revised Project area than what is suggested in the SEIR."[51] Indeed, "the Consortium of California Herbaria database contains numerous records of gray bushmallow occurring along Panoche Road in close proximity to the Revised Project area. The SEIR provides a similar unjustified conclusion regarding the potential for Hall's tarplant (*Deinandra*

[47] Cashen, p. 2.
[48] *Id.*
[49] *Id.*
[50] Cashen, p. 2.
[51] Cashen, p. 3.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

halliana)."[52] The DSEIR must be revised to provide accurate information, and disclose the studies upon which it relied, to determine the setting for special status plants along the proposed transmission line updgrades. B3-21 cont.

Third, the DSEIR fails to disclose the presence of California jewelflower on the Project site. According to the TLNRA, "California jewelflower (*Caulanthus californicus*) was detected in 'Study Area 1,' which is within the Revised Project site boundary and immediately adjacent to the solar field."[53] According to Mr. Cashen, not only is the California jewelflower listed as endangered, but the species is "critically imperiled," and has "a very high risk of extinction due to extreme rarity."[54] Accordingly, "[a]ny impact, either direct or indirect, to such a critically endangered species would jeopardize its continued existence." The DSEIR must address and remedy these inconsistencies regarding the occurrences of rare plants on the Project site. This information is critical for determining the Project's adverse impacts on special plant species. B3-22

iii. *The DSER Fails to Provide a Consistent Description of the Existing Environmental Setting for the Endangered California Condor* B3-23

The DSEIR provides conflicting reports regarding the presence of California condors on the Project site. The DSEIR states, "[i]mpacts to foraging habitat for California condors, Swainson's hawk, and white-tailed kite would also be potentially significant absent mitigation; however, these raptors *have not been observed* on site during the approximately 25,000 survey hours logged."[55] However, Mr. Cashen explains that this information is inaccurate.[56] According to the data included in the avian surveys, a California condor was seen when golden eagle nest surveys were being conducted.[57]

The DSEIR's description of the existing setting for condors is wrong. Accurate information is crucial because the elimination of the Project site as foraging habitat, as well as impacts associated with lake effect, and collisions with transmission lines and telecommunications structures, have the potential to impact

[52] *Id.*
[53] Cashen, p. 3.
[54] Cashen, pp. 3 – 4.
[55] DSEIR, p. C.6-38 (*emphasis added*).
[56] Cashen, p. 4.
[57] Avian Conservation Strategy, p. 24.
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California condors.[58] However, this potentially significant impact was omitted from the DSEIR because it concluded that no condors were sighted. The information in the DSEIR directly conflicts with information in the avian surveys conducted at the Project site. By skewing the existing environmental setting for California condors, the DSEIR obscures the Project's impacts in violation of CEQA. Because a condor was sighted, a species-specific survey must be conducted so that the public and decision makers are fully informed as to what impacts the Project will have on California condors. B3-23 cont.

iv. *The DSEIR's Fails to Provide an Adequate Account of the Existing Environmental Setting for Golden Eagles* B3-24

The DSEIR provides conflicting and misleading information regarding the importance of the Project site as golden eagle habitat for two reasons. First, the surveys relied upon in the DSEIR are inadequate. The DSEIR claims that the DSEIR point count surveys were conducted during the summer, fall and winter of 2013-2014.[59] However, Mr. Cashen explains that based on the information provided in the DSEIR appendices, the surveys were conducted from September 3, 2013 through January 24, 2014.[60] Accordingly, surveys were not conducted during the summer, as claimed in the DSEIR. The DSEIR attempts to resolve this inconsistency by stating, "any miscellaneous observations information gathered during the 2013 PVS giant kangaroo rat and blunt-nosed leopard lizard surveys, conducted in March through September, 2013, was also used to supplement the point count/UDA data."[61] However, Mr. Cashen explains that surveying for BNLL and giant kangaroo rat ("GKR") specifically involves watching the ground, whereas surveying for golden eagles involves focusing on the air and cliffs.[62] Therefore, it is impossible for the surveyors to have adequately and accurately conducted surveys for these species, simultaneously.[63] The DSEIR's information regarding the sufficiency of golden eagle surveys is inaccurate.

Second, the DSEIR provides a misleading account of the area's importance to golden eagles. The Eagle Conservation Plan states, "[t]he overall activity levels within the Project Footprint appear low with a majority of the activity taking place B3-25

[58] DSEIR, p. C.6-38; *see also generally* Cashen.
[59] Eagle Report, p. 7.
[60] *Id.*
[61] *Id.* at 8.
[62] Cashen, p. 5.
[63] *Id.*
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on adjacent conservation lands."[64] However, Mr. Cashen "disagree[s] with the Applicant's conclusion that the Revised Project site is not an important eagle use area, and that the majority of eagle activity occurs on adjacent conservation lands."[65] Despite the locations of the point count stations, a number of which included land outside the Project footprint,[66] a substantial number of golden eagle sitings were within the Project footprint. "The results of the point count surveys included a total of 61 observations of [golden eagles] GOEA. This total includes 23 individual observations of GOEA seen within the point count plot boundaries and 38 observations outside the plot boundaries."[67] Indeed, Mr. Cashen points out that figure 8 of the Point Count Survey Report, which depicts the golden eagle observations, demonstrates substantial golden eagle use of the Project site.[68] However, by including more land outside the Project footprint than the Project footprint itself for the point count surveys, the baseline for golden eagles has been skewed. A DSEIR that remedies this discrepancy in the description of golden eagle use patterns must be recirculated so the public and decision makers can fully assess impacts to golden eagles.

B3-25 cont.

v. *The DSEIR Omits New Information Regarding the Existing Environmental Setting for San Joaquin Kit Fox*

B3-26

The DSEIR omits information regarding the USFWS-designated core recovery areas for the Federally and State listed San Joaquin kit fox.[69] Where an EIR fails to disclose and analyze laws and policies directly applicable to the Project under review it "falls far short of 'demonstrat[ing] to an apprehensive citizenry that the agency has, in fact analyzed and considered the ecological implications of its actions.'"[70] A lack of specific statutory targets or thresholds does not relieve a lead agency of its duty to ensure that an EIR perform a meaningful consistency analysis.[71] Accordingly, the DSEIR's analysis must reflect impacts to the San Joaquin kit fox, which is endangered throughout its range, and impacts on kit fox

[64] Eagle Conservation Plan, p. 17.
[65] Cashen, p. 5.
[66] *See* Panoch Valley Solar Point Count Survey Study Report, p.7 and Figres 4, 5, 6 (April 2014).
[67] Eagle Report, p. 10.
[68] Cashen, p. 5.
[69] *See* United States Fish and Wildlife Service Sacramento Fish and Wildlife Office, *San Joaquin Kit Fox Five Year Review: Summary and Evaluation,* pp. 12 – 16 (Feb. 16, 2010) *available at* http://ecos.fws.gov/docs/five_year_review/doc3222.pdf.
[70] *Cleveland Nat'l Forest Found. v. San Diego Association of Gov't* (2014) 231 Cal.App.4th 1506, 1073 *citing Laurel Heights*, 47 Cal.3d at 392, 253.
[71] *Id.* at 1072.
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habitat and population.[72] The USFWS has designated three core population areas, which are essential to the Kit Fox's recovery.[73] The species' recovery hinges on the protection of three core populations in: (1) the Carrizo Plain Natural Area in San Luis Obispo County; (2) Natural lands of western Kern County (i.e., Elk Hills, Buena Vista Hill, and the Buena Vista Valley, Lokern Natural Area and adjacent natural land) inhabited by kit foxes; and (3) the Ciervo-Panoche Natural Area of western Fresno and eastern San Benito Counties.[74] However, two of the core recovery areas have been developed in recent years. For example, the Carrizo Plain has been developed with the Topaz Solar Farm and the California Valley Solar Ranch. Whereas the core population in western Kern County is being impacted by the development of oil and gas wells.[75] Panoche Valley is the last remaining undeveloped refuge, which is vital to species recovery. The development of the other two recovery areas is new information, which is essential to evaluating cumulative Project impacts on San Joaquin Kit Fox, and therefore, must be disclosed and analyzed in the DSEIR. The DSEIR must be updated and recirculated to remedy this significant informational defect.

B3-26 cont.

B. The DSEIR Fails to Adequately Set Forth the Baseline For Air Quality

B3-27

The DSEIR presents an inaccurate account of air quality in the Project region. The Project site is under the jurisdiction of two air districts: the San Joaquin Valley Air Pollution Control District ("SJVAPCD") and the Monterey Bay Unified Air Pollution Control District ("MBUAPCD"). Geographically, the Project is in the San Joaquin Valley Air Basin ("SJVAB") and the North Central Coast Air Basin ("NCCAB"). According to the DSEIR, "ambient levels for [NOx and ROG][76] in the San Joaquin Valley APCD are well below State and Federal ambient air quality standards."[77] However, Dr. Pless points out, "[t]his is wide off the mark."[78]

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[72] Endangered Species Reovery Program: Recovery Plan for Upland Species of the San Joaquin Valley, California (last visited Jan. 31, 2015) *available at* http://esrp.csustan.edu/publications/pubhtml.php?doc=sjvrp&file=chapter02L00.html.
[73] *Id.*
[74] *Id.*
[75] Bryan L Cyper, Scott E. Phillips and Patrick A. Kelly, "Research Report: Quantity and distribution of suitable habitat for endangered San Joaquin kit foxes: conservation implications", *Canid Biology & Conservation*, p. 26 (2013) *available at* http://www.canids.org/CBC/16/san_joaquin_kit_fox_habitat_suitability.pdf.
[76] These pollutants are ozone precursors. Emissions of these two pollutants from combustion engines exacerbates non-attainment in federal and state ambient air quality standards for ozone levels.
[77] Pless, pp. 3-4.
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According to Dr. Pless, "[a]mbient levels for ozone and particulate matter in the San Joaquin Valley APCD are frequently (and far) above State and Federal ambient air quality standards."[79] B3-27 cont.

> During 2011 through 2013, the ambient levels of ozone in the San Joaquin Valley Air Basin exceeded the federal and state 8-hour ambient air quality standard for ozone on 131, 113, and 112 days respectively…Likewise, during 2011 through 2013 PM10 ambient levels in the SJVAB exceeded the state 24-hour ambient air quality standard for PM10 on 113, 55, and 60 days, respectively.[80]

The SJVAPCD is designated non-attainment for state air quality standards for PM10, and federal PM2.5, and is in extreme non-attainment for federal ambient air quality standards for ozone and nonattainment of state ambient quality standards for ozone. The DSEIR's analysis of potential impacts must be compared to this baseline. Accordingly, an updated DSEIR that accurately and adequately reflects air quality in the SJVAB must be circulated for review so that the public and decision makers may assess the Project's impacts.

C. The DSEIR Fails to Clearly Set Forth Drainages and Jurisdictional Waters on the Project Site

B3-28

The DSEIR fails to adequately describe the washes on the Project site, thereby obscuring the existing setting against which impacts related to drainage and erosion should be identified, assessed and mitigated.

According to the DSEIR, "[t]he 2010 Final EIR identified approximately 18,700 linear [feet] ft of the ephemeral drainage channels within the Panoche Creek drainage, and approximately 7,025 linear ft of Las Aguilas Creek within the project site subject to the jurisdiction of the [United States Army Corps of Engineers] USACE and/or [California Department of Fish and Wildlife] CDFW."[81] According to Dr. Myers, this depiction is flawed because "[i]t is not clear whether the 18,700 linear ft is all of the channels in the entire drainage, with Las Aguilas Creek being part of Panoche Creek."[82] Dr. Myers explains that clarification on this point is

[78] *Id.*
[79] *Id.*
[80] *Id.*
[81] DSEIR, p. C.6-51.
[82] Myers, p. 12.
2373-039cv

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required because Las Aguilas Creek may be considered part of the Panoche Creek Drainage as they both derive from the Panoche Creek Groundwater Basin.[83] Accordingly, more information is required as to the relationship between the two measurements of linear impacts.

B3-28 cont.

Dr. Myers further explains that it is unclear what portions of the creeks are jurisdictional waters regulated by the USACE, which would require a Clean Water Act ("CWA") section 404 permit for dredge and fill.[84] The USACE sent the Applicant and County a revised jurisdictional delineation after the publication of the 2010 Final EIR.[85] According to the USACE letter, the USACE "re-examined the conditions of the project site" and "determined that the waters present on this project site are jurisdictional waters of the United States."[86] The letter rescinded a former jurisdictional delineation, and found that a CWA section 404 permit would be required. Information regarding jurisdictional waters on the Project site is new information not addressed in the 2010 Final EIR, nor adequately described in the DSEIR. The DSEIR states, "some of the previously identified ephemeral drainages, specifically 5,951 linear ft of such drainages on the eastern side of the Revised Project site, have been deemed waters of the U.S. or federal jurisdictional waters."[87] However, it is unclear whether and to what extent this determination changed the Final EIR's conclusion that 18,700 linear feet would be impacted by the Project, and whether the 5,951 linear feet discussed in the DSEIR are included in that number, or whether they are part of the 7,025 linear feet of Las Aguilas Creek. The DSEIR must clarify the extent, location and designation of the waters on and around the Project site to ensure that the public and decision makers are able to assess the Project's impacts on drainage and erosion. As proposed, the DSEIR fails to comply with CEQA's requirement to set forth an adequate description of the existing environmental setting upon which to measure impacts.

[83] *Id.*
[84] *Id.*
[85] Letter from Jane M Hicks, Chief, Regulatory Division, Department of the Army, to Kevin Lincoln, Power Engineers, Inc. Re: File No. 2009-00443S (October 18, 2010). (FEIR was published on Sept. 30, 2010).
[86] *Id.*
[87] DSEIR, p. C.6-25.
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D. The DSEIR Fails to Set Forth an Adequate Baseline Against Which Impacts on Groundwater Should be Measured

B3-29

The DSEIR provides an inconsistent, inadequate and misleading account of existing groundwater resources at the Project site. The Project proposes to pump 385.15 acre-feet per year ("af/y") of groundwater for Project construction.[88] Without sufficient information, it is impossible to determine the impact groundwater withdrawals will have on the aquifer underlying the Project site. As discussed above, the DSEIR completely fails to mention or address the current drought conditions in the State of California that have developed since the approval of the 2010 Final EIR. This information, as well as an adequate and accurate portrayal of groundwater recharge and potential drawdown is necessary for the public and decision makers to assess Project impacts on the environment. The DSEIR fails to adequately set forth existing groundwater conditions for five reasons.

First, the DSEIR omits new information regarding the multi-year drought in California, and the resulting decrease in Central Valley Water Project allocations to farming communities and subsequent increases in groundwater withdrawals.[89] This information is vital to understanding existing stresses on groundwater resources and the Project's potentially significant and more severe impacts on those resources. However, other than one cursory sentence acknowledging that California is in a drought, the DSEIR provides no information regarding the drought or its duration, severity or impacts on water supply throughout the state.[90]

The current drought has significantly changed existing conditions on the ground. During 2014, BLM water allocations were reduced to 10% of requests.[91] Although December 2014 storm systems initially increased optimism (BLM increased the allocations to 15% of requests), January 2015 is set to be the driest month on record since record keeping began in 1877. Accordingly, BLM may

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[88] DSEIR, C.15-5.
[89] Groundwater withdrawals during drought years are over double that of a normal year. *See* Janny Choy and Geoff McGhee, *Groundwater: Ignore It and It Might Go Away* (last visited Jan. 31, 2014) *available at* http://waterinthewest.stanford.edu/groundwater/overview/index.html.
[90] DSEIR, p. C.15-1.
[91] Elly Allshouse, "Bureau of Reclamation Provides Update on Central Valley Project Water Supply Conditions," *Association of California Water Agencies* (January 26, 2015 at 10:39 a.m.) *available at* http://www.acwa.com/news/water-supply-challenges/bureau-reclamation-provides-update-central-valley-project-water-supply-.

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further reduce allocations.[92] The California Department of Water Resources ("DWR") has also set allocations at 10% of requests, and may further reduce allocations to meet critical human health and safety needs.[93] Indeed, "DWR experts estimate that it will take roughly 150 percent of average precipitation for California to recover from drought."[94] According to a DWR news release,

> [t]he 29 public water agencies that receive SWP water (State Water Project Contractors) requested 4,172,686 acre-feet of water for 2015. Under today's initial allocation, they will receive 418,520 acre-feet. For most agencies, that amounts to 10 percent of the supplies for which they contract with DWR.[95]

This omitted information is essential to determining Project impacts on groundwater resources, especially given the prevalence of farming in San Benito and Fresno Counties. However, these changed circumstances, which could result in a significant impact, are not mentioned anywhere in the DSEIR. The DSEIR must be updated to reflect this information so that it can serve its purpose as an informational document.

B3-29 cont.

Second, according to the Technical Groundwater Memorandum ("Groundwater Memo") appended to the DSEIR, little to no information regarding the aquifer underlying the Project site is available.[96] However, the Water Supply Assessment, which was included with the Approved Project Final EIR, released in 2010, provides significantly more information regarding groundwater availability, multi-year drought impacts on the aquifer and current aquifer use.[97] According to CEQA, "[t]he EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental

B3-30

[92] *Id.*
[93] Ted Thomas, California Department of Water Resources, *Initial State Water Project Allocation Set at 10 Percent May be Reduced to Meet Critical Health and Safety Needs* (Dec. 1, 2014) *available at* http://www.water.ca.gov/news/newsreleases/2014/120114swp.pdf.
[94] *Id.*
[95] *Id.*
[96] "Little information is available to evaluate the potential utility of using wells 3, 17, 18, 22, 43, or 44 on the property." Geologica, Memorandum Re: Panoche Valley Solar Project Groundwater Extraction Impact Evaluation Panoche Valley, CA, December 15, 2014, pp. 6-8 (*hereinafter* Geologica(b)).
[97] Geologica Inc., Water Supply Assessment: Solargen Panoche Valley Solar Farm, Panoche Valley, California, pp. 17-18 (Sept. 23, 2010).
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context."[98] The DSEIR fails to demonstrate that the existing groundwater conditions were adequately established in order to evaluate more severe significant impacts, in light of changed circumstances, related to the current drought that has reduced California's groundwater supply.[99]

B3-30 cont.

Third, the DSEIR provides an inaccurate estimate of the groundwater recharge rate based on rainfall in Panoche Valley. According to the Groundwater Memo appended to the DSEIR, all modeling prepared for the Project assumes a recharge rate of one inch per year ("in/y").[100] However, according to expert hydrogeologist, Dr. Tom Myers, "[t]he recharge estimate used for this project, one inch/year over the project site, is extremely high."[101] Dr. Myers goes on to explain that, "[s]ome researchers have set estimates of average recharge precipitation less than 8 in/y as equal to zero."[102] According to the information in the Groundwater Memo, Panoche Valley has varied rain fall throughout its area, with approximately "10 -12 inches on the west edge to as little as 5-6 inches on the north and east, with an average at the Panoche Valley water station equal to 9.69 in/y."[103] However, it is Dr. Myers' opinion that the impacts of the Project on groundwater supply have been obscured because the DSEIR assumes the entire aquifer receives one in/y of recharge, which is inaccurate.

B3-31

Fourth, the DSEIR's groundwater modeling is not based on substantial evidence. Indeed, the groundwater model cannot predict site-specific impacts without a site-specific estimate of outflow. Dr. Myers explains that, based on the Groundwater Memo's one in/y assumption, Geologica uses a recharge rate of 2690 acre feet per year ("af/y") water balance calculation. However, an "independent estimate of outflow" is required for use of the modeling that is relied on in the DSEIR. Despite the necessity of this study to ensure accurate modeling, the consultants performing the modeling failed to estimate outflow from the aquifer to accurately model conditions at the Project site.[104] Accordingly, the modeling assumptions, i.e., simulated baseline conditions, that are assumed for Project groundwater recharge are not based on substantial evidence, preventing the public

B3-32

[98] CEQA Guidelines, § 15125(c).
[99] Janny Choy and Geoff McGhee, *Groundwater: Ignore It and It Might Go Away* (last visited Jan. 31, 2014) *available at* http://waterinthewest.stanford.edu/groundwater/overview/index.html.
[100] Myers, p. 5.
[101] *Id.*
[102] *Id.*
[103] Myers, p. 6.
[104] *Id.*
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and decision makers from assessing the Project's potentially significant impacts on water supply.

B3-32 cont.

Finally, the baseline model developed for the DSEIR incorrectly relies on recharge rates for irrigated lands, rather than recharge rates for upland habitat. Panoche Valley is comprised of natural upland habitat; therefore, the use of irrigated habitat resulted in false modeling assumptions. According to Dr. Myers, the differences in these two types of habitat yield varied recharge rates due to evaportraspiration ("ET") from plants and grass, and from soil permeability.[105] Dr. Myers concluded, "the [DSEIR's] estimate of ET is grossly inaccurate."[106] Myers explains, "[m]ost small showers just wet the surface of the soil and maybe that top inch or so and evaporates...Shrubs easily intercept more than a couple tenths of an inch from small storms so that most precipitation evaporates."[107] Indeed, the findings regarding "precipitation infiltrat[ion in] an irrigated area is irrelevant for a natural unirrigated, grassland."[108] Accordingly, the DSEIR lacks substantial evidence to support its description of the existing baseline for groundwater resources.

B3-33

For these five reasons, and given the variability in groundwater levels at the Project site,[109] an updated DSEIR must be revised to include substantial evidence to support its description of the existing setting for groundwater resources.

V. THE COUNTY LACKS SUBSTANTIAL EVIDENCE TO SUPPORT ITS CONCLUSIONS IN THE DSEIR REGARDING THE PROJECT'S SIGNIFICANT IMPACTS, THE DSEIR FAILS TO INCORPORATE ALL FEASIBLE MITIGATION MEASURES NECESSARY TO REDUCE SUCH IMPACTS TO A LEVEL OF INSIGNIFICANCE

B3-34

CEQA has two basic purposes, neither of which the DEIR satisfies. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[110] CEQA requires that an agency analyze potentially significant environmental impacts in an EIR.[111] The EIR should

[105] *Id.*
[106] Myers, p. 7
[107] *Id.*
[108] Myers, p. 8.
[109] Myers, p. 3.
[110] CEQA Guidlines, § 15002, subd. (a)(1).
[111] *See* Pub. Resources Code § 21000; CEQA Guidelines § 15002.
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not rely on scientifically outdated information to assess the significance of impacts, and should result from "extensive research and information gathering," including consultation with state and federal agencies, local officials, and the interested public.[112] To be adequate, the EIR should evidence the lead agency's good faith effort at full disclosure.[113] Its purpose is to inform the public and responsible officials of the environmental consequences of their decisions before they are made. For this reason, the EIR 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.[114] Thus, the EIR protects not only the environment but also informed self-government."[115]

B3-34 cont.

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.[116] The EIR 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."[117] 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 CEQA section 21081.[118]

B3-35

In this case, the DSEIR fails to satisfy the basic purposes of CEQA. The DSEIR's conclusions regarding impacts to biological and hydrological resources, public health impacts and cumulative impacts are not supported by substantial evidence. In preparing the DSEIR, the County: (1) failed to provide sufficient information to inform the public and decision-makers about potential environmental impacts; (2) failed to accurately identify and adequately analyze all potentially significant environmental impacts; (3) failed to incorporate adequate measures to mitigate environmental impacts to a less than significant level; and (4)

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[112] *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm.* (2001) 91 Cal. App.4th 1344, 1367; *Schaeffer Land Trust v. San Jose City Council,* 215 Cal.App.3d 612, 620.
[113] CEQA Guidelines § 15151; *see also Laurel Heights I* (1998) 47 Cal.3d 376, 406.
[114] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[115] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (citations omitted).
[116] CEQA Guidelines § 15002(a)(2)-(3); *Berkeley Keep Jets Over the Bay Com.,* 91 Cal.App.4th at 1354.
[117] CEQA Guidelines § 15002, subd. (a)(2).
[118] CEQA Guidelines § 15092, subd. (b)(2)(A)-(B).
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deferred the formulation of mitigation measures. As a result, the DSEIR fails to inform decision makers and the public of the Project's potentially significant environmental effects and to reduce damage to the environment before they occur. An EIR may conclude that impacts are insignificant only after providing an adequate analysis of the magnitude of the impacts and the degree to which they will be mitigated. Thus, if the lead agency, here San Benito County, fails to investigate a potential impact, its finding of insignificance simply will not withstand legal scrutiny.[119] The County must address these shortcomings and recirculate a revised DSEIR for public review and comment.

B3-35 cont.

A. The DSEIR Lacks Substantial Evidence to Support its Conclusions Regarding the Project's Significant Impacts on Biological Resources

B3-36

i. *The DSEIR Lacks Substantial Evidence to Support its Claim that the PG&E Upgrades Have Less than Significant Impacts on Avian Mortality*

The DSEIR's conclusions regarding the PG&E upgrades are not supported by substantial evidence for two reasons. First, the DSEIR incorrectly claims that the microwave tower at Panoche Mountain will not result in a significant increase in avian mortality. Mr. Cashen explains, "data from 38 different tower studies ...concluded that towers in the United States and Canada kill over 6.8 million birds per year."[120] Furthermore, "[a]vian collisions increase exponentially with tower height."[121] "The new microwave tower proposed for Panoche Mountain would be 300 feet tall, and thus it would pose a substantially greater collision hazard to birds than the existing towers."[122] However, the DSEIR downplays the significance of this potential impact, stating, "[t]he new microwave tower ... would be similar to existing infrastructure already constructed."[123] The DSEIR further elaborates, "microwave towers may result in net increases of collisions compared with baseline conditions."[124] However, the DSEIR stops there. Substantial evidence shows that the DSEIR fails to identify impacts associated with the increase in microwave tower height.

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[119] Pub. Res. Code § 21081.6(b); CEQA Guidelines § 15126.4(a)(2).
[120] Cashen, p. 9.
[121] *Id.*
[122] Cashen, p. 9.
[123] DSEIR, p. C.6-106.
[124] *Id.*
2373-039cv

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Second, the DSEIR fails to propose sufficient mitigation to mitigate impacts associated with the microwave towers. According to the DSEIR, the implementation of the Avian Protection Plan and the Avian Power Line Interconnection Committee ("APLIC") guidelines is sufficient to reduce impacts associated with the microwave towers below a level of significance.[125] However, B3-37

> "[t]he County has no basis for this conclusion because neither measure (i.e., APLIC guidelines or PG&E's APP) is applicable to microwave towers. As a result, construction of new microwave towers for the Revised Project would have a potentially significant and unmitigated impact on birds."[126]

The DSEIR must propose and implement all feasible mitigation to reduce this potentially significant impact.

Third, the DSEIR fails to provide adequate mitigation to prevent avian collision with the transmission lines that are part of the PG&E upgrades. The DSEIR incorrectly claims, "the largest birds with a reasonable likelihood of coming in contact with the high voltage transmission lines in the vicinity of the route would be the golden eagle."[127] This information is false. As previously discussed in this comment letter, a condor was sighted during the golden eagle surveys preformed for the Project. Because condors are known to be in and around the area, the "Transmission Line Guidelines for Condors" must be used. According to Mr. Cashen, "[c]ollision and electrocution mortality from power lines is considered biologically significant to the California condor due to its small population size."[128] Currently, the DSEIR proposes the construction of transmission lines that only account for golden eagle use.[129] However, given the California condor's greater wingspan, the design guidelines must be updated to accommodate larger birds of prey. B3-38

[125] *Id.*
[126] Cahsen, p. 9.
[127] DSEIR, p. C.6-106.
[128] Cashen, pp. 17 – 18.
[129] Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006.* Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C and Sacramento, CA. pp. 16,56.
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For these three reasons, the DSEIR lacks substantial evidence to show that PG&E upgrade impacts related to avian mortality rates would be reduced to a level of insignificance with the incorporation of the proposed mitigation. Instead, substantial evidence shows that the DSEIR underestimates the significant impacts a 300-foot microwave structure would have on avian species and that the proposed mitigation measures either do not address impacts at all, or provide insufficient mitigation to reduce impacts on avian species frequenting the Project site. Accordingly, an updated DSEIR that identifies all Project impacts on avian species must be recirculated so that the public and decisionmakers are fully informed of the Project's adverse and unmitigated impacts on biological resources.

B3-38 cont.

ii. *The DSEIR Lacks Substantial Evidence to Support its Conclusion that Project Impacts on Golden Eagles Will Be Insignificant*

B3-39

The DSEIR's conclusions regarding Project impacts to golden eagles are inaccurate for three reasons. First, the DSEIR claims that "[t]he Project's risk to nesting and breeding Golden Eagles is low to none."[130] Mr. Cashen explains, "[t]his statement conflicts with the Applicant's survey data, published scientific literature, and risk assessment guidance issued by the USFWS."[131] According to guidance published by USFWS, risk assessment should evaluate two components, which are not considered in the DSEIR: (1) cumulative impacts, and (2) site-specific threats.[132] Accordingly, Mr. Cashen concludes that the DSEIR's , "limited level of analysis is inappropriate for golden eagles. Guidance issued by the USFWS indicates cumulative effects analysis should occur at the natal dispersal distance of the species (140 miles)."[133] Furthermore, the USFWS's site-specific risk assessment recommends assessing a Project's potential to result in take, based on:

a. Burning from concentrated light at solar arrays.

b. Transmission line, power line, meteorological tower, or guy line collision.

c. Electrocution potential.

[130] Eagle Conservation Plan, p. 19.
[131] Cashen, p. 11.
[132] U.S. Fish and Wildlife Service, Pacific Southwest Region. 2010 Sep. Region 8 Interim Guidelines for the Development of a Project-Specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities.
[133] Cashen, p. 9.
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d. Territory abandonment.

e. Nest and roost site disturbances.

f. Habitat loss and fragmentation.

g. Disturbance due to ongoing human presence at the facility.[134]

B3-39 cont.

According to Mr. Cahsen, "[t]he Revised Project poses all of the aforementioned threats except burning from concentrated light at solar arrays. Ultimately, it is inconceivable that the loss of over 1,888 acres of foraging habitat in relatively close proximity to approximately 30 nesting territories would result in low to no risk to those territories, as suggested in the ECP."

B3-40

Second, the DSEIR fails to adequately assess Project impacts associated with the elimination of foraging habitat. According to the DSEIR, 15 active golden eagle nests were detected within a 10 mile radius of the Project site during the 2010 surveys.[135] The most recent surveys from 2013 – 2014, "resulted in the documentation of 46 golden eagle nests and an estimated 30 golden eagle territories, with nine of them active."[136] Indeed, seven golden eagles were seen feeding on the carcass of an animal during one of the reconnaissance surveys.[137] Because the Project would eliminate foraging habitat for golden eagles, it has the potential to result in take of golden eagles currently using the site as foraging habitat as they may be unable to find enough food to feed their young once the Project site is eliminated as foraging ground.[138] The DSEIR recognizes that development of the Project may result in the loss of foraging habitat for golden eagles, but does not disclose the severity of this impact.[139] According to field biologist, Scott Cashen, "during the breeding season many eagles concentrate their foraging activities in 'core areas' that are several orders of magnitude smaller than the home range. Eagles will travel far from their nests to access those core foraging areas."[140] Without information regarding prey abundance on the Project site, its

[134] U.S. Fish and Wildlife Service, Pacific Southwest Region. 2010 Sep. Region 8 Interim Guidelines for the Development of a Project-Specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities.
[135] DSEIR, pp. C.6-37, 38.
[136] DSEIR, pp. C.6-37, 38.
[137] Draft Eagle Conservation Plan, p. 12 *available at* http://cosb.us/panoche-valley-solar-farm-project/#.VMkz8tLF_M.
[138] Cashen, p. 4.
[139] DSEIR, p. C.6-37.
[140] Cashen, p. 4

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importance as an "eagle use area" cannot be determined.[141] However, Mr. Cashen explains that the golden eagle "survey report clearly shows there is substantial golden eagle use of the Revised Project site."[142]

B3-40 cont.

Third, the DSEIR's statement that impacts to Golden Eagles will be mitigated below a level of significance due to the quality of the habitat on the conservation lands is an example of a bare conclusion not supported by data. Mr. Cashen clarifies, "A conclusion of this nature requires demonstrating the Revised Project would alleviate existing threats or increase carrying capacity, such that there is a net zero (or positive) benefit to eagles. "[143] According to the USFWS's Eagle Conservation Guidance,

B3-41

> [c]ompensatory mitigation can address any pre-existing mortality source affecting the species-specific eagle management unit impacted by the project... However, there needs to be a credible analysis that supports the conclusion that implementing the compensatory mitigation action will achieve the desired beneficial offset in mortality or carrying capacity. [144]

Mr. Cahsen explains that, "[s]imply putting a conservation easement on foraging habitat that already exists does not alleviate the loss of 1,888 acres of foraging habitat, fragmentation of the landscape, increased collision potential, and other potentially adverse effects of the Revised Project to eagles."[145] Furthermore, Cashen colludes that the Eagle Conservation Plan, "provides no value as a mitigation measure without triggers for adaptive management based on the survey results. It is already well established in the scientific literature that eagles avoid anthropogenic disturbance and developed landscapes, including solar facilities."[146] To properly mitigate Project impacts on golden eagles, Mr. Cashen recommends:

[141] Cashen, p. 5.
[142] Cashen, p. 5.
[143] Cashen, p. 18.
[144] U.S. Fish and Wildlife Service. 2013. Eagle Conservation Plan Guidance: Module 1-Land Based Wind Energy-Version 2. USFWS Division of Migratory Bird Management. April 2013. p. 21.
[145] Cashen, p. 18.
[146] Cashen, p. 19.
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a before-after/control-impact ("BACI") study.[147] The study should incorporate rigorous data collected across all seasons. Specifically, I recommend the installation of transmitters on a small subset of the 30 eagle pairs nesting closest to the Revised Project site. This would eliminate speculation about eagle mortality, reduced nesting success, or abandoned territories due to the Revised Project.[148]

B3-41 cont.

The DSEIR fails to include substantial evidence to support its conclusions (1) that the Project site is not an important eagle use area, (2) the extent and (3) severity of Project impacts to eagles and the adequacy of mitigation measures. Accordingly, the DSEIR must be updated to reflect the prevalence of eagle use of the Project site, the Project's potential to result in take of golden eagles and must include adequate mitigation measures for impacts to golden eagles.

iii. *The DSEIR Fails to Identify and Assess Project Impacts Related to Lake Effect*

B3-42

The DSEIR omits new information and analysis regarding avian mortality at solar sites. Indeed, "[a] substantial amount of new information regarding avian mortality at solar facilities has been released since the County issued the Final EIR for the Approved Project."[149] The DSEIR calls this new information speculative, and, therefore concludes that, "impacts are considered to be less than significant (Class III) and no additional mitigation is required."[150] However, the DSEIR's conclusion is inaccurate. Studies of solar PV project impacts on avian species have revealed a phenomenon commonly referred to as lake effect.[151] Lake effect refers to birds mistaking vast solar farms for water bodies, due to solar panel reflectivity, which mimics water. The birds' mistake usually leads to collision, and ultimately, avian mortality.[152] Because this phenomenon is associated with utility scale solar developments, the Project has the potential to result in avian mortality. Indeed, Mr. Cashen echoes the certainty of this impact, "[w]hereas the extent of the threat remains unknown, the presence of dead and injured birds at solar facilities

[147] Morrison ML, WM Block, MD Strickland, WL Kendall. 2001. Wildlife Study Design. Springer-Verlag, New York (NY).

[148] Cashen, p. 19.

[149] Cashen, p. 10.

[150] DSEIR, p. C.6-54.

[151] *See e.g.* John Upton and Climate Central, "Solar Farms Threaten Birds," *The Scientific American* (Aug. 27, 2014 *available at* http://www.scientificamerican.com/article/solar-farms-threaten-birds/.

[152] Cashen, p. 10.

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operating (or under construction) in California demonstrates the facilities present a collision hazard to birds. The potential for the Revised Project to impact birds is not speculative, as the County claims."[153] Substantial evidence shows that the Project, as a utility scale solar power plant, poses significant and unmitigated impacts related to avian mortality. CEQA requires that the DSEIR be updated to address and analyze this new information related to a new and previously unaddressed significant impact, and that the DSEIR include all feasible mitigation.

B3-42 cont.

iv. *The DSEIR's Conclusion that Project Impacts on Rare Plants Have Been Mitigated is Not Based on Substantial Evidence in the Record*

B3-43

There is no basis in the DSEIR to conclude that Project impacts to rare plants would be less than significant after the implementation of mitigation.[154] The DSEIR's conclusions and analysis are flawed for three reasons.

First, to ensure that adequate mitigation has been provided for plant species, the DSEIR must assess whether and what rare plant habitat exists on the Project site. However, the DSEIR acknowledges "special-status plants were unlikely to be identified during the survey because of the time of year."[155] Accordingly, the DSEIR requires pre-construction surveys to supplement the already-performed surveys. However, this is insufficient because "[t]he SEIR lacks an enforcement mechanism that ensures the surveys are properly conducted and reported prior to ground disturbance activities."[156]

Second, the DSEIR concludes that impacts to special status plants would be mitigated by the conservation lands. However, according to Mr. Cashen, the "SEIR lacks the basis for this conclusion because it does not provide any evidence that the species that would be impacted by the Revised Project (i.e., gypsum loving larkspur, recurved larkspur, and serpentine linanthus) occur on the proposed conservation lands."[157] Without this information it is impossible to claim that Project impacts have been reduced to a level of insignificance.

B3-44

[153] Cashen, p. 10.
[154] *See* DSEIR, p. C.6-28.
[155] DSEIR, p. C.6-102.
[156] Cashen, p. 13.
[157] Cashen, p. 13.
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Third, according to Mr. Cashen there is insufficient evidence in the DSEIR to justify its claim that a 50-foot buffer would adequately mitigate impacts to species on the Project site.[158] This is because San Joaquin wollythreads habitat is present on the Project site.[159] According to the USFWS, "habitat can be protected in blocks of at least 160 acres and buffer zones of 500 feet or more are protected beyond the occurrence margins of *Monolopia congdonii* [San Joaquin woollythreads] to reduce external influences and to allow for plant population expansion."[160] Accordingly, Cashen concludes that a 50-foot buffer would not be adequate to protect this rare plant.[161] B3-45

The DSEIR lacks substantial evidence to support its claim that impacts to rare plants would be reduced to a level of insignificance. The DSEIR must be updated to include information regarding the viability of the conservation lands to support special status plants on the Project site and must include all feasible mitigation to ensure that plants on the Project site are adequately protected as required by the USFWS.

v. *The Project Will Have Unidentified, Unmitigated Impacts on Vernal Pool Habitat and Vernal Pool Fairy Shrimp* B3-46

The DSEIR fails to evaluate indirect impacts from the Project on vernal pool habitat, and ultimately vernal pool fairy shrimp. CEQA requires that a DSEIR examine indirect impacts resulting from a Project.[162] The Project may pose indirect unmitigated impacts to vernal pool habitat and Vernal Pool Fairy Shrimp for two reasons.

First, grading and the addition of impervious surfaces associated with the Project may lead to the modification of the drainage regime at the Project site, which may compromise vernal pool habitat. According to hydrogeologist, Tom Myers, the Project has the potential to result in downstream impacts such as erosion and sedimentation.[163] Vernal Pool habitat is usually fed by the types of

[158] Cashen, p. 17.
[159] DSEIR, p. C.6-9.
[160] U.S. Fish and Wildlife Service. 2010. *Monolopia* (=*Lembertia*) *congdonii* (San Joaquin woolly-threads). 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. pp. 24 and 25.
[161] Cashen, p. 17.
[162] CEQA Guidelines § 15126.2.
[163] Myers, p. 14.
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streams that will be impacted by the Project.[164] Furthermore, "genetic evidence, indicate that *vernal pool fairy shrimp populations are defined by entire vernal pool complexes, rather than individual pools.*"[165] According to Mr. Cashen, modification of vernal pools and the addition of solar paneling to the Project site will prevent dispersal of fairy shrimp, as the movement of wildlife and flooding is essential to maintaining habitat connectivity.[166] By filling the drainages that connect the vernal pools on the Project site, and adding impervious surfaces, the Project compromises the viability of vernal pool fairy shrimp habitat.[167]

B3-46 cont.

Second, the mitigation measures proposed in the DSEIR will lead to habitat fragmentation, which is one of the single largest threats facing vernal pool fairy shrimp.[168] Biologist Scott Cashen explains that "[s]pecies experts have noted the importance of pool complexes versus isolated pools in supporting various species of large branchiopods."[169] Indeed, "there is evidence that protecting small patches of vernal pool habitat, as proposed in the SEIR, is not a successful conservation strategy for vernal pool fairy shrimp."[170] Accordingly, the DSEIR's proposed mitigation further fragments the vernal pool habitat on the Project site; therefore, the proposed mitigation will not address Project impacts to vernal pool habitat and vernal pool fairy shrimp, but rather, will exacerbate them.

B3-47

Substantial evidence shows that the Project may result in unidentified and unanalyzed indirect impacts on vernal pool habitat and vernal pool fairy shrimp, which will be exacerbated by the incorporation of proposed mitigation. A DSEIR that fully quantifies and proposes suitable mitigation measures for impacts to vernal pool fairy shrimp must be recirculated.

vi. *The Avian Conservation Strategy Does not Constitute Adequate Mitigation*

B3-48

The Avian Conservation Strategy ("ACS") fails to effectively mitigate Project impacts on avian species. According to Mr. Cashen this study is not, but needs to

[164] Environmental Protection Agency, *Water: Wetlands: Vernal Pools* (last visited Jan. 23, 2014) *available at* http://water.epa.gov/type/wetlands/vernal.cfm.
[165]
[166] Cashen, p. 14.
[167] *Ibid.* p. 4. [emphasis added].
[168] Cashen, pp. 14 – 15.
[169] Cashen, p. 15.
[170] Cashen, p. 14.
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be, long term and, the ACS fails to include any triggers for mitigation by deferring the formulation of mortality thresholds. [171] The DSEIR states,

> If the County determines that either (1) bird mortality caused by solar facilities is substantial and is having potentially adverse impacts on special-status bird populations, or that (2) the attraction of polarized light from solar panels is causing reproductive failure of aquatic insect populations at high enough levels to adversely affect insectivorous special-status birds, the Applicant shall be required to implement some or all of the mitigation measures below.[172]

This mitigation measure is insufficient to support the DSEIR's conclusion that Project impacts related to avian mortality would be reduced to a level of insignificance. Mr. Cashen explains that the measure is insufficient because the DSEIR fails to discuss what the County considers to be excessive mortality.[173] The DSEIR's lack of information, and inconsistent description of the monitoring period,[174] "precludes the public from understanding the amount of mortality that could occur before any corrective actions are attempted."[175]

B3-48 cont.

Furthermore, the ACS fails to satisfy the definition of an adaptive management plan. "The U.S. Department of the Interior defines adaptive management as 'a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood.'" Cashen points out that adaptive management is not: 1) a trial-and-error approach nor 2) an attempt to fix a problem after implementation of a Project.[176] However, according to Mr. Cashen, the ACS does exactly this, by:

> 1) proposing a trial-and-error approach; (2) allowing little flexibility in modifying land-use activities in response to monitoring results; (3) assuming the problem (avian mortality) could be fixed after Project implementation; and (4) failing to establish clear goals with respect to avian mortality.

B3-49

[171] Cashen, p. 21.
[172] DSEIR, pp. C.6-87-88.
[173] Cashen, p. 21.
[174] Cashen, pp. 19-20.
[175] Cashen, p. 21.
[176] Cashen, p. 22.
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Substantial evidence shows that the DSEIR's mitigation measures do not constitute adaptive management, but rather, defer thresholds of mortality, rely on inadequate surveys, and fail to establish clear goals. Accordingly, the mitigation proposed in the DSEIR must be updated to include adequate mitigation measures that will address Project impacts related to avian mortality.

B3-49 cont.

B. The DSEIR Lacks Substantial Evidence to Support its Conclusion that Project Impacts on Groundwater Would Be Reduced Below a Level of Significance

B3-50

The DSEIR provides a faulty analysis of the Project's impacts on groundwater and lacks substantial evidence to support its conclusion that the Project's impacts on groundwater levels will be reduced to a level of insignificance with the implementation of mitigation measures. According to the DSEIR, the Project's truncated construction period will result in higher ground water pumping during construction, which has the potential to substantially deplete groundwater in the Project area. Indeed, the amount of groundwater required for the Project will put the aquifer from which water is withdrawn into a state of overdraft for several years.[177] However, the DSEIR fails to set forth the actual rate of drawdown, underestimates drawdown based on the model used, reaches a conclusion that is not supported by substantial evidence and fails to adequately mitigate significant impacts. The DSEIR's analysis and conclusions are inaccurate and flawed for five reasons.

First, the DSEIR's conclusions are based on undisclosed assumptions, preventing the public and decision makers from reviewing the analysis used to assess Project impacts.[178] The groundwater model used in the DSEIR is based on new information made available by the United States Geological Survey in their new MODFLOW model.[179] However, MODFLOW is based on the size of modeling cells used and the location of the constant head boundary ("CHB"), which is a natural discharge point of an aquifer.[180] The DSEIR uses MODFLOW, but fails to describe the size of the cells and the location of the CHB. According to Dr. Myers, "the DSEIR utilizes an analysis that the public cannot review because it is inadequately described."[181]

[177] Geologica(b), p. 10.
[178] Myers, p. 9.
[179] *Id.*
[180] *Id.*
[181] *Id.*
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Second, Dr. Myers explains that the use of MODFLOW is inappropriate, and is one of several reasons that, "[t]he method used to estimate drawdown with the model will ***underestimate drawdown*** near the pumping well."[182] Dr. Myers explains,

> The Well package for MODFLOW assumes that pumped water is drawn from the entire model cell, so that pumping drawdown is spread over the model cell. A cell is much larger than the well area, so the predicted drawdown is always much less than actually occurs at the well. Usually, a model is developed with model cells that become smaller, or telescope down in size, around a well so that the simulated drawdown is more realistic.[183]

However, the DSEIR's analysis failed to simulate withdrawal from a specific well, or reduce the cell area to simulate the use of a single well. According to the Groundwater Memo for the Project, the Applicant will likely use well zero for the Project.[184] The DSEIR names several wells that may be used.[185] Regardless of which of these wells is ultimately selected for groundwater withdrawals, a model as described by Dr. Myers is required instead of MODFLOW, which uses the entire cell volume for its analysis rather than focusing on a single well. Accordingly, a realistic estimate of aquifer drawdown was not calculated and, in Dr. Myer's opinion, this caused impacts associated with the Project to be "grossly underestimated."[186] Because the DSEIR fails to adequately discuss Project impacts to groundwater, its conclusion that Project impacts are less than significant with the incorporation of mitigation is not supported by substantial evidence.

B3-51

Third, the DSEIR underestimates drawdown because it fails to adequately assess impacts that would result from withdrawing water from an aquifer with multiple layers. Dr. Myers explains that the aquifer from which the Project will draw its water supply has multiple water-bearing zones, with varying layers of horizontal water flow.[187] This varied horizontal water flow, referred to as

B3-52

[182] *Id.* (*emphasis added*).
[183] Myers, p. 10.
[184] Geologica(b), p. 7
[185] *See* DSEIR, p. C.15-5.
[186] Myers, p. 10.
[187] Dr. Myers states that the aquifer has varied transmissitivity. Transmissivity is defined as the rate which groundwater flows horizontally through an aquifer.
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transmissivity, was not simulated in the DSEIR's appendices. According to Dr. Myers, the DSEIR's appendices

> did not specify the thickness [of the aquifer layers] but simulated the entire domain with a single transmissivity. By using just one layer for the model, the simulation assumes that the entire aquifer thickness provides water to the well when the reality is that only aquifer layers screened by the well provides water [*sic*]. This causes the model to underestimate the drawdown at the well.[188]

By using a theoretical model that fails to accurately reflect conditions at the Project site, the DSEIR underestimates the Project's impacts. Indeed, Dr. Myers concludes, "[t]he DSEIR simply does not adequately describe the hydrogeology of the wells to be pumped for the project or the wells that could be affected by the project."[189] Because the DSEIR bases its conclusion that Project impacts will be less than significant on a theoretical aquifer that fails to reflect existing conditions, its conclusions are not based on substantial evidence. Accordingly, the DSEIR must be updated to address impacts that will result from pumping the aquifer being used for the Project.

B3-52 cont.

Fourth, the DSEIR completely fails to analyze significant cumulative impacts from pumping groundwater in combination with other proposed and existing projects. Failure to consider the pumping of other wells is a failure to consider the overall impacts of this project on the site.[190] "Current groundwater pumping estimates are that about 180 af/y is pumped primarily for domestic, stockwatering, and a very small amount of irrigation."[191] However, Dr. Myers has concluded that the reports prepared for the Project, "failed to consider pumping other wells in the area, which would also discharge from the domain [i.e., aquifer]."[192] Indeed, "the [DSEIR's] study provides no consideration of cumulative effects with other wells pumping in the area."[193] However, once the Project begins to withdraw water for construction, "about 384 af will be pumped so the cumulative effect on the valley from pumping will be more than doubled for 18 months."[194] CEQA requires that an

B3-53

[188] Myers, p. 11.
[189] *Id.*
[190] Myers, p. 16.
[191] Myers, p. 4.
[192] Myers, p. 10.
[193] *Id.*
[194] *Id.*
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EIR disclose cumulative impacts on the environment. However, as explained by Dr. Myers, the DSEIR fails in this regard. Given current drought conditions and resulting increases in groundwater withdrawals, cumulative impacts must be considered to properly assess Project impacts on the environment. B3-53 cont.

Fifth, the DSEIR fails to account for reduced recharge to the wells that will result from the addition of impervious surface area and from grading the Project site.[195] According to Dr. Myers, "[m]ore precipitation will runoff from [the solar panel] areas than predicted by the modeling reviewed above. The hydrology studies have not estimated the effects of this additional impervious area on recharge."[196] The addition of impervious area will prevent the vernal pools on the Project site from recharging the underlying aquifer.[197] However, "the DSEIR does not disclose this impact or attempt to mitigate it."[198] Dr. Myers explains that, "[t]he panels will cover up to 413 acres. If all of that newly-impervious land prevents percolation, up to 34 acre-ft of recharge will be lost to the groundwater reservoir. The DSEIR fails to discuss this lost recharge."199 The DSEIR fails to account for reduced recharge to the groundwater aquifer. Accordingly, the DSEIR's conclusions are not based on substantial evidence in the record and the County must recirculate a DSEIR that discloses and mitigates the indirect impacts to groundwater levels associated with grading the vernal pools and increasing the impervious surface area on the Project site. B3-54

C. The DSEIR Fails to Mitigate Impacts on Groundwater to a Level of Insignificance

B3-55

The DSEIR fails to require feasible mitigation to reduce Project impacts on groundwater resources below a level of significance.[200] The DSEIR requires the Applicant to submit a Groundwater Monitoring and Reporting Plan.[201] However, the DSEIR's proposed mitigation is flawed for two reasons.

First, the description of the monitoring plan provides the Applicant with essentially no guidance.[202] According to Dr. Myers, the groundwater monitoring

[195] Myers, p. 11.
[196] *Id.*
[197] Myers, p. 12
[198] *Id.*
[199] Myers, p. 15.
[200] Myers, p. 17.
[201] DSEIR, p. C.15-8.
[202] Myers, p. 17.
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plan is insufficient because, "[a] groundwater monitoring plan should be based on the conceptual model of flow at the site and monitoring wells should be placed in locations from which drawdown will be detected before it reaches the points of concern, in this project the near-off-site wells used by others."[203] By omitting information specific to the wells being used for monitoring, the DSEIR simply provides no guidance, and falls far short of the type of mitigation necessary to ensure that water withdrawals for the Project do not exceed five feet – the threshold of significance set by the DSEIR.

B3-55 cont.

Second, the plan's goal to prevent more than a five foot draw down will not be successfully achieved using the DSEIR's plan.[204] According to Dr. Myers, in order to detect overdraft conditions associated with the pumping, "monitoring wells should be established on a pathway between the project pumping and the private well. The threshold for detecting impacts should be specified for the monitoring well to prevent the five ft of drawdown at the private well."[205] However, the Groundwater Plan contains no such guidance, and generally fails to set forth any guidance that would prevent a drawdown of over five feet, as required by the DSEIR.

B3-56

Instead of the monitoring established by the Groundwater Plan, the County should require the incorporation of feasible mitigation that includes performance standards, as required by CEQA.[206] Dr. Myers recommends that the "groundwater modeling reports [] be rewritten to adequately describe what they actually do. Calibration in steady state and with transient conditions could be accomplished and presented in the report."[207] In Dr. Myers' opinion, in order to remedy the Groundwater Mitigation Plan's deficiencies, "[the] monitoring plan requires the project proponent to locate all wells within a potentially impacted zone, defined as predicted drawdown exceeding five ft, for monitoring []; the monitoring plan [should] also require[] the project proponent to monitor three wells in the zone with less than one foot of predicted drawdown to judge the accuracy of the predictive model []."[208]

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[203] *Id.*
[204] *Id.*
[205] Myers, p. 18.
[206] *Endangered Habitats League v. County of Orange* (4th Dist. 2005), 131 Cal.App.4th 777, 793-94.
[207] Myers, p. 19.
[208] Myers, p. 20 (*internal citations omitted*).
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Substantial evidence shows that the Groundwater Monitoring Plan fails to ensure that no more than five feet of drawdown will result from Project pumping. To ensure compliance with CEQA's requirements, the County must revise the the DSEIR to include feasible mitigation with performance standards that will ensure withdrawals of groundwater will remain insignificant, such as the methods recommended by Dr. Myers. B3-56 cont.

D. The DSEIR Lacks Substantial Evidence to Support its Conclusions That the Project's Impacts on Waters of the State and Jurisdictional Waters on the Project Site Are Less Than Significant B3-57

i. The DSEIR's Analysis of Project Impacts on Watercourses is Flawed

The DSEIR's analysis and discussion of impacts on watercourses on the Project site is inadequate for four reasons. First, the DSEIR fails to disclose the extent of Project impacts on drainages at the Project site.[209] According to the DSEIR, the perimeter road, which will be constructed for site access, will cross over several drainages under the jurisdiction of the USACE and ephemeral waters regulated by CDFW. However, as Dr. Myers points out,

> [t]he DSEIR does not provide the linear stream footage or area that each of these crossings would impact. The DSEIR also does not provide design drawings or even photographs of the site so that a reviewer can assess whether there are impacts. The failure to provide details on the crossings is a failure to disclose adequately the effects of the project.[210]

Second, the DSEIR fails to discuss the flooding and erosion that could result from grading the vernal pools, drainage features and watercourses on the Project site. The DSEIR explains the importance of these features, and their role at the Project site: "[e]phemeral Drainages play an important role in conveying surface flows during the rainfall season to other habitats located down slope that support special-status plants and animals."[211] Dr. Myers echoes the importance of vernal B3-58

[209] Myers, p. 13.
[210] *Id.*
[211] DSEIR, C.6-26.
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pools and ephemeral drainages, noting they also recharge the aquifer from which the Project will withdraw water.[212] However, the DSEIR fails to address impacts to watercourses from drainage and erosion that will result if culverts and armoring are added to the ephemeral streams.[213] If these ephemeral waters are altered, the flow, which will be channelized, may exceed the culvert openings added by the Project design.[214] If the flow exceeds the capacity of the now-armored channel, "water will pond and sediment will settle to the stream bottom."[215]

B3-58 cont.

Third, the DSEIR fails to consider the cumulative impacts that the construction of road crossings constructed at the Project site may have on drainage and erosion.[216] Dr. Myers concludes that the cumulative impacts of the 27 planned stream crossings, "could have the largest effect on the east side of the project area where many small drainages emerge from mountains and begin to flow across the alluvial fans."[217] The culverts proposed to stabilize the channels may have the unintended effect of changing the drainage patters, leading to high velocity flows that result in high sedimentation and erosion rates. According to Dr. Myers, "[i]f one or more culverts causes the channels to shift, it is possible for channels to combine during floods and create larger flows and more erosion. The DSEIR has failed to consider these potential cumulative impacts of stream crossing construction."[218]

B3-59

Finally, the County's modification of the mitigation measures approved for the 2010 Final EIR will result in additional, unanalyzed impacts on drainage. Bio-8 required that the Project avoid any and all waters, washes and drains at the Project site.[219] However, the Applicant has eliminated this mitigation measure in the most recent version of the Project.[220] Furthermore, the DSEIR concludes that the removal of this mitigation measure will not result in additional impacts.[221] This conclusion is completely misleading and inaccurate.

B3-60

[212] Myers, p. 11.
[213] *See id.*
[214] Myers, p. 14.
[215] *Id.*
[216] Myers, p. 16.
[217] *Id.*
[218] *Id.*
[219] DSEIR, p. B.21.
[220] *Id.*
[221] DSEIR, p. C.6-56.
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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

The DSEIR lacks substantial evidence to support is conclusion that Project construction and operation will not result in significant impacts to watercourses. Instead, substantial evidence shows that the construction of culverts in the drainages at the Project site will result in the constriction of water flow, leading to downstream impacts, such as flooding, erosion, sedimentation and gullying.[222] The DSEIR must be updated to address and mitigate these unidentified and unmitigated significant impacts.

B3-60 cont.

ii. *The DSEIR Fails to Identify and Incorporate All Feasible Mitigation for Impacts to Drainages at the Project site*

B3-61

According to the DSEIR, the Project's compliance with laws and regulations are sufficient to mitigate Project impacts on drainage to a level of insignificance.[223] However, compliance with a regulation is not an indication of the sufficiency of mitigation measures where there is substantial evidence that the project may result in significant impacts.[224] Indeed, "[i]f there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project."[225] However, according to the DSEIR, complying with the requirements of a streambed alteration agreement from CDFW and a 404 Permit from USACE, neither of which has been prepared to date, is sufficient to ensure that impacts on ephemeral waters will be reduced below a level of significance. However, as previously discussed in this letter there is substantial evidence that the Project's stream-crossings will have significant impacts both up-and down-stream of the proposed stream alterations.[226] Accordingly, the design of the stream crossings has the potential to significantly impact drainage patterns and result in erosion.

B3-62

Furthermore, the Project design does not comply with the requirements of CWA section 404. Section 404 permits require that the Applicant demonstrate the design is the Least Environmentally Damaging Practicable Alternative ("LEDPA").[227] However, both Dr. Myers and the CDFW believe that there are less damaging alternatives or other design alternatives which could be implemented to

[222] Myers, p. 14.
[223] DSEIR, C.6-108.
[224] *Communities for a Better Env't v. California Res. Agency* (2002) 126 Cal.Rptr.2d 441, 453.
[225] CEQA Guidelines § 15064.4.
[226] Myers, p. 14.
[227] 33 U.S.C. § 1344(b)(1) (2012).
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

reduce overall Project impacts on drainage and erosion.[228] Dr. Myers recommends that the "bridges that span the crossings on the west [of the Project site] have abutments above the top of the terraces, [so] they would impinge very little on most flood events that pass the bridges thereby having little effect."[229] CDFW issued several letters recommending that the Project use the already-constructed Little Panoche Road to service the Project, thereby preventing any additional construction or stream-crossings.[230] By omitting any LEPDA analysis or evaluating other less damaging alternatives to the proposed culverts, the Applicant has failed to address impacts per the requirements of the CWA. Based on the recommendations of both Dr. Myers and the CDFW, the stream crossing design set forth in the DSEIR is not the LEDPA. Indeed, substantial evidence shows that the Applicant's proposed watercourse modifications are environmentally degrading, and that it is practicable to use other alternatives, which are more protective of the watercourses on the Project site. Accordingly, a DSEIR containing the LEDPA analysis and design must be recirculated so the public and decisionmakers can fully understand the impacts that will result from the Project.

B3-62 cont.

E. The DSEIR Completely Fails to Identify the Project's Significant Impacts on Water Quality

B3-63

The DSEIR completely fails to "analyze the potential for construction activity to degrade water quality."[231] According to the DSEIR, construction activity and excavation have the potential to degrade water quality.[232] However, no analysis as to how this conclusion was reached is provided. The DSEIR only states, "[c]ompliance with existing regulations, including implementation of a Storm Water Pollution Prevention Plan ("SWPPP"), and implementation of BPMs...would ensure that potential impacts remain less than significant."[233] However, this conclusion is not backed by substantial evidence. In addition, Dr. Myers states, "[t]he project will have significant cut and fill, especially where the perimeter roads cross washes,

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[228] Myers, p. 14; letter from Jeffrey R. Single, Regional Manager California Department of Fish and Wildlife, to Chief O'Connor, Chief Hollister Fire Department. Re: Fire Code Requirements and Access to the Proposed Panoche Valley Solar Farm (September 22, 2014). **Attachment E.**
[229] Myers, p. 14.
[230] Letter from Jeffrey R. Single, Regional Manager California Department of Fish and Wildlife, to Chief O'Connor, Chief Hollister Fire Department. Re: Fire Code Requirements and Access to the Proposed Panoche Valley Solar Farm (September 22, 2014).
[231] Myers, p. 15.
[232] DSEIR, p. C.15-4.
[233] DSEIR, p. C.15-7.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

whether they are jurisdictional or not."[234] The disturbance in the 27 water crossings[235] could pick up and transport sediment, which will impact down stream water quality.[236]

> The DSEIR fails to estimate how much degradation could occur, to discuss even qualitatively how it could occur, or prescribe measures to avoid degradation to downstream water quality. By failing to consider these issues, the DSEIR fails to adequately disclose the potential impacts of the construction of the project.[237]

Substantial evidence shows that the Project, as proposed, has the potential to substantially impair water quality in the area. CEQA requires that the DSEIR be recirculated with more information, which would allow the public and decision makers to determine the extent of impacts on water quality. Furthermore, feasible mitigation, made enforceable through terms and conditions that address impacts to water quality must be incorporated.

B3-63 cont.

F. The DSEIR Fails to Incorporate all Feasible Mitigation for Public Health Impacts Associated with Valley Fever

B3-64

Since publication of the 2010 Final EIR, new information regarding the severity of public health impacts related to Valley Fever has become available. [238] Indeed, since the certification of the Final EIR, Valley Fever contraction has soared, with several instances of outbreaks associated with the construction of solar Projects in endemic areas.

> Valley Fever, also called desert fever, San Joaquin Valley fever, desert rheumatism, or coccidioidomycosis (short cocci), is an infectious disease caused by inhaling the spores of Coccidioides immitis, a soil-dwelling fungus. Spores, or arthroconidia, are released into the air when infected soils are disturbed, e.g., by construction activities, agricultural operations, dust storms, or during earthquakes. The disease is endemic (native and common) in the semiarid regions of the southwestern United States.[239]

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[234] Myers, p. 15.
[235] *See* Figure C.6-7.
[236] Myers, p. 15.
[237] *Id.*
[238] DSEIR, p. C.9-1.
[239] Pless, p. 6.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

The DSEIR does suggest some mitigation; however, CEQA requires that all feasible mitigation required to reduce the impacts of the Project to a less than significant levelbe implemented. B3-64 cont.

> According to Dr. Pless, the Applicant's proposed measures are
>
> a step in the right direction, [but] are not as comprehensive as the recommendations to limit exposure to Valley Fever developed by the County of San Luis Obispo's Public Health Department in conjunction with the California Department of Public Health in response to an outbreak of Valley Fever in construction workers at a construction site for a solar facility.[240]

Furthermore, the "[t]he U.S. Geological Survey ("USGS") has developed recommendations to protect geological field workers in endemic areas. An occupational study of Valley Fever in California workers also developed recommendations to protect those working and living in endemic areas."[241] Because the measures recommended by Dr. Pless, USGS, and the County of San Luis Obispo are required to mitigate impacts to less than significant and are feasible to implement,[242] the DSEIR must be revised to include these protections in an enhanced dust control plan.

G. The DSEIR Lacks Substantial Evidence to Support its Conclusion that Construction Air Quality Impacts have Been Mitigated to a Level of Insignificance and Fails to Incorporate All Feasible Mitigation for Construction Impacts on Air Quality

B3-65

The DSEIR's conclusions regarding air quality are not supported by substantial evidence in the record. According to air quality expert, Dr. Petra Pless, there are numerous problems with the DSEIR's analysis and the mitigation measures used to model Project impacts were not incorporated into the DSEIR. According to Dr. Pless, the problems with the DSEIR's conclusions and analysis are three-fold.

[240] Pless, pp. 6 – 7.
[241] Pless, pp. 9 – 10.
[242] *Id.*
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

First, the Applicant was required, but failed, to consult with the MBUAPCD regarding construction equipment required for Project development. The DSEIR inaccurately portrays the MBUAPCD guidelines applicable to the Project by omitting the last sentence of the guidelines related to regulation of construction equipment. The DSEIR states, "construction projects using typical construction equipment that temporarily emit ozone precursors are accommodated in the emissions inventory for State and Federally required air management plans and would not have a significant impact on ozone concentrations."[243] Dr. Pless points out that "[t]he DSEIR omits one crucial sentence from MBUAPCD's guidance: 'The District should be consulted regarding emissions from non-typical equipment, e.g., grinders, and portable equipment.'"[244] The MBUAPCD defines typical equipment as "dump trucks, scrappers [*sic*], bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone."[245] However, the Project requires construction equipment that falls outside this definition, triggering the requirement for consultation. According to Dr. Pless,

> construction of the Revised Solar Project requires a number of non-typical equipment, including multiple pile drivers and generators, which have very high emissions compared to 'typical' construction equipment, one or more truck-mounted cranes, and several welders which are portable equipment; PG&E Upgrades require one or more crawler cranes, crawler drill rigs, and jet-fuel powered helicopters.[246]

Accordingly, further information is required regarding consultation with MBUAPCD.

B3-65 cont.

Second, the DSEIR incorrectly claims that emissions associated with PG&E upgrades "would not occur at significant levels due to the short construction period, the limited extent of equipment use, and the small footprint of the proposed upgrades."[247] However, the duration of construction does not alleviate the requirement that these impacts be assessed and analyzed. Accordingly, more information is needed regarding hours of use per day, horsepower, load factors, etc. that would support its claim that impacts associated with the upgrades are

B3-66

[243] DSEIR, p. C.4-4.
[244] Pless, p. 3 *quoting* MBUAPCD, CEQA Air Quality Guidelines, p.5-3 (2008).
[245] *Id.*
[246] Pless, p. 3.
[247] DSEIR, p. C.4-12.
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

insignificant.[248] Without this information, construction emissions associated with PG&E upgrades cannot be calculated. The DSEIR, by omitting this information and any analysis, fails to provide substantial evidence to support its conclusions. A revised DSEIR that supplies this information and sets forth the analysis used to reach the DSEIR's conclusions must be circulated.

B3-66 cont.

Third, the DSEIR fails to incorporate the modeling assumptions used to determine the maximum emissions from construction. According to the DSEIR, the Project's PM10 emissions will not exceed MBUAPCD's threshold of significance.[249] According to Dr. Pless,

B3-67

> [t]he DSEIR's modeling analysis determined that PM10 emissions from a maximum area disturbed of 50 acres per day combined with 35 haul truck trips importing 1,200 tons fill soil per day would not exceed the MBUAPCD's CEQA threshold of significance for PM10 assuming the site is watered three times per day and construction equipment is Tier 2 certified.[250]

Although the DSEIR incorporates the watering and maximum disturbance requirements, "the number of haul trucks per day (35) and the quantity of soil imported (1200 tons/day) are not reflected in the DSEIR's mitigation measures."[251] Because the DSEIR's significance determination rests on the incorporation of these assumptions, they must be included as enforceable mitigation. By failing to include these assumptions, the DSEIR's conclusion regarding Project impacts on air quality is not based on substantial evidence in the record.

H. The DSEIR Defers The Formulation of Mitigation Measures in Violation of CEQA

B3-68

The Habitat Mitigation Plan in the DSEIR defers the formulation and adoption of specific enforceable mitigation measures to an uncertain future date. CEQA prohibits a lead agency from deferring the formulation of mitigation measures to some future time.[252] The DSEIR's approach to Habitat Mitigation Plan violates CEQA for two reasons.

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[248] *See* Pless, p. 4.
[249] DSEIR, pp. C.4-4 -5.
[250] Pless, p. 6.
[251] *Id.*
[252] CEQA Guidelines, § 15126.4(a)(1)(B).
2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

First, the Habitat Mitigation Plan provides a vague outline of tentative plans for the deferred formulation of mitigation measures. For instance, the plan requires a "[d]iscussion of measures to be undertaken to enhance…the on-site preserved habitat and off-site mitigation lands for listed and special-status species."[253] "Numerous cases illustrate that reliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decision-making; and consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment."[254] Indeed, in *Communities for a Better Environment v. City of Richmond*, the Court determined that the EIR "merely propose[d] a generalized goal … and then set[] out a handful of cursorily described mitigation measures for future consideration that might serve to mitigate … emissions resulting from the Project."[255] Similarly, here, the DSEIR sets forth cursorily described measures, none of which include performance goals or criteria. Indeed, biologist Scott Cashen points out that success of the plan cannot be ensured without the identification of key components and success criteria.

B3-68 cont.

Second, the approach taken in the DSEIR stultifies public participation, as the lack of proposed concrete measures prevents the public and decision makers from evaluating the mitigation measures for their effectiveness. "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 also involves other interested agencies and the public."[256] Indeed, "[a] study conducted after approval of a project will inevitably have a diminished influence on decision making. Even if the study is subjected to administrative approval, it is analogous to the sort of post hoc rationalization of agency action that has been repeatedly condemned in decisions constructing CEQA."[257]

B3-69

The DSEIR proposes only a "generalized goal" of habitat and species monitoring, and then defers discussion, description and development of monitoring and preservation measures. This deferred mitigation effectively omits the public

[253] DSEIR, p. C.6-76.
[254] *Citizens for a Better Env't v. City of Richmond* (2010) 184 CalApp.4th 70, 93.
[255] *Id.*
[256] *Id.*
[257] *Sundstrom,* 202 Cal.App.3d at 307.
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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

from the decision making process and violates CEQA. The County must remedy this inadequacy in an updated and recirculated DSEIR.

B3-69 cont.

VI. CONCLUSION

B3-70

The Project presents significant environmental issues that must be addressed prior to approval of the Project. The DSEIR's project description is improperly truncated. The DSEIR fails to adequately establish the existing setting against which to measure Project impacts on biological, groundwater and hydrological resources. The DSEIR also fails to include an adequate analysis of and mitigation measures for the Project's potentially significant impacts. The County failed to include a reasonable discussion of alternatives and improperly deferred the formulation of mitigation measures to post-approval studies for impacts associated with biological resource impacts. Due to these significant deficiencies the DSEIR violates the requirements of CEQA. The County must prepare a revised DSEIR that addresses these inadequacies and recirculate the revised DSEIR for public review.

Sincerely,

Meghan A. Quinn

MAQ:clv

Attachments

2373-039cv

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

ATTACHMENT A

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Scott Cashen, M.S.—Independent Biological Resources Consultant

February 6, 2015

Ms. Meghan A. Quinn
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: Comments on the Supplemental Environmental Impact Report Prepared for the Solar Development Project

Dear Ms. Quinn:

B3-A1

This letter contains my comments on the Supplemental Environmental Impact Report ("SEIR") prepared for the Panoche Valley Solar Project. In 2010, the County of San Benito ("County") certified the Final Environmental Impact Report ("Final EIR") for a 399-megawatt project described as Alternative A Revised in the 2010 Final EIR (referred to as the "Approved Project"). The SEIR assesses Panoche Valley Solar, LLC's ("Applicant" or "PVS") proposed changes to the Approved Project. The currently proposed project is referred to as the "Revised Project" (or "Project").

I am an environmental biologist with 21 years of professional experience in wildlife ecology and natural resource management. To date, I have served as a biological resources expert for over 100 projects, the majority of which have been renewable energy facilities in California. My experience and scope of work in this regard has included assisting various clients with evaluations of biological resource issues, reviewing environmental compliance documents prepared pursuant to the California Environmental Quality Act ("CEQA") and the National Environmental Policy Act ("NEPA"), submitting written comments in response to CEQA and NEPA documents, and testifying as an expert witness before the California Energy Commission and California Public Utilities Commission. My educational background includes a B.S. in Resource Management from the University of California at Berkeley, and a M.S. in Wildlife and Fisheries Science from the Pennsylvania State University. A true and correct copy of my curriculum vitae is attached hereto.

I have gained particular knowledge of the biological resource issues associated with the Project through my work on numerous other projects in the region. My comments are based on my review of the environmental documents prepared for the Revised Project, a review of scientific literature pertaining to biological resources known to occur in the Revised Project area, consultation with other biological resource experts, and the knowledge and experience I have acquired during more than 21 years of working in the field of natural resources management.

3264 Hudson Avenue, Walnut Creek, CA 94597 1

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A2

EXISTING CONDITIONS

Special-Status Plants

Prior Survey Results Are Outdated

Focused botanical surveys were conducted for the Project during the fall of 2009 and the spring of 2010. The results of those surveys are now outdated. The California Department of Fish and Wildlife ("CDFW") survey protocol states:

> "Additional surveys may be necessary for the following reasons: Surveys are not current. Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment."[1]

Similarly, the U.S. Fish and Wildlife Service ("USFWS") survey protocol for federally listed plants states:

> "Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional survey."[2]

Additional special-status plant species may have colonized the Revised Project site since the surveys were completed five years ago. As a result, updated surveys are required to accurately disclose, analyze, and mitigate potentially significant impacts to special-status plant species.

The SEIR acknowledges numerous special-status plant species have the potential to occur in the Revised Project area.[3] However, for almost all of these species, it concludes suitable habitat is "unlikely to occur within disturbance limits."[4] The SEIR fails to justify this conclusion. The issue is confounded because the appendix (i.e., "Appendix A") referenced as the source of information for special-status plant species with the potential to occur "due to habitat" does not contain any plant species (i.e., wildlife only).[5] Because the referenced information is missing, the conclusions presented in the SEIR cannot be substantiated or validated.

As the SEIR and Applicant's survey report acknowledge, surveys for the Revised Project site were not conducted when most special-status species would have been detectable or

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[1] CDFG. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. Available at: <http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Plants>.

[2] USFWS. 2000. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. 2 pp.

[3] SEIR, Table C.6-1.

[4] *Ibid.*

[5] Energy Renewal Partners, LLC. 2014 Oct. Transmission Line Natural Resources Assessment Report. p. 26.

2

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A2 cont

identifiable.[6] However, there is evidence that at least some special-status plant species have a higher potential of occurring in the Revised Project area than what is suggested in the SEIR. For example, the SEIR indicates microhabitat conditions ideal for gray bushmallow (*Malacothamnus aboriginum*) are unlikely to be present within the disturbance areas.[7] However, the Consortium of California Herbaria database contains numerous records of gray bushmallow occurring along Panoche Road in close proximity to the Revised Project area.[8] The SEIR provides a similar unjustified conclusion regarding the potential for Hall's tarplant (*Deinandra halliana*), even though there are records of the species occurring near the Revised Project area, and an unidentified *Deinandra* species (potentially *D. halliana*) was detected in "Study Area 4."[9]

The issues described above highlight the need for data from appropriately-timed botanical surveys to fully assess existing conditions, analyze impacts, and formulate effective mitigation. Deferring the surveys until after completion of the CEQA review process prevents full disclosure of Project impacts. This precludes the public, resource agencies, and scientific community from being able to submit informed comments pertaining to Project impacts, and from having those comments vetted during the environmental review process.

B3-A3

<u>The SEIR Fails to Disclose the Presence of California Jewelflower in the Revised Project Area</u>

The SEIR includes a survey report that describes the natural resources that may be affected by the Revised Project's telecommunication upgrades. According to that survey report, California jewelflower (*Caulanthus californicus*) was detected in "Study Area 1," which is within the Revised Project site boundary and immediately adjacent to the solar field.[10] The presence of California jewelflower in Study Area 1 indicates it could occur elsewhere in the Project footprint, especially given the knowledge that both the size of California jewelflower plants and population size may vary dramatically from year to year, depending on site and weather conditions.[11]

California jewelflower is a state and federally listed endangered species. In addition, it has a NatureServe Heritage Rank of G1S1, indicating it is "critically imperiled" at both the global and state level.[12] Critically imperiled species have a very high risk of

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[6] *Ibid* and SEIR, p. C.6-6.

[7] SEIR, Table C.6-1.

[8] Data provided by the participants of the Consortium of California Herbaria. Available at: <ucjeps.berkeley.edu/consortium>. (Accessed 2015 Feb 4).

[9] *Ibid. See also* Energy Renewal Partners, LLC. 2014 Oct. Transmission Line Natural Resources Assessment Report, Appendix C – Vegetation List by Work Area.

[10] Energy Renewal Partners, LLC. 2014 Oct. Transmission Line Natural Resources Assessment Report, Appendix C – Vegetation List by Work Area.

[11] Cypher, Ellen. 2002. Supplemental Survey Methods for California Jewelflower. California State University, Stanislaus Endangered Species Recovery Program. Available at: <http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/rare_plant_protocol.pdf>.

[12] Master, L., D. Faber-Langendoen, R. Bittman, G. A. Hammerson, B. Heidel, J. Nichols, L. Ramsay, and

3

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A3 cont

extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.[13] Botanists have not detected California jewelflower since 2011, even at known concentration centers.[14] Any impact, either direct or indirect, to such a critically endangered species would jeopardize its continued existence.

The presence of California jewelflower in the Revised Project area constitutes significant new information that was not disclosed or analyzed in the SEIR.

California Condor

B3-A4

According to the SEIR, no California condors have been observed during surveys for the Project.[15] The Applicant's Avian Conservation Strategy ("ACS") also reports "[n]o California condors have been observed in or near the Project Footprint during any surveys…"[16] These statements are incorrect. Bloom Biological, Inc. detected a pair of California condors during the golden eagle nest surveys conducted in 2014.[17] This constitutes new information that was not disclosed in the SEIR.

Golden Eagle

B3-A5

Golden eagles have large home ranges. However, during the breeding season many eagles concentrate their foraging activities in "core areas" that are several orders of magnitude smaller than the home range.[18] Eagles will travel far from their nests to access those core foraging areas.[19] Golden eagles have been observed foraging at and flying over the Revised Project site. However, neither the Applicant nor the County made an effort to survey the Revised Project site to evaluate its potential function as a core foraging area.

A. Tomaino. 2009. NatureServe Conservation Status Assessments: Factors for Assessing Extinction Risk. NatureServe, Arlington, VA.

[13] California Department of Fish and Wildlife, Natural Diversity Database. 2014 Jul. Special Vascular Plants, Bryophytes, and Lichens List. Available at: <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/spplants.pdf>. (Accessed 2015 Feb 2).

[14] Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/). *See also* U.S. Fish and Wildlife Service. 2013. *Caulanthus californicus* (California jewelflower) 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. 27 pp.

[15] SEIR, Table C.6-2.

[16] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 24.

[17] Bloom Biological, Inc. 2014 May. Panoche Valley Solar Facility: 2014 Final Golden Eagle Nesting Survey Report. Table 3.

[18] Marzluff JM, ST Knick, MS Vekasy, LS Schueck, TJ Zarriello. 1997. Spatial use and habitat selection of golden eagles in southwestern Idaho. The Auk 114(4):673-687.

[19] DeLong, J. P. 2004. Effects of management practices on grassland birds: Golden Eagle. Northern Prairie Wildlife Research Center, Jamestown, ND. Northern Prairie Wildlife Research Center Online. Available at: <http://www.npwrc.usgs.gov/resource/literatr/grasbird/goea/goea.htm>. (Version 28MAY2004).

4

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A5 cont

The Applicant claims point count surveys and an eagle utilization distribution assessment ("UDA") were conducted during the summer, fall, and winter of 2013/2014.[20] The Applicant also claims that the surveys/UDA adhered to USFWS guidelines.[21] Neither claim is accurate.

The USFWS recommends surveys across all seasons for a minimum of two years to evaluate a project's risk to eagles.[22] The point count surveys and UDA were only conducted between 3 September 2013 and 24 January 2014.[23] The remaining eagle data were limited to incidental observations. According to the Applicant's survey report: "[i]n addition to the GOEA point count surveys and the UDA data, any miscellaneous observations information [*sic*] gathered during the 2013 PVS giant kangaroo rat and blunt-nosed leopard lizard surveys, conducted in March through September, 2013, was also used to supplement the point count/UDA data (Appendix C)."[24] It is not possible for biologists to effectively survey for eagles while concurrently searching the ground for giant kangaroo rats and blunt-nosed leopard lizards.[25] As a result, focused surveys to document golden eagle use of the Revised Project site were limited to five months during the *non-breeding* season. Although an estimated 30 breeding pairs of eagles occur within 10 miles of the Revised Project site, there were no surveys to document eagle use of the site during the breeding season.

Data on the natural history, behavior, abundance, and availability of prey can provide insight into golden eagle habitat quality and management. Prey abundance has been correlated with eagle reproductive parameters, and also with habitat use by nonbreeding eagles, such as juveniles, subadults, and floaters.[26] The Applicant did not collect any empirical data on the abundance and availability of golden eagle prey species on the Revised Project site. As a result, it has no scientific basis to conclude the site has a "sparse prey base."[27]

I disagree with the Applicant's conclusion that the Revised Project site is not an important eagle use area, and that the majority of eagle activity occurs on adjacent conservation lands.[28] During the UDA surveys there were 452 observation minutes of golden eagles inside the UDA Study Area and 157 observation minutes of GOEA outside

[20] Energy Renewal Partners, LLC. 2014 Apr. Panoche Valley Solar Point Count Survey Study Report. p. 7.

[21] *Ibid.*

[22] U.S. Fish and Wildlife Service. 2011 Jan. Draft Eagle Conservation Plan Guidance. Appendix C: Stage 2—Site-Specific Assessment Recommended Methods and Metrics. p. 57.

[23] Energy Renewal Partners, LLC. 2014 Apr. Panoche Valley Solar Point Count Survey Study Report. p. 7.

[24] *Ibid*, p. 8.

[25] U.S. Fish and Wildlife Service. 2011 Jan. Draft Eagle Conservation Plan Guidance. Appendix C: Stage 2—Site-Specific Assessment Recommended Methods and Metrics. p. 55.

[26] Driscoll, D.E. 2010. Protocol for golden eagle occupancy, reproduction, and prey population assessment. American Eagle Research Institute, Apache Jct., AZ. 55pp. Access: <http://www.dfg.ca.gov/wildlife/nongame/GEWG/>.

[27] Energy Renewal Partners, LLC. 2014 Dec. Draft Eagle Conservation Plan: Panoche Valley Solar Energy Project. p. 19.

[28] *Ibid*, pp. 17 and 18.

5

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A5 cont

the UDA Study Area.[29] Figure 8 in the Applicant's survey report clearly shows there is substantial golden eagle use of the Revised Project site.[30]

Due to the aforementioned issues, the Applicant and County lack the data needed to evaluate the Revised Project site's function as a core foraging area for one or more the estimated 30 breeding pairs that occur in the region. In the absence of empirical data on the locations of core foraging areas, the County must defer to the best available science, which suggests the Project could eliminate a substantial amount of core foraging habitat (perhaps all) used by at least one pair of breeding eagles.[31] The loss of core foraging habitat is likely to lead to take, as defined in the Eagle Act. The County has not disclosed or analyzed the severity of this impact, nor has it ensured potentially significant impacts to golden eagles are adequately mitigated.

PROJECT IMPACT ISSUES

B3-A6

Microwave Towers

The Revised Project may require building up to three new microwave towers, including a tower at Panoche Mountain. Each new tower would permanently impact 10,000 ft^2 of habitat (100' x 100').[32] The Biological Resources chapter of the SEIR appears to suggest that the site for the new microwave tower at Panoche Mountain contains "developed habitat."[33] This conflicts with the information presented in the Water Resources chapter, which states:

> "Panoche Mountain (at approximately 2,100 feet of elevation), northeast of the project site, consists of uninhabited grassland and shrubland open space. Panoche Mountain currently has at least two existing microwave communication towers, and a new tower (up to 300 feet tall) is proposed within the developed site of one existing tower. The site is located at the summit of Panoche Mountain and is surrounded by steeply sloped ridges and valleys. The headwaters of several unnamed streams begin in the valleys that descend from the summit of Panoche Mountain. The nearest headwaters are located approximately 500 feet from the proposed tower site."[34]

I reviewed Google Earth imagery and concluded the disturbed habitat at Panoche Mountain is limited to approximately 20,000 ft^2 (Figure 1). The majority of that area is occupied by two existing towers and associated infrastructure (Figure 2). Therefore, it would not be possible to build a new tower at Panoche Mountain without impacting natural habitat (Figure 3).

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[29] Energy Renewal Partners, LLC. 2014 Apr. Panoche Valley Solar Point Count Survey Study Report. p. 16.

[30] *Ibid,* Figure 8.

[31] Marzluff JM, ST Knick, MS Vekasy, LS Schueck, TJ Zarriello. 1997. Spatial use and habitat selection of golden eagles in southwestern Idaho. The Auk 114(4):673-687.

[32] SEIR, Table B-11.

[33] SEIR, p. C.6-13.

[34] SEIR, p. C.15-3.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A6 cont

According to the Applicant: "[t]he construction of the new microwave tower [at Panoche Mountain] would be in an area that is already disturbed with similar equipment. Impacts to sensitive species are not anticipated from planned work in this existing disturbed area."[35] The Applicant's conclusion is not supported by evidence. Indeed, there is no evidence that the Applicant assessed biological resources at the Panoche Mountain tower site. The California Natural Diversity Database ("CNDDB") has a record of the blunt-nosed leopard lizard occurring at the site (i.e., the "Panoche Mtn Telephone Co Repeater Site).[36] In addition to the blunt-nosed leopard lizard, there are other special-status wildlife, and special-status plant species, that may be affected by construction of the new tower. The SEIR fails to accurately disclose or analyze this information. It also fails to ensure impacts to blunt-nosed leopard lizards and other sensitive biological resources at the tower construction site would be mitigated to a less-than-significant level.

Figure 1. Existing conditions at Panoche Mountain.

[35] *See also* Energy Renewal Partners, LLC. 2014 Oct. Panoche Valley Solar Project Telecommunications Upgrades Modifications to PG&E Planned Disturbance Areas.

[36] California Natural Diversity Database (CNDDB). 2015. RareFind 5 [Internet]. California Department of Fish and Wildlife [2015 January 6].

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A6
cont

Figure 2. Existing towers and infrastructure at Panoche Mountain.

Figure 3. Disturbed area at Panoche Mountain is too small to build a new microwave tower without impacts to natural habitat. Yellow line = 75 feet. Red line = 18 feet.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A7

Avian Collisions – Microwave Towers

Longcore et al. (2012) analyzed data from 38 different tower studies and concluded that towers in the United States and Canada kill over 6.8 million birds per year.[37] The SEIR acknowledges that: "the construction of microwave towers may result in net increase of collisions compared to baseline conditions."[38] The SEIR, however, provides no information on the expected "net increase of collision," nor does it describe the baseline mortality conditions at Panoche Mountain where towers already exist.

Avian collisions with towers are disproportionately associated with certain types of towers.[39] For example, avian collisions increase exponentially with tower height.[40] The tallest existing tower at Panoche Mountain is 50 feet (15.2 m) tall.[41] The new microwave tower proposed for Panoche Mountain would be 300 feet tall, and thus it would pose a substantially greater collision hazard to birds than the existing towers.

Avian collisions are also disproportionately associated with towers that have steady-burning lights or FAA "status quo" lighting systems (i.e., a combination of red, flashing lights and red, non-flashing lights).[42] Because the SEIR fails to identify the lighting that would be installed on the proposed tower, the threat to migratory birds cannot be adequately evaluated.

Despite the deficiencies described above, the County concluded: "[w]ith the implementation of APLIC guidelines and this [*sic*] PG&E's Avian Protection Plan, impacts would be less than significant (Class III)."[43] The County has no basis for this conclusion because neither measure (i.e., APLIC guidelines or PG&E's APP) is applicable to microwave towers. As a result, construction of new microwave towers for the Revised Project would have a potentially significant and unmitigated impact on birds.

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[37] Longcore T, C Rich, P. Mineau et al. 2012. An Estimate of Avian Mortality at Communication Towers in the United States and Canada. PLoS One 7(4):e34025.

[38] SEIR, p. C.6-106.

[39] Longcore T, C Rich, P. Mineau et al. 2012. An Estimate of Avian Mortality at Communication Towers in the United States and Canada. PLoS One 7(4):e34025. *See also* Gehring J, P Kerlinger, AM Manville II. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. Ecological Applications 19(2):505-514.

[40] *Ibid.*

[41] Federal Communications Commission. Universal Licensing System [website]. Available at: <http://wireless2.fcc.gov/UlsApp/ApplicationSearch/applLocSum.jsp;JSESSIONID_APPSEARCH=TvTDSgYZLWyTwPgpTKgGC42XTdthGDNXT5fnhMzLFhxwDtN1tRKR!969052479!25182112?applID=4488952>.

[42] Longcore T, C Rich, P. Mineau et al. 2012. An Estimate of Avian Mortality at Communication Towers in the United States and Canada. PLoS One 7(4):e34025. *See also* Gehring J, P Kerlinger, AM Manville II. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. Ecological Applications 19(2):505-514.

[43] SEIR, p. C.6-106.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A8

Avian Collisions – Solar Arrays

A substantial amount of new information regarding avian mortality at solar facilities has been released since the County issued the Final EIR for the Approved Project. A recent study completed by the National Fish and Wildlife Forensics Laboratory (2014) reported: "[o]ur findings demonstrate that a broad ecological variety of birds are vulnerable to morbidity and mortality at solar facilities…".[44] At PV facilities, birds appear to mistake the broad reflective surfaces of the solar arrays for water, trees, and other attractive habitat.[45] When this occurs, the birds become susceptible to mortality by: (a) colliding with the solar arrays; or (b) becoming stranded (often injured) on a substrate from which they cannot take flight, thereby becoming susceptible to predation and starvation.[46]

The SEIR acknowledges new information exists, but claims that information is speculative, and thus impacts "are considered to be less than significant (Class III) and no additional mitigation is required."[47] Whereas the extent of the threat remains unknown, the presence of dead and injured birds at solar facilities operating (or under construction) in California demonstrates the facilities present a collision hazard to birds.[48] The potential for the Revised Project to impact birds is not speculative, as the County claims. Indeed, even the Applicant has acknowledged that it "may be required to add additional avoidance, minimization or mitigative measures to reduce impacts to a less than significant level due to the results of the monitoring reports."[49] As discussed in the "mitigation" section of this document, the SEIR fails to ensure those additional avoidance, minimization or mitigation measures are implemented should the monitoring reports indicate excessive levels of avian mortality.

B3-A9

Golden Eagles

Golden eagles are protected under Fish and Game Code Section 3511 and the federal Bald and Golden Eagle Protection Act ("Eagle Act"). California law prohibits take of golden eagles, and the USFWS requires a permit to be issued for take of bald or golden eagles where the taking is associated with, but not the purpose of the activity, and cannot be practicably avoided. Take includes: (1) injury to an eagle; (2) causing a decrease in golden eagle productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment by substantially interfering with normal

[44] Kagan RA, TC Viner, PW Trail, EO Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. 28 pp.

[45] *Ibid.*

[46] *Ibid.*

[47] SEIR, p. C.6-54.

[48] Kagan RA, TC Viner, PW Trail, EO Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. 28 pp.

[49] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 19.

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B3-A9 cont

breeding, feeding, or sheltering behavior.[50]

The Applicant's recently released Eagle Conservation Plan ("ECP") states: "[t]he Project's risk to nesting and breeding Golden Eagles is low to none."[51] This statement conflicts with the Applicant's survey data, published scientific literature, and risk assessment guidance issued by the USFWS.[52]

After the Final EIR was prepared for the Approved Project the USFWS released guidelines pertaining to evaluating a solar facility's risk to bird and bat species. The guidelines indicate the risk assessment should examine two distinct components: (1) cumulative impacts, and (2) site-specific threats.[53] As discussed below, the risk analysis presented in the ECP fails to meet USFWS guidelines for assessing each of these two components.

The ECP's analysis of cumulative impacts to golden eagles is limited to the statement that: "[t]o date, no other solar projects have been built in the vicinity of the Panoche Valley Solar Project and to the knowledge of PVS; no solar facilities are planned for construction in the future."[54] This limited level of analysis is inappropriate for golden eagles. Guidance issued by the USFWS indicates cumulative effects analysis should occur at the natal dispersal distance of the species (140 miles).[55] Not only did the cumulative effects analysis presented in the ECP not occur at that level, but it was limited to a fraction of the geographic area that the SEIR identified as being biologically relevant (i.e., the larger Ciervo-Panoche region, areas of western Fresno County, regions of western Kern County in the San Joaquin Valley, eastern San Luis Obispo County, and northern Santa Barbara County).[56]

USFWS guidance indicates a site-specific risk assessment should address the potential for "take" based on:

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[50] 50 CFR 22.3. *See also* U.S. Fish and Wildlife Service. 2009. Final Environmental Assessment: Proposal to Permit Take as Provided Under the Bald and Golden Eagle Protection Act. U.S. Fish and Wildlife Service, Washington, D.C. Table 1.

[51] Energy Renewal Partners, LLC. 2014 Dec. Draft Eagle Conservation Plan: Panoche Valley Solar Energy Project. p. 19.

[52] Marzluff JM, ST Knick, MS Vekasy, LS Schueck, TJ Zarriello. 1997. Spatial use and habitat selection of golden eagles in southwestern Idaho. The Auk 114(4):673-687. *See also* Thelander CG, California Department of Fish and Game. 1974. Nesting territory utilization by golden eagles (Aquila chrysaetos) in California during 1974. Wildlife Management Branch Administrative Report No. 74-7 (November 1974). 22 pp.

[53] U.S. Fish and Wildlife Service, Pacific Southwest Region. 2010 Sep. Region 8 Interim Guidelines for the Development of a Project-Specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities. 15 pp.

[54] Energy Renewal Partners, LLC. 2014 Dec. Draft Eagle Conservation Plan: Panoche Valley Solar Energy Project. p. 26.

[55] US Fish and Wildlife Service, Division of Migratory Bird Management. 2009. Final Environmental Assessment, Proposal to Permit Take. Provided Under the Bald and Golden Eagle Protection Act. Washington: Dept. of Interior. p. 37.

[56] SEIR, p. C.6-108.

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B3-A9 cont

a. Burning from concentrated light at solar arrays.
b. Transmission line, power line, meteorological tower, or guy line collision.
c. Electrocution potential.
d. Territory abandonment.
e. Nest and roost site disturbances.
f. Habitat loss and fragmentation.
g. Disturbance due to ongoing human presence at the facility.[57]

The Revised Project poses all of the aforementioned threats except burning from concentrated light at solar arrays. Ultimately, it is inconceivable that the loss of over 1,888 acres of foraging habitat in relatively close proximity to approximately 30 nesting territories would result in low to no risk to those territories, as suggested in the ECP.

The USFWS has concluded that data within a 10-mile radius of a nest provides adequate information to evaluate many project-level impacts.[58] The Applicant's consultant estimated there are 30 golden eagle territories within a 10-mile radius of the Revised Project site.[59] The USFWS estimates 235 breeding pairs of golden eagles reside in Bird Conservation Region 32 (which encompasses most of the Coast Ranges, Central Valley, and south coast).[60] This suggests the Project could directly or indirectly impact almost 13% of the population within Bird Conservation Region 32, and an even greater proportion of the population within the "Central Coast Ranges" portion of that region. This would have significant implications on eagle conservation, because the "Central Coast Ranges" region has the highest abundance of golden eagle nesting territories in the State of California.[61] In other words, the Project has the potential to impact approximately 13% of the eagles in the state's most important eagle region. The SEIR and ECP have not disclosed or analyzed the magnitude of this impact, nor have they ensured the impact would be adequately mitigated.

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[57] U.S. Fish and Wildlife Service, Pacific Southwest Region. 2010 Sep. Region 8 Interim Guidelines for the Development of a Project-Specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities. 15 pp.

[58] US Fish and Wildlife Service, Division of Migratory Bird Management. 2009. Final Environmental Assessment, Proposal to Permit Take. Provided Under the Bald and Golden Eagle Protection Act. Washington: Dept. of Interior. p. 38.

[59] Bloom Biological, Inc. 2014 May. Panoche Valley Solar Facility: 2014 Final Golden Eagle Nesting Survey Report. p. 1.

[60] US Fish and Wildlife Service, Division of Migratory Bird Management. 2009. Final Environmental Assessment, Proposal to Permit Take. Provided Under the Bald and Golden Eagle Protection Act. Washington: Dept. of Interior. Table C.4.

[61] Thelander CG, California Department of Fish and Game. 1974. Nesting territory utilization by golden eagles (Aquila chrysaetos) in California during 1974. Wildlife Management Branch Administrative Report No. 74-7 (November 1974). 22 pp. *See also* DEIR, Appendix E.1, p. 93.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A10

Special-Status Plants

The SEIR concludes impacts to special-status plants would be potentially significant, but that the proposed mitigation would reduce impacts to a less-than-significant level.[62] The SEIR lacks the basis for this conclusion because it does not provide any evidence that the species that would be impacted by the Revised Project (i.e., gypsum loving larkspur, recurved larkspur, and serpentine linanthus) occur on the proposed conservation lands.[63]

B3-A11

Vernal Pool Fairy Shrimp

According to the SEIR, field surveys completed in 2010, after publication of the 2010 Final EIR, identified the presence of vernal pool fairy shrimp in three ephemeral pools, all of which occur within the Revised Project footprint.[64] The SEIR and supporting survey reports only identify the location of two of the pools. Furthermore, the SEIR does not identify how many of the 117 pools detected in 2010 are within the Revised Project footprint (although it indicates at least 15 pools would be impacted).[65] These deficiencies preclude a thorough understanding of existing conditions, Project impacts, and the feasibility of the proposed mitigation.

It is likely existing conditions have changed in the 4.5 years since the pools within the Revised Project site were surveyed for vernal pool branchiopods. Indeed, between December 2009 and September 2010 the number of pools on the originally proposed Project site dropped from 128 to 117 due to "separate pools becoming hydrologically connected as the wet season advanced, pools associated with cattle water troughs remaining wet throughout the year due to perennial runoff, and one pool associated with a cattle trough buried by ranchers in order to berm up the deepening depression around the cattle trough to allow cattle easy access to the water."[66] It is likely there have been additional changes since then, especially because there were several months of above average rainfall after the last surveys were completed in September 2010.[67] In addition to overland flow, fairy shrimp disperse through animals that provide for movement of mud and cysts in feathers, fur, and hooves.[68] The numerous cattle on the site could have easily dispersed fairy shrimp cysts to new locations over the past 4.5 years. Therefore, the distribution of fairy shrimp on the site could have changed, even if the number of pools has not changed. The USFWS's *Five-Year Review* for the vernal pool fairy shrimp states the following:

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[62] SEIR, p. C.6-28.

[63] *Ibid.*

[64] SEIR, pp. C.6-33 and -34.

[65] SEIR, p. C.6-25.

[66] Live Oak Associates, Inc. 2010 Jan [*sic*]. Protocol-Level Dry Season Branchiopod Survey Results, 90-Day Survey Report, Panoche Valley Solar Farm. p. 7.

[67] Western Regional Climate Center. Cooperative Climatalogical Climate Summaries [online]. Monthly Sum of Precipitation for the Panoche 2 W, CA Station. Available at: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6675>. (Accessed 2015 Feb 3).

[68] U.S. Fish and Wildlife Service. 2007. Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*, Five-Year Review: Summary and Evaluation. p. 5.

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B3-A11 cont

> Due to local topography and geology, the depressions are part of an undulating landscape, where soil mounds are interspersed with basins, swales, and drainages. Both flooding and the movement of wildlife within vernal pool complexes allow fairy shrimp to disperse between individual pools. These movement patterns, as well as genetic evidence, indicate that *vernal pool fairy shrimp populations are defined by entire vernal pool complexes, rather than individual pools* (King et al. 1996; Fugate 1998).[69]

The SEIR concludes the mitigation measures adopted for the previously Approved Project would reduce impacts to vernal pool fairy shrimp to less than significant levels.[70] Those measures include (a) BR-8.2: avoiding disturbance of ephemeral pools to the maximum extent practicable and mitigating for unavoidable impacts; and (b) BR-8.3: creating a 100-foot construction buffer for seasonal depressions and known waterbodies.[71] The SEIR cannot point to those mitigation measures as evidence that impacts to vernal pool fairy shrimp would be mitigated to less than significant levels.

First, the SEIR fails to establish a mechanism for identifying the distribution of vernal pool fairy shrimp (and potentially other listed branchiopods) at the time of construction. As the SEIR acknowledges, there is potentially suitable habitat (ephemeral and vernal pools) for vernal pool fairy shrimp throughout much of the Project site.[72] Previously adopted mitigation measure BR-8.2 was contingent on the results of mitigation measure BR-8.1 (protocol surveys). The SEIR eliminates mitigation measure BR-8.1. As a result, mitigation measure BR-8.2 for the Revised Project is fundamentally different than the measure that was approved in the Final EIR. I recognize that protocol surveys were completed after the Final EIR was approved. However, the SEIR provides no evidence that the USFWS subsequently approved the results of those surveys, nor does it account for potential changes in the distribution of listed branchiopods since the Final EIR was approved.

Second, despite comments from the USFWS and information presented in the federal *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* ("Recovery Plan"), the County has yet to provide evidence that a 100-foot construction buffer would mitigate indirect impacts to pools occupied by vernal pool fairy shrimp.[73] To the contrary, there is evidence that protecting small patches of vernal pool habitat, as proposed in the SEIR, is not a successful conservation strategy for vernal pool fairy shrimp. This issue is discussed extensively in the Recovery Plan and in the USFWS's *Five-Year Review* for the vernal pool fairy shrimp. I incorporate both of those documents by reference. In brief:

- "Habitat loss and fragmentation is the largest threat to the survival and recovery of the

[69] *Ibid.* p. 4. [emphasis added].
[70] *Ibid.*
[71] *Ibid.*
[72] SEIR, p. C.6-34.
[73] FEIR, Comment A004-25.

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B3-A11 cont

listed species and species of concern addressed in this recovery plan."[74]

- "Remnant habitat that has been protected in small parcels is often subject to changed hydrological conditions, invasion by nonnative plants and other species, increased vegetation growth, and other conditions (such as cessation of grazing or overgrazing) that serve to make habitat less suitable for the shrimp."[75]
- "Species experts have noted the importance of pool complexes versus isolated pools in supporting various species of large branchiopods (Fugate 1992; Eriksen and Belk 1999; Helm and Vollmar 2002; R. Grosberg, UC Davis, *in litt.* 1993). Helm has observed that when a formerly intact vernal pool landscape is fragmented by development, the associated large branchiopod community generally declines through time…"[76]
- "specific pools could be non-self-sustaining "sink" pools, relying on the influx of cysts from the pools with the greatest abundance of shrimp. If an extirpation event, such as a prolonged drought cycle, occurs in a population that has lost substantial habitat and has been fragmented, the opportunities for recolonization will likely be greatly reduced due to physical isolation from other source populations."[77]

Based on the aforementioned information; abundance of pools within the Revised Project area; the extent to which those pools will be fragmented; and reduction in animals that disperse cysts among pools post-construction, it is my professional opinion that the County's proposed mitigation does not ensure impacts to vernal pool fairy shrimp would be mitigated to less than significant levels.

Cumulative Impacts

B3-A12

The SEIR lacks adequate disclosure and analysis of the Revised Project's contribution to cumulative impacts. The SEIR lists 24 new projects that have been proposed or built within the cumulative impacts assessment area since the Final EIR was approved.[78] However, the SEIR provides insufficient information on the size and location of those projects. For example, the SEIR does not identify the size of eight (33%) of the projects. Although the SEIR does identify the size of the remaining 16 projects, it does not quantify (or otherwise identify) the various habitat types impacted by each project. This precludes the public and resources agencies from being able to independently evaluate, and submit informed comments, pertaining to cumulative impacts to habitat for sensitive biological resources.

Similarly, the SEIR does not provide a map of the 24 new projects, and it provides only general information on each project's location (e.g., "30 miles southeast"). This precludes the ability to evaluate impacts to core habitat areas, as well as impacts to habitat connectivity, fragmentation, and other landscape-level variables that can

[74] U.S. Fish and Wildlife Service. 1998. Vernal Pools of Southern California Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon. p. I-16.

[75] U.S. Fish and Wildlife Service. 2007. Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*, Five-Year Review: Summary and Evaluation. p. 35.

[76] *Ibid*, p. 42.

[77] *Ibid.*

[78] SEIR, p. C.6-108 and Table D-1.

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B3-A12, cont

significantly affect plant and animal populations.

Finally, the SEIR's list of new projects does not appear to be comprehensive. For example, the SEIR does not list the 3,000-acre California Flats Solar Project, even though that project is within the cumulative effects analysis area and would impact habitat for the San Joaquin kit fox, golden eagle, and many of the other sensitive biological resources known to occur in the Revised Project area. In addition, the SEIR's list is limited to new solar projects. Presumably there are other types of new projects within the cumulative effects analysis area that could contribute to cumulative impacts.

The SEIR does not evaluate the significance of cumulative impacts to biological resources. Its excuse for this omission is that: "[b]ecause these cumulative projects will all be subject to environmental regulations similar to the Revised Project analyzed in this SEIR, the cumulative analysis focuses on determining whether the Project's incremental contribution to cumulative impacts would be cumulatively considerable."[79]

It is improperly speculative to assume that future projects will provide sufficient mitigation to ensure that there will be no cumulative impacts. Similarly, just because a past project mitigated impacts, and found that impacts are less than significant, does not mean that no impacts whatsoever arose from the project. The whole point of cumulative impact analysis is to determine whether impacts from various past and future projects that may have been individually deemed less than significant are, in fact, significant when looked at as a whole. Furthermore, mitigation that may have been considered effective in the past may now be known not to be sufficiently effective. For example, it is now known that previously accepted mitigation techniques have not been effective in conserving burrowing owl populations. Moreover, the need to provide mitigation for impacts to biological resources does not guarantee a less than significant cumulative impact. Several studies have demonstrated that most mitigation projects fails from a functional perspective.[80]

Ultimately, the County concludes the Revised Project would not represent a considerable contribution to cumulative impacts.[81] This conflicts with the County's prior conclusion (in the Final EIR for the Approved Project) that the Project's contribution to cumulative impacts would be considerable, resulting in significant and unavoidable cumulative biological resources impacts.[82] The SEIR does not justify the County's rationale for changing it conclusion, nor does it provide any actual analysis (e.g., data) to support the County's current conclusion.

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[79] SEIR, p. D-4.

[80] Fiedler PL. 1991. Mitigation-related transplantation, relocation and reintroduction projects involving endangered and threatened, and rare plant species in California. Final Report. Available at: nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=3173. *See also* Ambrose RF. 2000. Wetland Mitigation in the United States: Assessing the Success of Mitigation Policies. Wetlands (Australia), 19: 1-27.

[81] SEIR, p. C.6-109.

[82] FEIR, p. C.6-140.

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MITIGATION ISSUES

B3-A13

Special-Status Plants

The SEIR acknowledges that surveys for the Revised Project were not conducted when most special-status plants would have been evident or identifiable. As a result, the SEIR requires the Applicant to conduct pre-construction surveys for State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in all areas subject to ground-disturbing activity.[83] The SEIR lacks an enforcement mechanism that ensures the surveys are properly conducted and reported prior to ground disturbance activities.

By definition, California Rare Plant Rank ("CRPR") 1 and 2 species are considered rare or endangered under CEQA §15380(b) and (d). Because the SEIR does not require surveys or mitigation for CRPR 1 and 2 species, impacts to sensitive botanical resource remain potentially significant and unmitigated.

The SEIR fails to justify the conclusion that a 50-foot buffer would adequately mitigate impacts to listed plant species.[84] San Joaquin woolythreads (*Monolopia congdonii*) is one of the three listed plant species that the County concluded could occur in the Revised Project area. The USFWS's *5-Year Status Review* reports the following actions are needed for recovery of the species:

> Ensure that habitat can be protected in blocks of at least 160 acres and buffer zones of 500 feet or more are protected beyond the occurrence margins of *Monolopia congdonii* to reduce external influences and to allow for plant population expansion.[85]

California Condor

B3-A14

The SEIR states: "the largest birds with a reasonable likelihood of coming in contact with the high voltage transmission lines in the vicinity of the route would be the golden eagle."[86] California condors (which are larger than golden eagles) have been detected in the Revised Project area.[87] Collision and electrocution mortality from power lines is considered biologically significant to the California condor due to its small population size.[88] Furthermore, implementation of the standard Avian Power Line Interaction Committee ("APLIC") guidelines does not eliminate the collision and electrocution

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[83] SEIR, p. C.6-80.

[84] *Ibid.*

[85] U.S. Fish and Wildlife Service. 2010. *Monolopia* (=*Lembertia*) *congdonii* (San Joaquin woolly-threads). 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office. pp. 24 and 25.

[86] SEIR, p. C.6-106.

[87] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 24. *See also* Bloom Biological, Inc. 2014 May. Panoche Valley Solar Facility: 2014 Final Golden Eagle Nesting Survey Report. Table 3.

[88] Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Edison Electric Institute and APLIC. Washington, D.C.

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B3-A14 cont

hazard to condors. The APLIC guidelines state: "[i]n areas with condors, a 150-cm (60-in) separation may not be adequate. Larger birds such as condors or storks may warrant special consideration by utilities."[89] Because the SEIR only requires the standard APLIC guidelines, it fails to ensure potentially significant impacts to the California condor are mitigated.

Golden Eagle

B3-A15

The SEIR contains a new mitigation measure that requires the Applicant to prepare and implement an Avian Conservation Strategy ("ACS") and Eagle Conservation Plan ("ECP").[90] Draft versions of those documents claim the Revised Project would not affect the local golden eagle population. For example, the ECP states:

> "The combination of avoidance and minimization measure[s] and compensatory mitigation commitments will ensure that the net effect of PVS's operations on the eagle population is, at a minimum, no net loss."[91]

A conclusion of this nature requires demonstrating the Revised Project would alleviate existing threats or increase carrying capacity, such that there is a net zero (or positive) benefit to eagles. The USFWS's Eagle Conservation Plan Guidance states the following:

> Compensatory mitigation can address any pre-existing mortality source affecting the species-specific eagle management unit impacted by the project (e.g. environmental lead abatements, addressing eagle electrocutions due to high risk power poles, etc.) that was in effect at the time of the FEA in 2009 (USFWS 2009b), or it can address increasing the carrying capacity of the eagle population in the affected eagle management unit. However, there needs to be a credible analysis that supports the conclusion that implementing the compensatory mitigation action will achieve the desired beneficial offset in mortality or carrying capacity.[92]

Simply putting a conservation easement on foraging habitat that already exists does not alleviate the loss of 1,888 acres of foraging habitat, fragmentation of the landscape, increased collision potential, and other potentially adverse effects of the Revised Project to eagles. Similarly, "avoidance and minimization measures" may *reduce* Project impacts, but they do not provide a net benefit to eagles.

The only justification I could find for the Applicant's conclusion that the Revised Project would have no net effect on the eagle population is the Applicant's statement that the proposed compensation lands "are of equal or greater habitat quality and will support an equal or greater population of Golden Eagles and their prey species after the

[89] Avian Power Line Interaction Committee (APLIC). 2006. *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006.* Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C and Sacramento, CA. pp. 16 and 56.

[90] SEIR, p. C.6-87.

[91] Energy Renewal Partners, LLC. 2014 Dec. Draft Eagle Conservation Plan: Panoche Valley Solar Energy Project. p. 26.

[92] U.S. Fish and Wildlife Service. 2013. Eagle Conservation Plan Guidance: Module 1-Land Based Wind Energy-Version 2. USFWS Division of Migratory Bird Management. April 2013. p. 21.

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B3-A15 cont

restoration/preservation activities compared to the habitat found within the Project Footprint."[93] There is no scientific evidence that the abundance of prey is the limiting factor for the local eagle population. Indeed, there is not even conceptual evidence to support the Applicant's claim because the Applicant has not provided a *Habitat Mitigation and Monitoring Plan*, or even identified the activities it would implement to increase prey populations.

The Applicant's Draft ECP proposes eagle distribution surveys every other week between September and January for two years following Project construction.[94] The proposed surveys would have little scientific value, especially because they would be limited to the non-breeding season, even though the response variable of most concern is the loss of *breeding* birds (or territories).

The ECP provides the following statement regarding the objective of the post-construction surveys:

> "This report will be used to determine whether the utilization of the Project Footprint/VFCL is equal to or greater than the pre-construction results and if monitoring can be terminated due to those results after consultation with the USFWS, CDFW and San Benito County."[95]

The stated objective provides no value as a mitigation measure without triggers for adaptive management based on the survey results. It is already well established in the scientific literature that eagles avoid anthropogenic disturbance and developed landscapes, including solar facilities.[96] Because the proposed surveys would not enable a rigorous inference of Project impacts, and because a true experiment is not practical, the Applicant should be required to conduct a before-after/control-impact ("BACI") study.[97] The study should incorporate rigorous data collected across all seasons. Specifically, I recommend the installation of transmitters on a small subset of the 30 eagle pairs nesting closest to the Revised Project site. This would eliminate speculation about eagle mortality, reduced nesting success, or abandoned territories due to the Revised Project.

Mortality Monitoring

B3-A16

Duration

The County and Applicant provide inconsistent information on the duration of the post-construction mortality monitoring. The Applicant's ACS first indicates monitoring will

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[93] Energy Renewal Partners, LLC. 2014 Dec. Draft Eagle Conservation Plan: Panoche Valley Solar Energy Project. p. 21.

[94] *Ibid*, p. 27.

[95] *Ibid.*

[96] SEIR, p. C.6-31.

[97] Morrison ML, WM Block, MD Strickland, WL Kendall. 2001. Wildlife Study Design. Springer-Verlag, New York (NY). 210 pp.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A16 cont

occur for three years; it then suggests monitoring will be for two years.[98] The SEIR indicates post-construction mortality monitoring will be limited to one year.[99] Consistent with USFWS guidelines, post-construction monitoring programs should be done for a minimum of three years after operation of the facility begins.[100]

Sampling Methods

B3-A17

The Applicant has proposed two different types of post-construction mortality monitoring: (1) systematic sampling of the solar arrays, and (2) searches of the perimeter fence and power support structures (e.g., switchyard) by O&M personnel.[101] Post-construction monitoring also must be conducted at the microwave towers and along the transmission lines due to the potential for those features to cause avian mortality.

The Applicant proposes to exclude the data gathered during searches of the perimeter fence and power support structures in its estimates of mortality rates.[102] Those data should not be excluded from analysis. There is evidence that birds become trapped (due to injury, or the bird's physiology) inside the perimeter fences at solar facilities.[103] Although data are limited, it is reasonable to expect that injured birds that are ambulatory enough to glide or walk would attempt to escape the solar field, only to become trapped along the fenceline (and ultimately die).

The ACS suggests post-construction mortality monitoring within the solar arrays would be conducted along transects spaced 200 feet (61 meters) apart.[104] The proposed transect spacing is way too far apart to provide reliable data. The analysis provided by Warren-Hicks et al. (2013) indicates transect spacing of even 6 to 8 meters (a standard distance used by many investigators) is too far apart for many small bird and bat detections.[105]

The ACS states: "[d]uring the initial preparation for each round of carcass surveys, a preparatory survey will be conducted to remove any avian carcasses that have occurred

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[98] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. pp. 43 and 48.

[99] SEIR, p. C.6-87.

[100] U.S. Fish and Wildlife Service, Pacific Southwest Region. 2010 Sep. Region 8 Interim Guidelines for the Development of a Project-Specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities. p. 10.

[101] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 43.

[102] *Ibid.*

[103] Kagan RA, TC Viner, PW Trail, EO Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. 28 pp.

[104] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 44.

[105] Warren-Hicks W, J Newman, R Wolpert, B Karas, L Tran. (California Wind Energy Association). 2013. Improving Methods for Estimating Fatality of Birds and Bats at Wind Energy Facilities. California Energy Commission. Publication Number: CEC-500-2012-086.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

before each round of the surveys is initiated."[106] This statement suggests carcasses would be removed before carcass data are collected. If that is indeed the proposed monitoring strategy, it will produce a vast underestimate of the actual mortality level.

B3-A17 cont

Triggers for Remedial Action Measures

According to the SEIR:

B3-A18

> "The [post-construction mortality monitoring] study would document the level of bird mortality and if the County and regulatory agencies deemed the mortality excessive, would require the Applicant to take corrective actions (i.e. adaptive management) including the placement of additional bird flight diverters, alterations to project components that have been identified as key mortality features (i.e., the modification of project colors or coatings), or other appropriate actions approved by the County and regulatory agencies."[107]

The SEIR then states:

> "If the County determines that either (1) bird mortality caused by solar facilities is substantial and is having potentially adverse impacts on special-status bird populations, or that (2) the attraction of polarized light from solar panels is causing reproductive failure of aquatic insect populations at high enough levels to adversely affect insectivorous special-status birds, the Applicant shall be required to implement some or all of the mitigation measures below"[108]

The approach described above suffers numerous flaws:

First, the SEIR does not provide mortality thresholds, nor does it discuss what the County might consider to be "excessive" mortality. This precludes the public from understanding the amount of mortality that could occur before any corrective actions are attempted.

Second, the SEIR provides no evidence that it is feasible to install bird flight diverters on solar arrays, or that the installation of bird flight diverters reduces avian collisions with solar arrays. Klem (2009) and Kagan et al. (2014) discuss several techniques (e.g., UV-reflective or solid, contrasting bands spaced no further than 28 cm from each other on arrays) that enable birds to avoid collisions with windows, and presumably solar panels.[109] The techniques described by Klem (2009) and Kagan et al. (2014) are feasible, and they should be incorporated as mitigation.

B3-19

Third, the SEIR does not identify how the County would be able to conduct the analyses

B3-20

[106] Energy Renewal Partners, LLC. 2014 Dec. Draft Avian Conservation Strategy: Panoche Valley Solar Facility. p. 45.

[107] SEIR, p. C.6-40.

[108] SEIR, pp. C.6-87 and -88.

[109] Klem D Jr. 2009. Preventing Bird-Window Collisions. The Wilson Journal of Ornithology 121(2):314–321. *See also* Kagan RA, TC Viner, PW Trail, EO Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. 28 pp.

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-A20 cont

needed to determine whether: "(1) bird mortality caused by solar facilities is substantial and is having potentially adverse impacts on special-status bird populations, or that (2) the attraction of polarized light from solar panels is causing reproductive failure of aquatic insect populations at high enough levels to adversely affect insectivorous special-status birds." These two types of analyses would require rigorous studies that likely are not feasible, and definitely could not be accomplished with one to three years of monitoring data.

B3-A21

Adaptive Management

The U.S. Department of the Interior defines adaptive management as "a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood."[110] In discussing adaptive management, Morrison (2002) added:

1. "The concept of adaptive management or adaptive resource management is centered primarily on monitoring the effects of land-use activities on key resources and then using the monitoring results as a basis for modifying those activities to achieve the project's goals (Walters 1986; Lancia et al. 1996)."
2. "Adaptive management is not a trial-and-error approach."
3. "Attempting to fix a problem after implementation is quite different from developing an action plan prior to the start of a project."
4. "Regardless of the specific approach, adaptive management offers a structure whereby clear goals are established and then monitored—and specific actions for responding to deviations are planned at the *outset* of the project."[111]

The adaptive management approach outlined in the SEIR and ACS violates these concepts by: (1) proposing a trial-and-error approach; (2) allowing little flexibility in modifying land-use activities in response to monitoring results; (3) assuming the problem (avian mortality) could be fixed after Project implementation; and (4) failing to establish clear goals with respect to avian mortality.

[110] Williams BK, RC Szaro, CD Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

[111] Morrison ML. 2002. Wildlife Restoration: Techniques for Habitat Analysis and Animal Monitoring. Island Press: Washington (DC).

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CONCLUSION

Based on the issues described in this letter, it is my professional opinion that the County needs to revise and re-circulate the Project's SEIR.

Sincerely,

Scott Cashen, M.S.
Senior Biologist

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ATTACHMENT B

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

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February 2, 2015

Via Email

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Re: Review of Draft Supplemental Environmental Impact Report for Panoche Valley Solar Project

Dear Ms. Quinn,

Per your request, I reviewed the Draft Supplemental Environmental Impact Report ("DSEIR") for the Panoche Valley Solar Project ("Revised Project") published for review by the County of San Benito ("County") in December 2014 for review under the California Environmental Quality Act ("CEQA").[1]

My qualifications as an environmental expert include a doctorate in Environmental Science and Engineering from the University of California Los Angeles. I am a court-recognized expert with more with more than twenty years of experience in the environmental field and have provided expert comments on air quality, public health and greenhouse gas emissions for numerous power plants including solar plants in the environmental review process under CEQA. My résumé is attached to this letter.

I. Background

In 2010, Solargen Inc., the predecessor in interest to current applicant Panoche Valley Solar, LLC ("PVS" or "Applicant"), applied to the County for a Conditional Use Permit ("CUP") to construct and operate a solar photovoltaic power plant with an generating capacity of 420 Megawatts ("MW") on 4,885 acres in the Panoche Valley ("Proposed Project") as well as for whole or partial cancellation of nearly 7,000 acres of California Land Conservation Act of 1965 ("Williamson Act") contracts. The County Board of Supervisors ("Board") certified the Final Environmental Impact Report ("2010 Final EIR") and approved the CUP, the cancellation of the Williamson Act contracts, and a Development Agreement in fall of 2010. However, rather than

[1] County of San Benito, Draft Supplemental Environmental Impact Report, Panoche Valley Solar Project, CUP No. UP 1023-09-A, SCH No. 2010031008, December 2014; http://cosb.us/panoche-valley-solar-farm-project/#.VLWY4ntLWZN.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

approving the 420-MW project as originally proposed and analyzed in the Draft Environmental Impact Report ("2010 Draft EIR"), the County approved Alternative A Revised, a reduced-density alternative for a 339-MW plant on 3,201 acres ("Approved Project"). In August 2014, PVS requested that the County modify the approved CUP for the Approved Project. The solar facility under review in the SDEIR has been further reduced in size to 247 MW on 2,506 acres but would be constructed over a shorter 18-month timeframe as opposed to five years ("Revised Solar Project"). In addition, Pacific Gas & Electric ("PG&E") identified specific telecommunication upgrades that are required to serve the project which would be installed within the existing PG&E right-of-way and at existing PG&E facilities including installation of new optical ground wire on PG&E's Moss Landing-Panoche transmission line and two microwave towers ("PG&E Upgrades").[2] Together, the Revised Solar Project and the PG&E Upgrades comprise the Revised Project. The DSEIR "assesses the environmental impacts that may result from these incremental changes to the Approved Project" and "does not reanalyze the environmental impacts of the project as a whole."[3]

II. The DSEIR Analysis of Potential Impacts on Air Quality during Construction of PG&E Upgrades Is Flawed

B3-B1

Emissions during construction of the Revised Solar Project in San Benito County would affect air quality in the North Central Coast Air Basin ("NCCAB") which is under the jurisdiction of the Monterey Bay Unified Air Pollution Control District ("MBUAPCD"). PG&E Upgrades would occur partially within San Benito County and partially in Fresno County, which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District ("SJVAPCD"). The DSEIR advances multiple claims and statements to support its conclusions that emissions from construction of the Revised Solar Project and the PG&E Upgrades would be less than significant under both air districts' guidance. None of them survive scrutiny.

First, the DSEIR analyzes construction of the Revised Solar Project and PG&E Upgrades separately. As far as construction of these project components occur within the same air basin, NCCAB, and concurrently, their combined emissions must be analyzed and compared to applicable thresholds of significance.

B3-B2

Second, the DSEIR, citing to the MBUAPCD's 2008 *CEQA Air Quality Guidelines*, states that the district has not established thresholds of significance for equipment emissions and that "construction projects using typical construction equipment that temporarily emit ozone precursors are accommodated in the emissions inventory for State and federally required air quality management plans and would not have a

[2] DSEIR, pp. A-1 and B-1.

[3] DSEIR, p. A-1.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

significant impact on ozone concentrations."[4] The DSEIR omits one crucial sentence from the MBUAPCD's guidance: "The District should be consulted regarding emissions from non-typical equipment, e.g., grinders, and portable equipment."[5] The DSEIR does not indicate that the District was consulted and conveniently ignores the fact that the construction equipment required for the Revised Project hardly qualifies as "typical" – the MBUAPCD cites to "dump trucks, scrappers [sic], bulldozers, compactors and front-end loaders that temporarily emit precursors of ozone" as typical equipment. In fact, construction of the Revised Solar Project requires a number of non-typical equipment, including multiple pile drivers and generators, which have very high emissions compared to "typical" construction equipment, one or more truck-mounted cranes, and several welders which are portable equipment[6]; PG&E Upgrades require one or more crawler cranes, crawler drill rigs, and jet fuel-powered helicopters,[7] which would be used to transport electrical workers to the towers, deliver materials, and assist in pulling the new optical ground wire from tower to tower along the 17-mile PG&E Moss Landing-Panoche transmission line.[8]

B3-B2 cont.

Third, the DSEIR claims that the SJVAPCD has not established CEQA significance thresholds for construction emissions for either PM10 and PM2.5 or nitrogen oxides ("NOx") and reactive organic gases ("ROG"), which are ozone precursors.[9] This claim is mistaken. The DSEIR relies on the SJVAPCD's 2002 *Guide for Assessing and Mitigating Air Quality Impacts* for its claim; however, since publication of this document, the SJVAPCD adopted CEQA thresholds of significance for construction emissions of carbon monoxide ("CO"), NOx, ROG, sulfur oxides ("SOx"), PM10, and PM2.5.[10] (*See* Exhibit 1.) Emissions during construction of the PG&E Upgrades must be quantified and compared to these thresholds.

B3-B3

Fourth, while the DSEIR states that in lieu of CEQA significance thresholds for ozone precursors, projected emissions can be compared to the SJVAPCD's CEQA significance thresholds for operational emissions of NOx and ROG, it does not provide a corresponding quantitative analysis.[11] Instead, the DSEIR contends that although the construction of the new microwave communication towers would generate exhaust and

B3-B4

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[4] DSEIR, p. C.4-4.

[5] MBUAPCD, CEQA Air Quality Guidelines, 2008, p. 5-3; http://mbuapcd.org/pdf/CEQA_full%20%281%29.pdf.

[6] 2010 Final EIR, Appx. 3, Table 2-5.

[7] DSEIR, Table C.4-7, p. C.4-12.

[8] DSEIR, pp. B-27 and B-28.

[9] DSEIR, p. C.4-5.

[10] SJVAPCD, Air Quality Thresholds of Significance – Criteria Pollutants; http://www.valleyair.org/transportation/0714-GAMAQI-Criteria-Pollutant-Thresholds-of-Significance.pdf.

[11] DSEIR, p. C.4-5.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

fugitive dust (particulate matter) emissions, they "would not contribute substantially because the ambient levels for these pollutants in the San Joaquin Valley APCD are well below State and Federal ambient air quality standards." This claim is wide off the mark. Ambient levels for ozone and particulate matter in the San Joaquin Valley APCD are frequently (and far) above State and Federal ambient air quality standards. In fact, data obtained from the California Air Resources Board ("CARB") show that during 2011 through 2013, the ambient levels of ozone in the San Joaquin Valley Air Basin ("SJVAB") exceeded the federal 8-hour ambient air quality standard for ozone on 109, 105, and 89 days respectively, and the state 8-hour ambient air quality standard for ozone on 131, 113, and 112 days, respectively. (*See* Exhibit 2.) In other words, ambient levels of ozone exceeded federal and state ambient air quality standards approximately one third of the year. Due to these frequent and extremely unhealthy levels of ozone in the SJVAB, the SJVAPCD is currently designated as being in extreme nonattainment of federal ambient air quality standards for ozone and nonattainment of state ambient quality standards for ozone, as the DSEIR summarizes in Table C.4.3. Likewise, during 2011 through 2013 PM10 ambient levels in the SJVAB exceeded the state 24-hour ambient air quality standard for PM10 on 113, 55, and 60 days, respectively. (*See* Exhibit 3.) The SJVAB is currently designated non-attainment for the state ambient air quality standards for PM10 as well as for the federal and state ambient air quality standards for particulate matter equal to or smaller than 2.5 micrometers ("PM2.5"), as summarized by the DSEIR in Table C.4.3.

B3-B4 cont.

Fifth, the DSEIR claims that emissions during construction of the PG&E Upgrades "would not occur at significant levels due to the short construction period, the limited extent of equipment use, and the small footprint of the proposed upgrades"[12] The overall duration of the construction period, approximately 16 weeks[13], is irrelevant for short-term impacts on air quality (*e.g.*, on an hourly or daily basis) and the DSEIR fails to provide any information on equipment use such as hours of use per day, horsepower, load factors, etc. that would support its claim.

B3-B5

Finally, despite the fact that the DSEIR (mistakenly) claims that the SJVAPCD does not have a CEQA threshold of significance for PM10 emissions from construction, it concludes nonetheless that PM10 emissions during construction of the PG&E Upgrades, "would not result in an exceedance of … SJVAPCD PM10 thresolds [sic]."[14] Similarly, the DSEIR claims that the "amount of equipment that will be used for a short duration will not generate emissions of criteria pollutants above applicable thresholds"[15] when it claims elsewhere that neither the MBUAPCD nor the SJVAPCD

B3-B6

[12] DSEIR, p. C.4-12.

[13] *Ibid.*

[14] *Ibid.*

[15] *Ibid.*

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

have established CEQA thresholds of significance for ozone precursors.[16] These incongruous and contradictory statements do not inspire confidence in the DSEIR's conclusion that construction of the PG&E Upgrades would result in less than significant impacts on air quality.

B3-B6 cont.

The DSEIR should be revised to include a quantitative analysis of construction emissions compared to the SJVAPCD's CEQA thresholds of significance for construction.

III. The DSEIR Fails to Provide Adequate Information to Estimate Construction Emissions during PGE Upgrades

B3-B7

Construction of the PG&E Upgrades would be conducted over a period of 16 weeks. Installation of the optical ground wire on the existing Moss Landing-Panoche transmission line would require operation of a number of heavy duty diesel-powered construction equipment as well as the use of helicopters. The DSEIR provides a list of construction equipment that would be used for installation of the optical ground wire in Table C.4-7 but fails to provide information about hours of use per day, horsepower, fuel use, load factors, number of helicopter landings and takeoffs, etc. Further, this list appears incomplete as it does not include some equipment that is described elsewhere in the DSEIR or is typically required for similar installations, including crew trucks and trailer trucks for installing temporary wood poles required at overhead crossings of public roadways or existing transmission or distribution lines and permanent wood poles for the crossing of two existing 500 kV transmission lines;[17] helicopter support trucks for refueling at the landing zones; water trucks for dust suppression; number of construction workers and vehicle miles traveled within each air district; and welding equipment for upgrades to the steel attachments at each of the 75 existing towers to accommodate installation of the optical ground wire.[18] Further, the list appears to underestimate the amount of equipment required, *e.g.*, only one helicopter is listed; elsewhere the DSEIR indicates that more than one helicopter would be used.[19] The DSEIR should be revised to include accurate information about all construction equipment and quantitative emission estimates.

IV. The DSEIR Fails to Require Adequate Mitigation for Emissions during Construction of the Revised Solar Project

B3-B8

The DSEIR provides a modeling analysis by AMEC, *CalEEMod Analysis of Potential Particulate Emissions from Construction Activities at the Panoche Valley Solar Farm*

[16] DSEIR, pp. C.4.4 and C.4-5.

[17] *See* DSEIR, p. B-27.

[18] DSEIR, p. B-28.

[19] *Ibid.*

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Project,[20] that sought to determine maximum construction activities that would not result in PM10 emissions in excess of the MBUAPCD's CEQA threshold of significance of 82 pounds per day ("lbs/day"). This modeling analysis determined that PM10 emissions from a maximum area disturbed of 50 acres per day combined with 35 haul truck trips importing 1,200 tons fill soil per day would not exceed the MBUAPCD's CEQA threshold of significance for PM10 assuming the site is watered three times per day and construction equipment is Tier 2 certified.[21]

B3-B8 cont.

I note that while watering three times per day and 50 acres of maximum site disturbance are incorporated into the DSEIR's mitigation measures, the number of haul trucks per day (35) and the quantity of soil imported (1200 tons/day) are not reflected in the DSEIR's mitigation measures.

V. The DSEIR Fails to Analyze Increase in Operational Fugitive Dust Emissions due to Changing Gravel Access Roads to Dirt Path Transportation Corridors and from New Perimeter Road

B3-B9

The DSEIR explains that previously proposed gravel access roads on the Revised Solar Project site would be replaced by dirt path transportation corridors. In addition, the Revised Project would include a graveled perimeter road…"[22] Yet, the DSEIR does not quantify the increase of fugitive dust particulate matter emissions from these proposed changes under the Revised Project. I recommend that the County revise operational emissions for the Revised Solar Project to account for fugitive dust emissions from these roads.

VI. The DSEIR Fails to Adequately Mitigate Potential Valley Fever Impacts

B3-B10

Valley Fever, also called desert fever, San Joaquin Valley fever, desert rheumatism, or coccidioidomycosis (short cocci), is an infectious disease caused by inhaling the spores of *Coccidioides immitis*, a soil-dwelling fungus. Spores, or arthroconidia, are released into the air when infected soils are disturbed, *e.g.*, by construction activities, agricultural operations, dust storms, or during earthquakes. The disease is endemic (native and common) in the semiarid regions of the southwestern United States. Typical symptoms of Valley Fever include fatigue, fever, cough, headache, shortness of breath, rash, muscle aches, and joint pain. Symptoms of advanced Valley Fever include chronic pneumonia, meningitis, skin lesions, and bone or joint infections. The most common clinical presentation of Valley Fever is a self-

[20] Technical Memorandum from Stephen Ochs, AMEC, to Panoche Valley Solar, Re: CalEEMod Analysis of Potential Particulate Emissions from Construction Activities at the Panoche Valley Solar Farm Project, August 8, 2014; http://cosb.us/wp-content/uploads/PM10-CalEEMod.pdf.

[21] *Ibid.*

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

limited acute or subacute community-acquired pneumonia that becomes evident 13 weeks after infection.[23] No vaccine or known cure exists for the disease.[24]

B3-B10 cont.

The DSEIR recognizes that the Revised Solar Project and PG&E Upgrades would occur in an area favorable to the growth of the Valley Fever vector and discusses the recent rise in Valley Fever cases and deaths in the southwestern United States, especially in California. The DSEIR notes that during construction of two projects similar to the Revised Project, the 250-MW California Valley Solar Ranch and the 550-MW Topaz Solar Farm in San Luis Obispo County, 28 workers became infected with Valley Fever.[25] To reduce the potential exposure to fugitive dust, which may contain the fungus spores, and likelihood of contracting Valley Fever for construction workers and the public, the DSEIR refers to Mitigation Measures AQ-1.1 (Develop and implement a fugitive dust plan) and AQ-1.2 (Designate a dust complaint monitor). In addition, the DSEIR proposes Mitigation Measure HZ-7-7:

- The Applicant shall prepare a detailed informational brochure explaining Valley Fever, its cause, and its symptoms, and the populations most at risk for the disease. The brochure shall incorporate information provided the California Department of Public Health (DPH) (http://www.cdph.ca.gov/healthinfo/discond/Pages/Coccidioidomycosis.aspx) and shall be reviewed by a DPH for adequacy at least 30 days before the start of construction. The approved brochure shall be provided to all residents of the Panoche Valley and all families of students at the Panoche Valley School.
- The Applicant shall make breathing protection gear available to all workers, at their request and at no cost to workers.
- As part of the Safe Worker Environmental Awareness Program, the Applicant shall educate workers to recognize the symptoms of Valley Fever, and to promptly report suspected symptoms of work-related Valley Fever to a supervisor.[26]

These measures, while a step in the right direction, are not as comprehensive as the recommendations to limit exposure to Valley Fever developed by the County of San Luis Obispo's Public Health Department in conjunction with the California Department of Public Health in response to an outbreak of Valley Fever in construction workers at a

[23] *See, e.g.*, Lisa Valdivia, David Nix, Mark Wright, Elizabeth Lindberg, Timothy Fagan, Donald Lieberman, Prien Stoffer, Neil M. Ampel, and John N. Galgiani, Coccidioidomycosis as a Common Cause of Community-acquired Pneumonia, Emerging Infectious Diseases, v. 12, no. 6, June 2006; http://europepmc.org/articles/PMC3373055.

[24] Rebecca Plevin, National Public Radio, Cases Of Mysterious Valley Fever Rise In American Southwest, May 13, 2013; http://www.npr.org/blogs/health/2013/05/13/181880987/cases-of-mysterious-valley-fever-rise-in-american-southwest.

[25] DSEIR, p. C.9-1.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

construction site for a solar facility. These recommended measures go far beyond the conventional dust control measures recommended in the DSEIR for the Revised Project:

B3-B10 cont.

1. *Implement comprehensive Injury and Illness Prevention Program (required by Title 8, Section 3203) ensuring safeguards to prevent Valley Fever are included.*
2. *Work with a medical professional with expertise in cocci to develop a training program for all employees discussing the following issues: potential presence of C. immites in soils; the risks involved with inhaling spores; how to recognize common symptoms (which resemble common viral infections, and may include fatigue, cough, chest pain, fever, rash, headache, and body and joint ache); requesting prompt reporting of suspected symptoms to a supervisor and health care provider; discussing worker entitlement to receive prompt medical care if they suspect symptoms of work-related Valley Fever; and requesting the use of personal protection measures as outlined below.*
3. *Control exposure to dust:*
   - Consult with local Air Pollution Control District Compliance Assistance programs and with California Occupational Safety and Health Administration ("Cal/OSHA") compliance program regarding meeting the requirements of dust control plans and for specific methods of dust control. These methods may include wetting the soil while ensuring that the wetting process does not raise dust or adversely affect the construction process.
   - Provide high-efficiency particulate ("HEP")-filtered, air-conditioned enclosed cabs on heavy equipment. Train workers on proper use of cabs, such as turning on air conditioning prior to using the equipment.
   - Provide communication methods, such as 2-way radios, for use in enclosed cabs.
   - Provide National Institute for Occupational Safety and Health ("NIOSH")-approved respirators for workers without a prior history of Valley Fever.
   - Half-face respirators equipped with N-100 or P-100 filters should be used during digging. Employees should wear respirators when working near earth moving machinery.
   - Employees should be medically evaluated, fit-tested, and properly trained on the use of the respirators, and a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Protection Standard (8 CCR 5144) should be in place.
   - Prohibit eating and smoking at the worksite, and provide separate, clean eating areas with hand-washing facilities.
   - Avoid outdoor construction operations during unusually windy conditions.
   - Consider limiting outdoor construction during the fall to essential jobs only, as the risk of cocci infection is higher during this season.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

4. *Prevent transport of cocci outside endemic areas:*
   - Thoroughly clean equipment, vehicles, and other items before they are moved off-site to other work locations.
   - Provide workers with coveralls daily, lockers (or other system for keeping work and street clothing and shoes separate), daily changing and showering facilities.
   - Clothing should be changed after work every day, preferably at the work site.
   - Train workers to recognize that cocci may be transported offsite on contaminated equipment, clothing, and shoes; alternatively, consider installing boot-washing.
   - Post warnings onsite and consider limiting access to visitors, especially those without adequate training and respiratory protection.
5. *Improve medical surveillance for employees*
   - Employees should have prompt access to medical care, including suspected work-related illnesses and injuries.
   - Work with a medical professional to develop a protocol to medically evaluate employees who have symptoms of Valley Fever.
   - Consider preferentially contracting with 1-2 clinics in the area and communicate with the health care providers in those clinics to ensure that providers are aware that Valley Fever has been reported in the area. This will increase the likelihood that ill workers will receive prompt, proper and consistent medical care.
   - Respirator clearance should include medical evaluation for all new employees, annual re-evaluation for changes in medical status, and annual training, and fit-testing.
   - Please note that skin testing is not recommended for evaluation of Valley Fever.
   - If an employee is diagnosed with Valley Fever, a physician must determine if the employee should be taken off work, when they may return to work, and what type of work activities they may perform.[27]

Two other studies have developed complementary recommendations to minimize the incidence of Valley Fever. The U.S. Geological Survey ("USGS") has developed recommendations to protect geological field workers in endemic areas.[28] An occupational study of Valley Fever in California workers also developed recommendations to protect those working and living in endemic areas.[29] These two

B3-B10 cont.

[27] San Luis Obispo County Health Agency, Recommendations for Workers to Prevent Infection by Valley Fever in SLO County; http://www.slocounty.ca.gov/Assets/PH/Epidemiology/Cocci+Recomendations.pdf.

[28] Fisher et al. 2000.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

sources identified the following measures, in addition to those identified by the County of San Luis Obispo's Public Health Department, to minimize exposure to Valley Fever:

B3-B10 cont.

- Pretest soils to determine if each work location is within an endemic area.
- Implement a vigorous program of medical surveillance.
- Implement aggressive enforcement of respiratory use where exposures from manual digging are involved.
- Test all potential employees for previous infection to identify the immune population and assign immune workers to operations involving known heavy exposures.
- Hire resident labor whenever available, particularly for heavy dust exposure work.
- All workers in endemic areas should use dust masks to protect against inhalation of particles as small as 0.4 microns. Mustaches or beards may prevent a mask from making an airtight seal against the fact and thus should be discouraged.
- Establish a medical program, including skin tests on all new employees, retesting of susceptibles, and prompt treatment of respiratory illness in susceptibles; periodic medical examination or interview to discover a history of low grade or subclinical infection, including repeated skin testing of susceptibles.

All of the above health-protective measures are feasible for the Revised Project and should be required in an enhanced dust control plan to reduce the risk for construction workers, on-site employees and the public of contracting Valley Fever.

VII. Recommendation

Based on the above discussion, I find that the DSEIR is substantially flawed and fails to identify and mitigate significant impacts. I recommend that the County address the above issues in a Revised DSEIR.

With best regards,

Petra Pless, D.Env.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Attachment
Resumé for Petra Pless

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Petra Pless, D.Env.

440 Nova Albion Way, #2
San Rafael, CA 94903
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(815) 572-8600 fax
petra.pless@gmail.com

Dr. Pless is a court-recognized expert with over 20 years of experience in environmental consulting conducting and managing interdisciplinary environmental research projects and preparing and reviewing environmental permits and other documents for U.S. and European stakeholder groups. Her broad-based experience includes air quality and air pollution control; water quality, water supply, and water pollution control; biological resources; public health and safety; noise studies; California Environmental Quality Act ("CEQA"), Clean Air Act ("CAA"), and National Environmental Policy Act ("NEPA") review; industrial ecology and risk assessment; and use of a wide range of environmental software.

EDUCATION

Doctorate in Environmental Science and Engineering (D.Env.), University of California Los Angeles, 2001

Master of Science (equivalent) in Biology (focus on Limnology), Technical University of Munich, Germany, 1991

PROFESSIONAL HISTORY

Pless Environmental, Inc., Principal, 2008–present

Environmental Consultant, Sole Proprietor, 2006–2008

Leson & Associates (previously Leson Environmental Consulting), Kensington, CA, Environmental Scientist/Project Manager, 1997–2005

University of California Los Angeles, Graduate Research Assistant/Teaching Assistant, 1994–1996

ECON Research and Development, Environmental Scientist, Ingelheim, Germany, 1992–1993

Biocontrol, Environmental Projects Manager, Ingelheim, Germany, 1991–1992

REPRESENTATIVE EXPERIENCE

Air Quality and Pollution Control

Projects include CEQA/NEPA review; CAA attainment and non-attainment new source review; prevention of significant deterioration ("PSD") and Title V permitting; control technology analyses (BACT, LAER, RACT, BARCT, BART, MACT); technology evaluations and cost-effectiveness analyses; criteria and toxic pollutant and greenhouse gas emission inventories; emission offsets; ambient and source monitoring; analysis of emissions estimates and ambient air pollutant concentration modeling. Some typical projects include:

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Petra Pless, D.Env.

- Provided expert support for intervention in California Energy Commission ("CEC") proceedings for numerous power plants including natural gas-fired, integrated gasification combined-cycle, geothermal (flash and binary) solar (thermal and photovoltaic) facilities with respect to air quality including emission reduction credits, hazards and hazardous materials, public health, noise, and biological resources.
- Critically reviewed and prepared technical comments on the air quality, biology, noise, water quality, and public health and safety sections of CEQA/NEPA documents for numerous commercial, residential, and industrial projects (*e.g.*, power plants, airports, residential developments, retail developments, university expansions, hospitals, refineries, slaughterhouses, asphalt plants, food processing facilities, slaughterhouses, feedlots, printing facilities, mines, quarries, landfills, and recycling facilities) and provided litigation support in a number of cases filed under CEQA.
- Critically reviewed and prepared technical comments on the air quality and public health sections of the Los Angeles Airport Master Plan (Draft, Supplement, and Final Environmental Impact Statement/Environmental Impact Report) for the City of El Segundo. Provided technical comments on the Draft and Final General Conformity Determination for the preferred alternative submitted to the Federal Aviation Administration.
- Prepared comments on proposed PSD and Title V permit best available control technology ("BACT") analysis for greenhouse gas emissions from a proposed direct reduced iron facility in Louisiana.
- Prepared technical comments on U.S. Environmental Protection Agency ("EPA")'s *Inhalation of Fugitive Dust: A Screening Assessment of the Risks Posed by Coal Combustion Waste Landfills* prepared for EPA's proposed coal combustion waste landfill rule.
- Prepared technical comments on the potential air quality impacts of the California Air Resources Board's *Proposed Actions to Further Reduce Particulate Matter at High Priority California Railyards*.
- For several California refineries, evaluated compliance of fired sources with Bay Area Air Quality Management District Rule 9-10. This required evaluation and review of hundreds of source tests to determine if refinery-wide emission caps and compliance monitoring provisions were being met.
- Critically reviewed and prepared technical comments on draft Title V permits for several refineries and other industrial facilities in California.
- Evaluated the public health impacts of locating big-box retail developments in densely populated areas in California and Hawaii. Monitored and evaluated impacts of diesel exhaust emissions and noise on surrounding residential communities.
- In conjunction with the permitting of several residential and commercial developments, conducted studies to determine baseline concentrations of diesel exhaust particulate matter using an aethalometer.
- For an Indiana steel mill, evaluated technology to control NOx and CO emissions from fired sources, including electric arc furnaces and reheat furnaces, to establish BACT. This required a comprehensive review of U.S. and European operating experience. The lowest emission levels were being achieved by steel mills using selective catalytic reduction ("SCR") and selective non-catalytic reduction ("SNCR") in Sweden and The Netherlands.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Petra Pless, D.Env.

- For a California petroleum coke calciner, evaluated technology to control NOx, CO, VOCs, and PM10 emissions from the kiln and pyroscrubbers to establish BACT and LAER. This required a review of state and federal clearinghouses, working with regulatory agencies and pollution control vendors, and obtaining and reviewing permits and emissions data from other similar facilities. The best-controlled facilities were located in the South Coast Air Quality Management District.
- For a Kentucky coal-fired power plant, identified the lowest NOx levels that had been permitted and demonstrated in practice to establish BACT. Reviewed operating experience of European, Japanese, and U.S. facilities and evaluated continuous emission monitoring data. The lowest NOx levels had been permitted and achieved in Denmark and in the U.S. in Texas and New York.
- In support of efforts to lower the CO BACT level for power plant emissions, evaluated the contribution of CO emissions to tropospheric ozone formation and co-authored report on same.
- Critically reviewed and prepared technical comments on applications for certification ("AFCs") for numerous natural-gas fired, solar, biomass, and geothermal power plants in California permitted by the California Energy Commission. The comments addressed construction and operational emissions inventories and dispersion modeling, BACT determinations for combustion turbine generators, fluidized bed combustors, diesel emergency generators, etc.
- Critically reviewed and prepared technical comments on draft PSD permits for several natural gas-fired power plants in California, Indiana, and Oregon. The comments addressed emission inventories, greenhouse gas emissions, BACT, case-by-case MACT, compliance monitoring, cost-effectiveness analyses, and enforceability of permit limits.
- For a California refinery, evaluated technology to control NOx and CO emissions from CO Boilers to establish RACT/BARCT to comply with BAAQMD Rule 9-10. This required a review of BACT/RACT/LAER clearinghouses, working with regulatory agencies across the U.S., and reviewing federal and state regulations and State Implementation Plans ("SIPs"). The lowest levels were required in a South Coast Air Quality Management District rule and in the Texas SIP.
- In support of several federal lawsuits filed under the federal Clean Air Act, prepared cost-effectiveness analyses for SCR and oxidation catalysts for simple cycle gas turbines and evaluated opacity data.
- Provided litigation support for a CEQA lawsuit addressing the adequacy of pollution control equipment at a biomass cogeneration plant.
- Prepared comments and provided litigation support on several proposed regulations including the Mojave Desert Air Quality Management District Rule 1406 (fugitive dust emission reduction credits for road paving); South Coast Air Quality Management District Rule 1316, San Joaquin Valley Air Pollution Control District Rule 2201, Antelope Valley Air Quality Management District Regulation XIII, and Mojave Desert Air Quality Management District Regulation XIII (implementation of December 2002 amendments to the federal Clean Air Act).
- Critically reviewed draft permits for several ethanol plants in California, Indiana, Ohio, and Illinois and prepared technical comments.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

- Reviewed state-wide average emissions, state-of-the-art control devices, and emissions standards for construction equipment and developed recommendations for mitigation measures for numerous large construction projects.
- Researched sustainable building concepts and alternative energy and determined their feasibility for residential and commercial developments, *e.g.*, regional shopping malls and hospitals.
- Provided comprehensive environmental and regulatory services for an industrial laundry chain. Facilitated permit process with the South Coast Air Quality Management District. Developed test protocol for VOC emissions, conducted field tests, and used mass balance methods to estimate emissions. Reduced disposal costs for solvent-containing waste streams by identifying alternative disposal options. Performed health risk screening for air toxics emissions. Provided permitting support. Renegotiated sewer surcharges with wastewater treatment plant. Identified new customers for shop-towel recycling services.
- Designed computer model to predict performance of biological air pollution control (biofilters) as part of a collaborative technology assessment project, co-funded by several major chemical manufacturers.
- Experience using a wide range of environmental software, including air dispersion models, air emission modeling software, database programs, and geographic information systems.

Water Quality and Pollution Control

Experience in water quality and pollution control, including surface water and ground water quality and supply studies, evaluating water and wastewater treatment technologies, and identifying, evaluating and implementing pollution controls. Some typical projects include:

- Evaluated impacts of on-shore oil drilling activities on large-scale coastal erosion in Nigeria.
- For a 500-MW combined-cycle power plant, prepared a study to evaluate the impact of proposed groundwater pumping on local water quality and supply, including a nearby stream, springs, and a spring-fed waterfall. The study was docketed with the California Energy Commission.
- For a 500-MW combined-cycle power plant, identified and evaluated methods to reduce water use and water quality impacts. These included the use of zero-liquid-discharge systems and alternative cooling technologies, including dry and parallel wet-dry cooling. Prepared cost analyses and evaluated impact of options on water resources. This work led to a settlement in which parallel wet dry cooling and a crystallizer were selected, replacing 100 percent groundwater pumping and wastewater disposal to evaporation ponds.
- For a homeowner's association, reviewed a California Coastal Commission staff report on the replacement of 12,000 linear feet of wooden bulkhead with PVC sheet pile armor. Researched and evaluated impact of proposed project on lagoon water quality, including sediment resuspension, potential leaching of additives and sealants, and long-term stability. Summarized results in technical report.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Petra Pless, D.Env.

Applied Ecology, Industrial Ecology and Risk Assessment

Experience in applied ecology, industrial ecology and risk assessment, including human and ecological risk assessments, life cycle assessment, evaluation and licensing of new chemicals, and fate and transport studies of contaminants. Experienced in botanical, phytoplankton, and intertidal species identification and water chemistry analyses. Some typical projects include:

- Conducted technical, ecological, and economic assessments of product lines from agricultural fiber crops for European equipment manufacturer; co-authored proprietary client reports.
- Developed life cycle assessment methodology for industrial products, including agricultural fiber crops and mineral fibers; analyzed technical feasibility and markets for thermal insulation materials from natural plant fibers and conducted comparative life cycle assessments.
- For the California Coastal Conservancy, San Francisco Estuary Institute, Invasive Spartina Project, evaluated the potential use of a new aquatic pesticide for eradication of non-native, invasive cordgrass (*Spartina spp.*) species in the San Francisco Estuary with respect to water quality, biological resources, and human health and safety. Assisted staff in preparing an amendment to the Final EIR.
- Evaluated likelihood that organochlorine pesticide concentrations detected at a U.S. naval air station are residuals from past applications of these pesticides consistent with manufacturers' recommendations. Retained as expert witness in federal court case.
- Prepared human health risk assessments of air pollutant emissions from several industrial and commercial establishments, including power plants, refineries, and commercial laundries.
- Managed and conducted laboratory studies to license pesticides. This work included the evaluation of the adequacy and identification of deficiencies in existing physical/chemical and health effects data sets, initiating and supervising studies to fill data gaps, conducting environmental fate and transport studies, and QA/QC compliance at subcontractor laboratories. Prepared licensing applications and coordinated the registration process with German environmental protection agencies. This work led to regulatory approval of several pesticide applications in less than six months.
- Designed and implemented database on physical/chemical properties, environmental fate, and health impacts of pesticides for a major multi-national pesticide manufacturer.
- Designed and managed experimental toxicological study on potential interference of delta-9-tetrahydrocannabinol in food products with U.S. employee drug testing; co-authored peer-reviewed publication.
- Critically reviewed and prepared technical comments on applications for certification for several natural-gas fired, solar, and geothermal power plants and transmission lines in California permitted by the California Energy Commission. The comments addressed avian collisions and electrocution, construction and operational noise impacts on wildlife, risks from brine ponds, and impacts on endangered species.
- For a 180-MW geothermal power plant, evaluated the impacts of plant construction and operation on the fragile desert ecosystem in the Salton Sea area. This work included baseline noise monitoring and assessing the impact of noise, brine handling and disposal, and air emissions on local biota, public health, and welfare.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Petra Pless, D.Env.

- Designed research protocols for a coastal ecological inventory in Southern California; developed sampling methodologies, coordinated field sampling, determined species abundance and distribution in intertidal zone, and conducted statistical data analyses.
- Designed and conducted limnological study on effects of physical/chemical parameters on phytoplankton succession; performed water chemistry analyses and identified phytoplankton species; co-authored two journal articles on results.

PRO BONO ACTIVITIES

Founding member of "SecondAid," a non-profit organization providing tsunami relief for the recovery of small family businesses in Sri Lanka. (www.secondaid.org.)

PUBLICATIONS & RECOMMENDATIONS

Available upon request.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Exhibit 1

SJVAPCD
Air Quality Thresholds of Significance – Criteria Pollutants

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

San Joaquin Valley Air Pollution Control District

HEALTHY AIR LIVING

Air Quality Thresholds of Significance – Criteria Pollutants

The San Joaquin Valley Air Pollution Control District's current adopted thresholds of significance for criteria pollutant emissions and their application is presented in the following table.

Air Quality Thresholds of Significance – Criteria Pollutants

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	*Emissions (tpy)*	*Emissions (tpy)*
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Exhibit 2

CARB
San Joaquin Valley Air Basin 2011-2013
Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily Maximum 8-Hour Ozone Averages

in the San Joaquin Valley Air Basin

	2011		2012		2013	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Sep 29	0.105	Jul 12	0.116	Jun 8	0.106
Second High:	Jun 22	0.104	Jul 11	0.107	Jun 7	0.104
Third High:	Sep 22	0.104	Jul 10	0.103	Jun 2	0.099
Fourth High:	Jul 3	0.103	Aug 10	0.103	Jul 20	0.097
California:						
First High:	Sep 22	0.105	Jul 12	0.116	Jun 8	0.106
Second High:	Sep 29	0.105	Jul 11	0.108	Jun 7	0.104
Third High:	Jun 22	0.104	Jul 10	0.103	Jun 2	0.100
Fourth High:	Jul 3	0.104	Aug 10	0.103	Jul 20	0.097
National:						
# Days Above the Standard:		109		105		89
Nat'l Standard Design Value:		0.099		0.098		0.094
Nat'l Year Coverage Range:		77 - 100		0 - 100		67 - 100
California:						
High # Days Above the Standard:		131		134		112
High State Designation Value:		0.114		0.116		0.116
High Valid EPDC:		0.113		0.112		0.109
State Year Coverage Range:		75 - 100		0 - 100		66 - 100

Notes:

Eight-hour ozone averages and related statistics are available in the San Joaquin Valley Air Basin between 1974 and 2013. Some years in this range may not be represented.
All averages expressed in parts per million.
An exceedance of a standard is not necessarily related to a violation of the standard.
Year Coverage Range represents the lowest and highest Year Coverages of all of the monitoring sites in the air basin.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:

8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Exhibit 3

CARB
San Joaquin Valley Air Basin 2011-2013
Top 4 Summary: Highest 4 Daily 24-Hour PM10 Averages

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

California Environmental Protection Agency
Air Resources Board

Top 4 Summary: Highest 4 Daily 24-Hour PM10 Averages

in the San Joaquin Valley Air Basin

	2011		2012		2013	
	Date	24-Hr Average	Date	24-Hr Average	Date	24-Hr Average
National:						
First High:	Nov 2	151.8	Jun 21	138.6	Oct 3	224.2
Second High:	Dec 28	110.3	Oct 17	126.0	Dec 18	183.9
Third High:	Dec 29	109.0	Nov 15	99.1	Dec 17	164.8
Fourth High:	Dec 10	108.0	Jan 13	98.3	Nov 14	163.1
California:						
First High:	Nov 2	154.0	Jan 13	125.8	Dec 18	183.6
Second High:	Dec 28	116.7	Jan 11	118.3	Nov 12	123.5
Third High:	Dec 29	114.6	Jan 1	117.7	Nov 6	114.7
Fourth High:	Dec 10	113.3	Jan 14	116.6	Oct 19	98.5
National:						
Estimated # Days > 24-Hour Std:		0.0		0.0		3.8
Measured # Days > 24-Hour Std:		0		0		4
3-Yr Avg Est # Days > 24-Hr Std:		1.0		0.0		1.0
High Annual Average:		*44.8*		*45.1*		*65.2*
High 3-Year Average:		*41*		*38*		*44*
California:						
Estimated # Days > 24-Hour Std:		116.4		89.4		122.3
Measured # Days > 24-Hour Std:		113		55		60
High Annual Average:		44.2		41.4		45.6
High 3-Year Max Annual Average:		47		44		46
High Year Coverage:		100		100		—

Notes:

Daily PM10 averages and related statistics are available in the San Joaquin Valley Air Basin between 1988 and 2013. Some years in this range may not be represented.
All averages expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
An exceedance of a standard is not necessarily related to a violation of the standard.
All values listed above represent midnight-to-midnight 24-hour averages and may be related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on local conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on local conditions). National statistics are based on standard conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* means there was insufficient data available to determine the value.

Available Pollutants:
8-Hour Ozone | Hourly Ozone | PM2.5 | PM10 | Carbon Monoxide | Nitrogen Dioxide | State Sulfur Dioxide | Hydrogen Sulfide

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

ATTACHMENT C

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Tom Myers, Ph.D.
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775-530-1483
tom_myers@charter.net

January 30, 2015

Meghan A. Quinn
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: Comments on the Draft Supplement Environmental Impact Review for the Panoche Valley Solar Project

Dear Ms. Quinn:

I have reviewed the hydrogeologic aspects of the proposed solar project as described in the draft supplemental environmental impact report prepared for the Panoche Valley Solar Project (DSEIR). This letter presents my comments. B3-C1

My experience includes a Ph.D. and M.S. in Hydrology/Hydrogeology from the University of Nevada, Reno, and a B.S. in Civil Engineering from the University of Colorado. I have approximately 20 years of experience consulting and researching hydrogeology, including groundwater modeling, and fluvial morphology. Much of my graduate research concerned riparian systems, including fluvial morphology and the impacts of flooding on stream channels. My curriculum vitae is attached after the references.

The project site is in the County of San Benito (County) in Panoche Valley (DSEIR, B-1) about 15 miles east of Pinnacles National Park (DSEIR, Figure B-1). The project description does not provide a topographic map or otherwise discuss elevations of the project; this is a drawback to the project description that prevents the reader from obtaining a good overview of the site upon a first reading. The ground surface elevations reported for wells in Geologia (2010a) range from about 1200 to 1350 feet (ft) above mean sea level (amsl). The project area is shown in Figure 1.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-C1 cont.

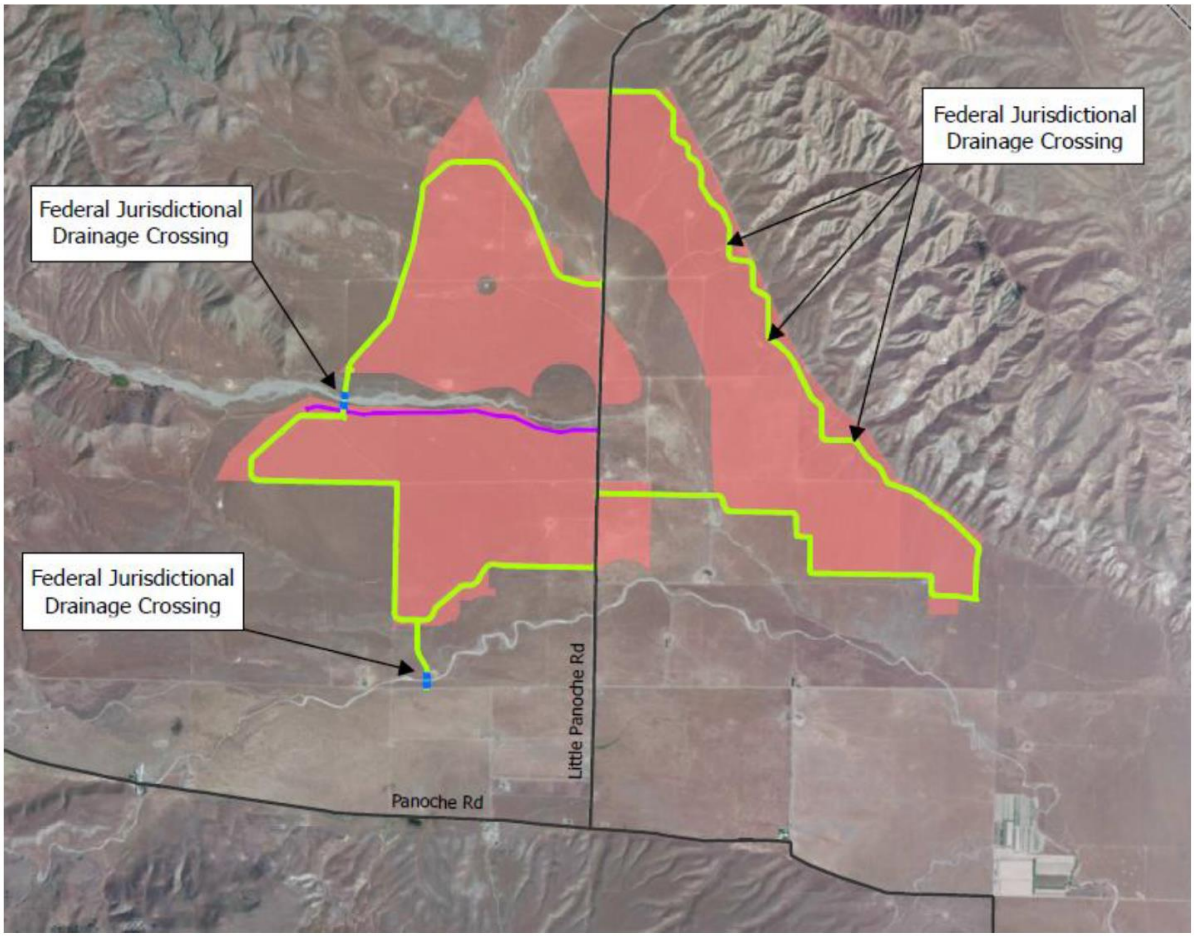

Figure 1: Snapshot of DSEIR Figure B-3 showing the project site, perimeter roads, and jurisdictional crossings.

The project had originally been proposed in a larger form and approved in a final impact review issued in 2010 (FEIR). The number of photovoltaic (PV) panels have been reduced from a range of three to four million to approximately one million. This is not as large a decrease as the numbers suggest because the currently-proposed panels are 3'x6' whereas in the approved 2010 project, the panels measured 2'x4', so the total area covered directly by panels reduced from 734 acres (assuming 4 million panels) to 413 acres. The panels would be constructed in rows spaced from 10 to 35 ft apart, a reduction from a proposed range of 15 to 62 ft; the reduction is to prevent shading of adjacent rows (DSEIR, p B-4) although there is no description of what controls the exact spacing. The space between rows would be used as transportation quarters but allowed to simply be dirt paths with no graveling or compaction (other than occurs due to usage). The DSEIR should include a mitigation measure or applicant proposed measure setting a speed limit for transport in these areas to limit impacts from erosion. The perimeter road, required for emergency access, would be 20 ft wide with 20' by 300' pullouts. The

B3-C2

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

perimeter roads would include five crossings of federally jurisdictional washes, as discussed in detail below. The DSEIR is supplemental to the FEIR and considers in detail only the changes in the project. B3-C3

One way this project increases impacts is to have higher pumping albeit for a shorter time period. The construction period will be reduced from five years to 18 months, but the groundwater pumping rate during construction will be higher than projected previously and could cause more drawdown. One reason for the increased pumping is that there will be three temporary construction water ponds filled with 4.4 million gallons of water and three 20,000-gallon water tanks (DSEIR, p B-7).

The focus of this review is on the water resource impacts as tabulated on DSEIR, p c15-4. Impacts WR-1 through WR-6 are all potentially significant, as will be explained in this letter.

WR1. The project may substantially deplete local groundwater supplies and interfere with groundwater recharge. B3-C4

Most of the technical hydrogeologic analysis was presented in two groundwater impact reports prepared for the DSEIR (Matthews and Haizlip 2014a and b) and two hydrogeologic analyses (Geologia 2010a and b) prepared for the FEIR. Matthews and Haizlip (2014a) is a revision of Matthews and Haizlip (2014b) to consider an 18-month construction period whereas the earlier report analyzed a 24-month period. The pumping regime is more precisely detailed in Matthews and Haizlip (2014a), with four pumping periods and different rates specified as opposed to two in Matthews and Haizlip (2014b). The total pumpage for 18 months would be 384 acre-feet and the long-term operational pumping is 2533 gpd or less than 3 af/year. Geologia (2010a and b) describes hydrogeology and estimates recharge, but does not make a prediction of drawdown due to the proposed project.

Geologia (2010b) indicates the valley has two groundwater-bearing zones. The upper zone is subdivided into two or three zones, from 90 to 170 ft bgs and from 180 to 400 ft bgs. This is a classic alluvial aquifer with highly heterogeneous zones with variable transmissivity separated by layers of low-transmissivity clay. Geologia (2010b) indicated that many wells had been drilled to 600 ft but only screened to from 200 to 400 ft bgs because the deeper layers were low-yielding silt. This description also indicates that most of the wells and groundwater flow would behave as if in a confined aquifer. The lower groundwater bearing zone has been developed in just two very high producing wells that are about 1000 ft bgs (Geologia 2010b).

Groundwater levels in most wells in the valley have trended upward since the 1970s by from 10 to 30 ft, with some (well #28) recovering by more than 100 ft (Figure 2). Most had been steady from the late 1990s through 2008 (Id.). Two deeper wells (well #s 10 and 25) have water levels

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

more than 150 ft bgs which means that the deeper aquifer has lower groundwater level and that there probably is downward flow (recharge) from the upper to lower layer. Despite the general recovery since the 1970s, over the past five years (2009 through 2014), groundwater levels have decreased in about half of the wells (Matthews and Haizlip 2014b).

B3-C4 cont.

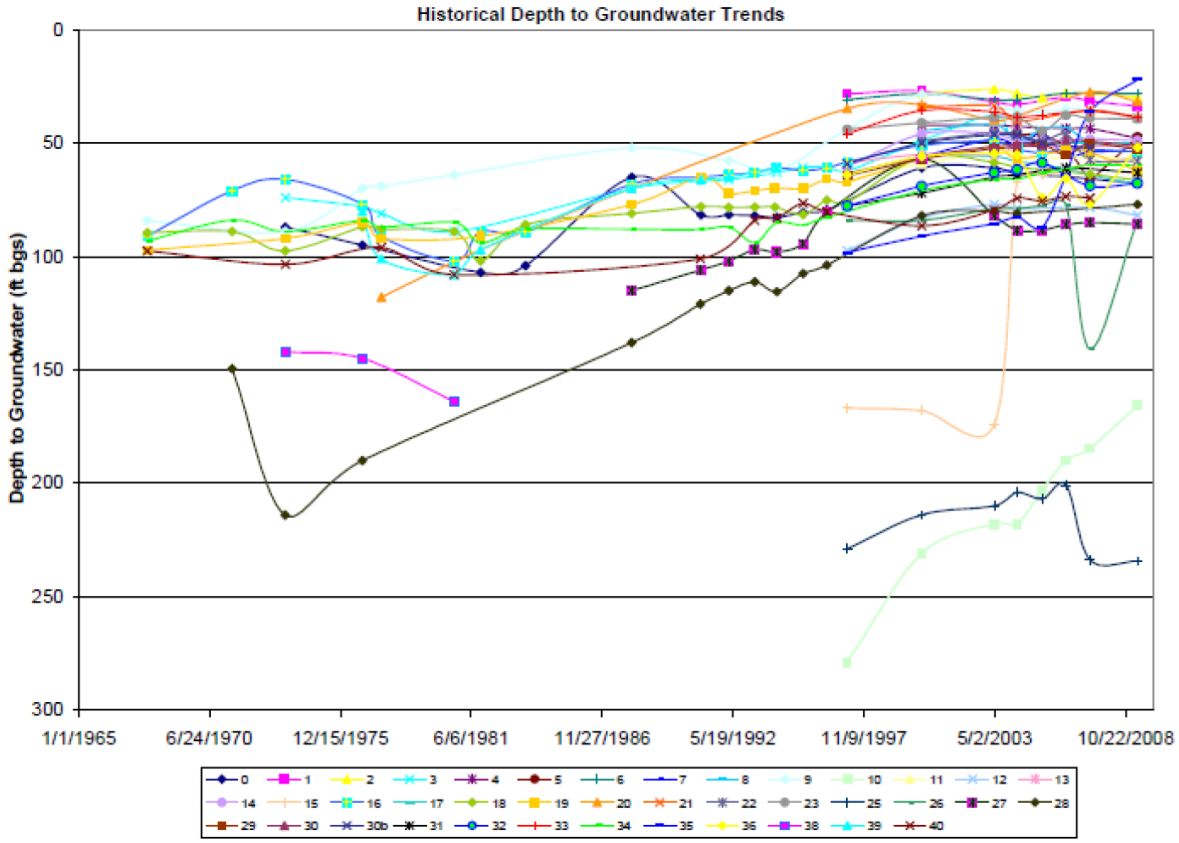

Figure 2. Historical depth to groundwater measurements in wells throughout the Panoche Valley.

B3-C5

Figure 2: Figure 2 from Geologia (2010a), also Figure 4 from Geologia (2010b).

The reports do not indicate the amount of pumping that occurred or the amount of land that was irrigated to cause the drawdown in the early 1970s. Current groundwater pumping estimates are that about 180 af/y is pumped primarily for domestic, stockwatering, and a very small amount of irrigation. The ongoing drought of the last eight years is likely the cause of the most recent drop in groundwater levels, measuring up to ten ft in five years. The records however do not show much of a drop during the 1986 through 1994 drought or the extreme drought of 1976-77. This may reflect that the current drought is deeper than in 1986-1994 and longer than 1976-77.

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The groundwater level map in 2014 is highly irregular, regardless of how it was drawn in Matthews and Haizlip (2014b) (Figure 3). The contours show a water table sloping from west to east across the project site, with a steeper slope to the west. There are adjacent wells with more than 150 ft of difference. For example, wells 5 and 25, in the middle at the top, have 1206 and 1046 ft amsl water levels even though the 1060 contour is far to the east. One other well has water surface elevation 1059[1] but it is surrounded by several wells with elevation in excess of 1120 ft. The curve in the 1260 contour just accommodates a well with 1157 ft elevation while being surrounded by many other wells with water levels much higher than 1200 ft. Some of these differences may be explainable by the wells being completed in different levels of the aquifer. If there is a significant difference in water levels among aquifer layers, a contour map should be drawn for different levels to show areas with vertical gradients.

B3-C6

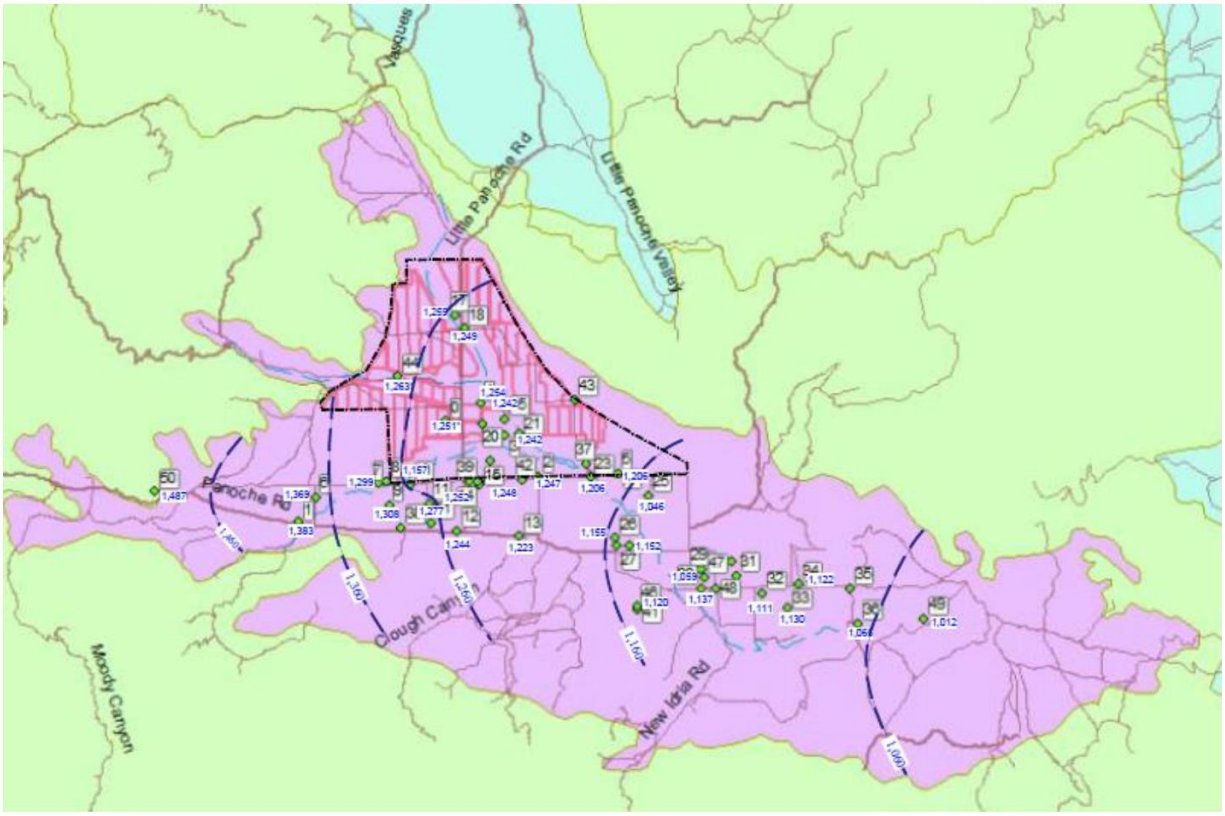

Figure 3: Snapshot of a portion of Figure 1 (Matthews and Haizlip 2014b) showing water surface contours and individual well levels.

B3-C7

a. The recharge estimate is too high.

The recharge estimate used for this project, one inch/year over the project site, is extremely high, based on my experience in Nevada, Arizona, and California. Some researchers have set

[1] The well number is not visible on Figure 3, but it is in the middle between the 1160 and 1060 contours.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-C7 cont.

estimates of average recharge precipitation less than 8 in/y as equal to zero (Avon and Durbin 1994, Anderson et al 1992, Maxey and Eakin 1949), although most analyses indicate that even in very dry areas there will be some recharge during some years, usually due to the recharge of runoff from stream beds (Stonestrom et al 2007, Flint et al 2002). In Panoche Valley, annual rainfall varies from 10-12 inches on the west edge to as little as 5-6 inches on the north and east, with an average at the Panoche Valley weather station equal to 9.69 in/y (Geologica 2010b). During some years, the annual precipitation was less than 6 in/y. Most of the recharge in dry areas, such as Panoche Valley, occurs at the base of a mountain or in fractures in the mountains (Wilson and Guan 2004). This suggests that whatever the average total recharge is for the area, it is not homogeneous across the area, as simulated by Matthews and Haizlip (2014a and b). CA Groundwater Bulletin 118 does not estimate recharge for Panoche Valley.

Geologia (2010b) estimated recharge as 2690 af/y based on water balance calculations as shown in Figure 4. Essentially, they set recharge equal to the groundwater outflow. This is a common method of estimating recharge if there is an independent estimate of outflow, which the authors of the Geologia study do not do. The basic concept in the table reproduced in Figure 4 is that any precipitation that does not run off infiltrates to the soil and the infiltration that does not become evapotranspiration (ET, evaporate or transpire through plants) passes through the soil and becomes groundwater recharge. Conceptually, this is correct, although it does not account for soil properties, such as how much water the soil can hold.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-C7 cont.

Table 4. Estimated Panoche Valley Groundwater Budget Calculations

Hydrologic Inflow Components		Rate Acre-ft/yr
Direct Precipitation		
Valley Floor	*7 in/yr over 12,000 acres*	7,000
Upland Areas	*8 in/yr over 21,000 acres*	14,000
Groundwater Inflow	*assumed negligible*	0
Surface Water Inflow	*assumed negligible*	0
Irrigation Return Flow	*assumed negligible*	0
	Total	21,000

Hydrologic Outflow Components		
Potential Evapotranspiration		
Valley Floor	*300 mm/yr over 12,000 acres*	4,830
Upland Areas	*50 mm/yr over 21,000 acres*	3,430
Groundwater Outflow	*Difference between sum of inflow and outflow components*	2,690
Surface Water Outflow	*Runoff Coefficient times Precipitation*	
Valley Floor	*C=0.31 over 12,000 acres*	2,170
Upland Areas	*C=0.55 over 21,000 acres*	7,700
Irrigation, Stock Watering, Domestic Supply Wells	*Based on Geologica, 2010 field survey*	*180*
	Total	21,000

Figure 4: Snapshot of Table 4 from Geologia (2010b)

Geologia estimated outflow as the difference in estimated total inflow components, 21,000 af/y of precipitation, and outflow components including ET and surface water runoff. The 2690 af/y estimate averaged over 33,000 acres converts to 0.98 in/y, or the 1 in/y used in the numerical model. Assuming the runoff estimate is accurate, the sensitivity of the groundwater outflow estimate to the ET estimate (just above the groundwater outflow estimate in Figure 4) is apparent – small increases in the ET estimates would reduce the groundwater outflow estimate.

Potential runoff is probably grossly overestimated. Essentially, they set annual runoff as the product of stormwater coefficients determined from the CalTRans Stormwater Manual and annual precipitation. However, stormwater coefficients are intended to estimate storm runoff from large flood-producing events, not annual runoff from annual precipitation; most storm events generate no runoff. Additionally, stormwater coefficients do not account for the infiltration of runoff from uphill, as would occur here to water running off the uplands onto the lowlands where the infiltration potential may be increased. In other words, coefficients are calibrated to estimate the runoff from large runoff producing storms, not from smaller events that mostly infiltrate.

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B3-C7 cont.

Less runoff would seem to increase the infiltration and potential recharge, but the estimate of ET is grossly inaccurate. The authors provide essentially no justification in the form of references or data for their ET estimates of 300 mm/y in the grasslands and 50 mm/y in the mountains. Experience suggests that 300 mm/y may be accurate, but 50 mm/y seems very low for the uplands. Most small showers just wet the surface of the soil and maybe the top inch or so and simply evaporates. Initial abstraction of stormwater, or the amount of water that is intercepted by vegetation and surface storage, simply evaporates. Shrubs easily intercept more than a couple tenths of an inch from small storms so that most of that precipitation evaporates. Also, Geologia (2010b) suggests surface storage is low, but in grasslands this may not be true because the ground surface is rough and likely covered with organic matter from the grass. Thus much of the actual precipitation evaporates rather than running off.

The Geologia study (2010a) provides an additional reference: "Based on a study of groundwater recharge in the Panoche Water District by Young and Wallender in 2002, it was determined that roughly 2/3 or 66% of rainfall infiltrates the surface as groundwater recharge which is consistent with findings in similar ecosystems around the world". The citation, Young and Wallender (2002), is completely inappropriate for this area. Based on its abstract[2] it considers irrigated areas throughout the San Joaquin Valley; finding that 2/3rds of precipitation infiltrates an irrigated area is irrelevant for a natural, unirrigated, grassland. The recharge calculated by the water balance specified by the article includes infiltrating applied water[3], which means that recharge includes artificial recharge from irrigation. The note about being "consistent with findings ... around the world" does not appear linked to the article, based on the abstract[4].

The DSEIR studies incorrectly subtract groundwater pumping from the balance to estimate recharge because groundwater that is pumped had to recharge before it was pumped. Only in a steady state situation, in which the pumping has been occurring for a long time and the system has returned to steady state, should the pumping outflow be used to estimate natural

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[2] Abstract from Young and Wallender (2002): An annual water balance (10/95 to 9/96) was calculated for 98 regions within a 15,000 ha water district located on the west side of the San Joaquin Valley, California. The water balance was calculated using limited data collected by the water district. The spatial resolution of the balance yielded information on water use to manage the region's drainage problems. Data layers were created for infiltrating applied water, infiltrating rainfall, crop water use, bare soil evaporation, drainage, change in saturated storage, deep percolation, and net recharge to the groundwater system. Results indicated that groundwater recharge occurs in upslope, undrained regions and that groundwater discharge occurs in downslope, drained regions, in agreement with previous studies with lower spatial resolution. The area-weighted average deep percolation was 290 mm in undrained areas and 85 mm in drained areas, suggesting a difference in water management correlated to location of the shallow water table. The spatial distribution of deep percolation indicates that the assumption of spatial uniformity made in previous groundwater modeling failed to capture considerable variability.

[3] Id.

[4] Id.

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recharge. Natural recharge is water that enters the ground whether it discharges to natural discharge points or to a well.

B3-C7 cont.

In summary, an increase in ET, especially in the uplands, would significantly decrease the groundwater outflow and therefore the estimated recharge. Other errors as outlined herein render the estimate more uncertain. The recharge estimate provided in Geologia (2010a and b) is too high to be used for groundwater modeling of project impacts by Matthews and Haizlip (2014a and b).

b. The groundwater modeling completed for the project likely underestimates drawdown because the model was poorly designed and ultimately inappropriate for the task of estimating drawdown.

B3-C8

Drawdown from the proposed pumping were considered using a numerical groundwater model developed using the US Geological Survey code, MODFLOW. This is new information made available since the release of the 2010 FEIR. Matthews and Haizlip (2014a and b) describe the modeling very briefly and with just one figure showing the general layout of finite-difference-model cells. Their model used 84 columns and 40 rows, but the authors do not specify the size of the cells (Matthews and Haizlip 2014 a, p 7). They assume the north, south and western boundaries are no flow, which means that groundwater cannot flow across them. Natural groundwater discharge from the model domain is from the east end of the domain through a constant head boundary (CHB)[5]; however the specific location of the CHB is not described or shown in a figure nor are the hydraulic parameters of the boundary described. Therefore, the DSEIR utilizes an analysis that the public cannot review because it is inadequately described.

Conceptually, the numerical model simulates recharge entering at the ground surface over the model domain, flowing through the model domain[6], and exiting on the east side through the CHB. The model simulates no natural discharge points such as springs, streams, or wetlands. Recharge was set to equal one inch per year over the entire active portion of the model area, but as described above, this estimate was much too high. Based on the description of the model, the amount of water exiting the model domain would equal one inch per year of water entering the surface of the model over the entire model domain. However, the descriptions in Matthews and Haizlip (2014a) are insufficient to have confidence that I understand the model as well I would with an adequate model report.

[5] A constant head boundary is a head-controlled flux boundary, meaning that the head, or groundwater level and pressure, is held constant at the boundary and that the flow across the boundary is adjusted, without limit, to maintain the specified head.

[6] In groundwater modeling, the "domain" is the volume being modeled. In this case, that is the aquifer from which the project proposes to pump its water.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

B3-C8 cont.

Steady state means inflow to the groundwater domain equals outflow from the groundwater domain and there is no change in groundwater storage[7]. Outflow from an aquifer occurs through natural discharge points, such as springs and streams or anthropogenic points such as wells. In this model, the only natural discharge is groundwater flow through the eastern boundary. At steady state, the flow through the eastern boundary would equal the entire recharge over the domain, which is the product of the recharge rate, one inch per year, and the area of the domain. Matthews and Haizlip (2014a) do not describe this steady state situation as part of the model report and also failed to consider pumping other wells in the area, which would also discharge from the domain. This means the study provides no consideration of cumulative effects with other wells pumping in the area. Current pumping, not taking into consideration the needs of the project is estimated at 120 af/y but within a year a half of project construction, about 384 af will be pumped so the cumulative effect on the valley from pumping will be more than doubled for 18 months. During the 1970s and earlier when wells were being pumped for irrigation, pumping would have much higher but there is no information on the amount that was pumped.

Simulation of the proposed project involves adding a discharge point - the pumping well – to the domain. Simulated pumping diverts flow from exiting the domain through the eastern boundary. The simulation of pumping adds a discharge from the domain which removes groundwater from storage so that the system is no longer in steady state. The simulation of pumping is a transient condition in which water is removed from storage by drawing down the water table near the pumping well[8] until the amount diverted from exiting the model domain equals the amount being pumped from the well. In practice, steady state conditions become reestablished when drawdown ceases to increase; in reality, steady state is never reached because drawdown continues to draw from further in the model domain or from the boundaries.

The method used to estimate drawdown with the model will underestimate drawdown near the pumping well. The Well package for MODFLOW assumes that pumped water is drawn from the entire model cell, so that pumping drawdown is spread over the model cell. A cell is much larger than the well area, so the predicted drawdown is always much less than actually occurs at the well. Usually, a model is developed with model cells that become smaller, or telescope down in size, around a well so that the simulated drawdown is more realistic. This was not done here, so the very small predicted drawdowns at the pumped well, 3 and 5 ft, respectively, for two different storage coefficients, are grossly too small.

[7] Groundwater storage is the amount of water contained in the pore spaces of an aquifer. Storage does not change in an aquifer that is at steady state.

[8] In three dimensions, the water table or potentiometric surface near a pumping well looks like an inverted cone, so the well is said to create a "drawdown cone".

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Another problem with the estimate is that the model assumes the target wells, wells 14, 16 and 27, are screened in the same aquifer layer. The model has just one layer, so the model implicitly pumps all water from an aquifer thickness equal to the layer thickness. The model report (Matthews and Haizlip 2010a) did not specify the thickness but simulated the entire domain with a single transmissivity. By using just one layer for the model, the simulation assumes that the entire aquifer thickness provides water to the well when the reality is that only aquifer layers screened by the well provides water. This causes the model to underestimate the drawdown at the well. If one of the wells being monitored is screened over sections of the aquifer from which more of the pumped water is drawn from, the drawdown could be much higher than predicted. This discussion assumed that during well construction, the driller located the more productive layers rather than screening the entire aquifer thickness. If the wells are screened in different layers, there may be less effect. The DSEIR simply does not adequately describe the hydrogeology of the wells to be pumped for the project or the wells that could be affected by the project.

B3-C9

Possibly, the most significant cause of the model underestimating drawdown is recharge. As described above, one inch per year is much too high an estimate for recharge. Recharge is the closest source for replenishing water that is pumped, which means that the simulated pumpage will pull recharge in and near the model cell containing the well boundary first. Therefore, overestimating recharge causes the model to underestimate the effects of pumping.

In summary, the design of the groundwater model structure causes the numerical model to underestimate drawdown due to pumping for the proposed project. The DSEIR (at C.15 -6) inaccurately estimates drawdown due to the project and fails to consider cumulative effects.

B3-C10

c. The project will decrease recharge by increasing the impervious area and by grading or otherwise eliminating vernal pools which are source of recharge.

B3-C11

The project will increase the impervious area at the site by covering it with solar panels. More precipitation will runoff from these areas than predicted by the modeling reviewed above. The hydrology studies have not estimated the effects of this additional impervious area on recharge. Although some of the runoff from panels will infiltrate and recharge, some will also become additional runoff. APM WR-2, described in the 2010 FEIR (p C.15-12) as mitigating this issue will not mitigate it. APM WR-2 deals with restoration of disturbed ground, not the additional impervious area caused by the panels. Effectively, the panel construction just increases the storm runoff coefficient across the area and therefore also the runoff. The project analysis in the DSEIR does not account for this potential effect.

The project will impact 15 known vernal pools, or 0.26 acres either permanently or temporarily (DSEIR, p C6-25). Despite their obvious influence on hydrology, including recharge and surface

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water storage, the water resources chapter of the DSEIR does not even mention vernal pools. Vernal pools fill with water seasonally and drain by percolating into the ground. Most of this percolation becomes groundwater recharge. The project will cause this recharge to be lost, but the DSEIR does not disclose this impact or attempt to mitigate it.

B3-C11 cont.

WR2. The project will substantially alter the existing drainage patter of the site and cause increased flooding on and off the site.

B3-C12

Much of the discussion regarding drainages and wetlands is contained within the biology chapter of the DSEIR. Hydrology impacts to jurisdictional and ephemeral washes are considered as part of Impact BR-20. Both the Corps of Engineers and CA Department of Fish and Wildlife have jurisdiction over certain ephemeral waters and will need to approve 404 Permits for fill and a Lake and Streambed Alteration Agreement (LSAA), respectively (DSEIR, p C6-64).

Mitigation MM BR-G.2 includes the provision that all project activities shall not disturb the ground within 100 ft of washes and streams, as measured from the top of the bank, except as "described and allowed by the USACE 404 permit and approved LSAA" (DSEIR, p C6-66). As described below, simply having a permit from the Corps of Engineers does not mean the project will not have substantial impacts.

a. The DSEIR is very confusing in its identification of which washes are jurisdictional and what the impacts of the revised project would be to the drainages.

B3-C13

Figure 5 shows the Federal and State Waters Overview (DSEIR, Figure C6-7). The statement in the DSEIR regarding the length of jurisdictional channels is confusing: "The 2010 Final EIR identified approximately 18,700 linear ft of the ephemeral drainage channels within the Panoche Creek drainage, and approximately 7,025 linear ft of Las Aguilas Creek within the project site subject to the jurisdiction of USACE and/or CDFW" (DSEIR, p C6-51). It is not clear whether the 18,700 linear ft is all of the channels in the entire drainage, with Las Aguilas Creek being part of Panoche Creek; a reason to consider Las Aguilas as part of Panoche Creek drainage is that the groundwater basin is considered as the Panoche Creek Groundwater Basin. It is also not clear whether these lengths were jurisdictional, because the following sentence identified "some of the previously identified ephemeral drainages, specifically 5,951 linear ft of such drainages on the eastern side of the Revised Project site have been deemed waters of the U.S. or federal jurisdictional waters" (DSEIR, p C6-52). This sentence implies the 5951 ft were included in the 18,700 ft but also that it is now considered to be jurisdictional.

The DSEIR is also confusing where it writes of "five planned crossings of federally jurisdictional washes" (DSEIR, p C6-52). After stating that there would be three culverts installed on

B3-C14

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drainages on the east site, "[i]n total, approximately 3,503 linear ft of drainages on the eastern side of the Revised Project would be subject to permanent impacts associated with crossings" (Id.). This appears to be the length of all affected drainages but the paragraph refers to the jurisdictional washes and the subject of the previous sentence was three jurisdictional washes that would be crossed. Three culverts would not affect 3,503 linear ft, so the document does not provide data on the length of jurisdictional washes on the east side that would be affected by crossings.

B3-C14 cont.

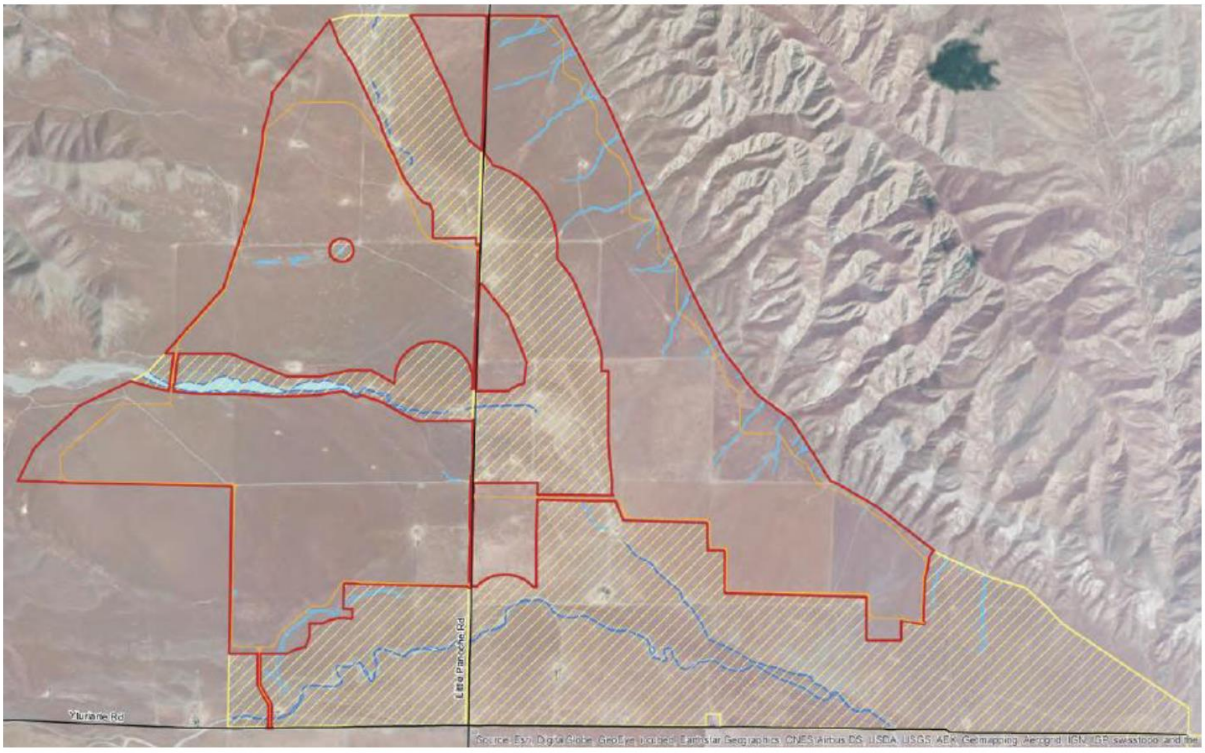

Figure 5: Snapshot of Figure C.6-7 show an Overview of Federal and State Jurisdiction Waters. The red line is project footprint, the light blue surrounded by dark blue is jurisdictional water, the light blue lines are drainage survey lines, and the orange is the project perimeter road.

B3-C15

b. The DSEIR does not provide adequate disclosure of the impacts of each jurisdictional stream crossing.

The project will have five crossings of federal jurisdictional washes (DSEIR, p C.15-8). The two on the west are on Las Aguilas Creek and Panoche Creek and those on the east are of the perimeter over drainages just as they emerge from the mountains. The DSEIR does not provide the linear stream footage or area that each of these crossings would impact. The DSEIR also does not provide design drawings or even photographs of the site so that a reviewer can assess whether there are impacts. The failure to provide details on the crossings is a failure to disclose adequately the effects of the project.

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The DSEIR claims that crossings "would be designed based on the USACE 404(b)(1) analysis and the *Least Environmentally Damaging Practicable Alternative*" (DSEIR, p C.6-52, italics in original). The DSEIR does not present the 404 analysis nor any evidence that the alternative is the least environmentally damaging practicable alternative (LEDPA). B3-C16

Based on the descriptions in the DSEIR, the crossings on the east do not meet the LEDPA requirements. If the bridges that span the crossings on the west have abutments above the top of the terraces, they would impinge very little on most flood events that pass the bridges thereby having little effect. Culverts as proposed for the east side will train the flow into the culvert which significantly disrupts flow patterns both up and downstream. Upstream, a culvert forces the flow paths to converge if the flow is less than the capacity that the culvert can pass as an open channel. However, if the flow exceeds the culvert open channel flow capacity, water will pond and sediment will settle to the stream bottom. Downstream, the flow emerging from the culvert is in a stream much narrower than the natural channel. Because the flow path has been constricted, the flow velocity is much higher than natural. Higher flow velocity will cause erosion and possibly increase gullying downstream. The LEDPA alternative for these crossings would clearly also be a bridge that spans the natural channel.

c. The DSEIR fails to provide analysis of the effects of erosion at stream crossings on the east. B3-C17

As noted in the previous paragraphs, proposed culverts would likely cause both sedimentation and erosion. The DSEIR does not provide predicted flow rates at the crossings or estimate the flow velocities to be expected. Failure to predict the storm flows or provide analysis of the effect those flows will have on erosions and sedimentation is a failure to disclose the impacts of the project.

d. The DSEIR fails to assess how culverts will affect overall drainage patterns on the east side of the project. B3-C18

Figure 5 shows the many drainages emerging from the east side of the valley. As is apparent, the drainages emerge at the top of an alluvial fan. The DSEIR provides no alluvial fan specific analysis considering the complexities inherent with developing the project on an alluvial fan. An alluvial fan is a hydrologically and geomorphically dynamic area, with channels that change location regularly. Such drainages carry a lot of colluvium, or landslide-derived rocks and soils. As the colluvium settles, the drainage fans and channels erode while others fill with sediment. This is a natural process on an alluvial fan and this project, with its road crossings, will significantly alter the natural patterns. There is a great deal of uncertainty in the flow paths, which means that the perceived, or mapped, historical channel or network of channels cannot be relied on to convey the base flood (NRC 1996). This means the area subject to flooding on an alluvial fan is much greater than would be shown on the maps.

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The project perimeter road will cross all of them, which essentially locks their location in place. The DSEIR fails to disclose how these road crossings will affect these ephemeral drainages and/or alluvial fans. By failing to complete these analyses, the DSEIR has also failed to consider whether the proposal is the LEDPA. B3-C18 cont.

There are descriptions of the three crossings (drainage 14, 19, and 22) giving affected area and lengths, but without figures or diagrams detailing the grading at the site it is impossible to assess the accuracy of the numbers, whether the design is LEDPA, or whether it would meet the requirements for 401 water quality certification. Cut and fill affects water quality by adding suspended sediment to the flow.

The project will cause 7.86 acres of ephemeral drainage to be permanently lost and will impact 15 known vernal pools, or 0.26 acres either permanently or temporarily (DSEIR, p C6-25). Despite their obvious influence on hydrology, including recharge and surface water storage, the water resources chapter of the DSEIR does not even mention vernal pools.

WR3. Construction activity and excavation could degrade water quality due to erosion and sedimentation. B3-C19

The DSEIR does not analyze the potential for construction activity to degrade water quality. The project will have significant cut and fill, especially where the perimeter roads cross washes, whether they are jurisdictional or not. If flow events occur while there is disturbance within the channels, the flow could pick up and transport more suspended sediment. Even outside of the washes a heavy storm will pick up more sediment on disturbed soil. The DSEIR fails to estimate how much degradation could occur, to discuss even qualitatively how it could occur, or prescribe measures to avoid degradation to downstream water quality. By failing to consider these issues, the DSEIR fails to adequately disclose the potential impacts of the construction of the project.

WR4. The project would increase the impervious area which could increase runoff which could increase flooding and erosion downstream. B3-C20

The project consists of constructing solar panels on sites that otherwise are desert or grassland habitats. Water infiltrates the soils in these areas. According to their groundwater analysis (Matthews and Haizlip 2014a), the recharge through the project area is one inch per year. Although I have argued above that this recharge estimate is likely wrong, it will be used for this discussion. Solar panels would create impervious areas that would generate runoff rather than allowing infiltration and groundwater recharge. The panels will cover up to 413 acres. If all of that newly-impervious land prevents percolation, up to 34 acre-ft of recharge will be lost to the groundwater reservoir. The DSEIR fails to discuss this lost recharge.

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WR5. Project features located in a floodplain or watercourse could result in additional flooding and erosion. B3-C21

The project will construct culverts and other road crossings within watercourses. Any construction that constricts natural flow patterns within a channel potentially increases the flow velocities and potential for erosion in the channel. Rip rap may mitigate erosion at the point of the rip rap, but it constricts flow and causes the water to pass the constriction carrying less sediment than it would under natural flow conditions. Further downstream, the sediment-starved water potentially will cause more erosion. The DSEIR has completely failed to consider the potential effects of building project features within the watercourses beyond the potential for at-the-feature-location effects.

WR7. The project could contribute substantially to considerable effects on water resources. B3-C22

The DSEIR has not considered the pumping from any wells in basin other than the project site, as part of its groundwater modeling, as discussed above. Failure to consider the pumping of other wells is a failure to consider the overall impacts of this project on the site. Additional pumping in a basin such as Panoche Valley could result in threshold effects, meaning that overlap of drawdown among wells could cause cumulative drawdown that exceeds the sum of the individual wells because of boundary conditions. In other words, individually the wells pump as if the aquifer domain has an infinite extent, one of the assumptions of standard well hydraulics equations. If several wells are pumped at the same time and if the aquifer can still be considered infinite, the cumulative effects are simply the sum of the drawdown from the several wells. However, if the overlapping drawdown causes drawdown to reach a no flow boundary, the infinite-aquifer assumption breaks down and the cumulative pumping causes more drawdown than the sum of the individual wells. The DSEIR has not considered cumulative pumping, which for 18 months will be more than doubled due to about 384 af being pumped for the proposed project while the current pumping is 120 af/y.

The DSEIR has also failed to consider cumulative effects of road crossings. This could have the largest effect on the east side of the project area where many small drainages emerge from mountains and begin to flow across the alluvial fans. As described above, culverts can significantly change the drainage patterns. If one or more culverts causes the channels to shift, it is possible for channels to combine during floods and create larger flows and more erosion. The DSEIR has failed to consider these potential cumulative impacts of stream crossing construction.

Mitigation Measures

The DSEIR proposes two modified mitigation measures for the revised project.

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B3-C23

MM WR-1.1 Groundwater Monitoring and Reporting: The DSEIR requires the applicant to "prepare and submit a Groundwater Monitoring and Reporting Plan" (DSEIR, p C.15-8) prior to commencing pumping for the project. It was not prepared for review as part of the DSEIR and therefore the DSEIR is not complete. Mitigation should be reviewable but the monitoring plan is not.

The monitoring plan requires a network with a "minimum of three new or existing on site or off-site down-gradient wells near the southern project boundary" (DSEIR, p C.15-9). This description provides essentially no guidance. A groundwater monitoring plan should be based on the conceptual model of flow at the site and monitoring wells should be placed in locations from which drawdown will be detected before it reaches the points of concern, in this project the near-off-site wells used by others. Thus, groundwater monitoring wells should be constructed on the most likely flow path between the project pumping wells and the points of concern.

The description also provides no guidance as to the depth or thickness of the screens in a monitoring well. The water level in a well depends on the pressure in the aquifer spanned by the well screen or open interval. If the well spans more than one lithological layer, meaning layers of different type such as gravel, sand, or sandstone, with different pressures, the well water level will be a weighted average of pressures in the layers; it will be an average dependent on the pressure and the transmissivity of each layer at the point it intersects the well.

There may also be pressure difference among layers which can cause vertical flow among layers, so it is important to know whether there are pressure gradients among the layers, or a vertical gradient. A downward vertical gradient indicates groundwater is flowing vertically downward and may represent a point where recharge is occurring. An upward vertical gradient may indicate a layer with artesian pressure. To provide guidance on whether there is a vertical gradient being established, a monitoring well should be open to no more than 20 ft of aquifer at any one location. Monitoring wells should have multiple openings where necessary to monitoring different layers and to determine vertical gradients. The environmental monitoring treatise Nielsen (2006) provides several chapters with recommendations on establishing piezometers or groundwater monitoring wells, including those with multiple ports to measure different pressures in different layers. The DSEIR simply fails to provide any guidance regarding these issues.

For the reasons specified in the previous paragraph that make a monitoring well an adequate well, existing pumping wells should not be considered part of the monitoring regime. Because

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they are the wells that should be protected, they should be monitored. Thus, it is necessary to monitor the existing wells for impacts due to the proposed project, but it is not sufficient.

B3-C23 cont.

Also, the threshold of preventing five ft of drawdown at a nearby private well is adequate, but the means for preventing with this plan is not. As mentioned, the monitoring wells should be established on a pathway between the project pumping and the private well. The threshold for detecting impacts should be specified for the monitoring well to prevent the five ft of drawdown at the private well. The mitigation specified by the DSEIR is insufficient in that regard.

Additionally, the DSEIR mentions that the "primary objective for the monitoring is to establish pre- and post-construction groundwater level trends that can be quantitatively compared against observed and calculated trends near the project pumping wells and near potentially impacted existing private wells" (DSEIR, p C15-9). The plan fails this objective in many ways:

a. It is not possible to establish any kind of trend representative of pre-project conditions by submitting a monitoring plan 60 days before the commencement of pumping. In general, the minimum time for a pre-project trend would be a year to get seasonal changes.
b. The DSEIR implies that "post-construction … trends" can be determined before pumping begins since that would be only trend that can be compared "against observed and calculated trends".
c. The DSEIR does not specify what a "calculated trend" might be; in general that would likely be an analytical or numerical model of project pumping with calibrated aquifer parameters, but there is no requirement that, that be provided. The calculated trend would have to be estimated prior to pumping to be able to compare against it.
d. Comparing against a calculated trend would only be comparing whether the estimate was correct, not whether it was causing an impact.
e. A calculated trend would result from an adequate model based on calibration against the established pre-pumping trend. That has not been done for the DSEIR, as it should have been, nor is it proposed for the monitoring.

Finally, on a positive note, the plan does propose adequate requirements for measuring the pumpage at the project well(s) and for reporting on a monthly basis. In general that should be sufficient for the measure of pumping rates. Recording pumping on a daily basis is sufficient for comparing to monitoring drawdown and estimating future effects of the pumping. However, the drawdown monitoring, as discussed above, is not sufficient

MM WR-1.2 Aquifer Testing and Well Interference Analysis: This mitigation is necessary but appears to be insufficient. The DSEIS provides inadequate requirements for the test. Seventy two hours may be insufficient to cause sufficient stress at nearby private wells to adequately parameterize the aquifer. The DSEIR does not specify a pumping rate or even describe how the

B3-C24

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

pumping rate shall be determined. Although it may be implied, the requirement does not specify that the pumping test shall be completed prior to estimates of water level trends in MM WR-1.1, discussed above. For reasons discussed above regarding MM WR-1.1, existing private wells will likely not provide useful information about aquifer parameters, unless the well construction records are accurate and the well spans complete aquifers.

B3-C24 cont.

Applicant proposed measures

B3-C25

Applicant proposed measures (APM) for water resources are minor things that are little more than common sense measures for construction in any environment. Agreeing to repair or replace facilities that are damaged during construction as required by the land owner or land management agency (APM WR-1) should be a legal requirement, not an applicant concession, as these APMs are implied to be. Constructing roads to cross washes at rights angles (APM WR-3) is a cost-saving move and certainly not a concession.

However, APM WR-2 has been seriously diminished in importance and value since the FEIR. This APM would have the applicant agree to restore surface disturbances to their natural conditions. The change allows the applicant to do this only "as part of Project decommissioning". This means that disturbed ground will remain unrestored for as long as the project operates. This will increase water pollution by allowing overland flow to cause erosion and pick up substantial suspended sediment, as discussed above in the impacts section. This is a significant deficiency in the proposed project.

CONCLUSION AND RECOMMENDATIONS

B3-C26

With respect to water resources and erosion/sedimentation, the DSEIR inadequately discloses potential impacts of the project. This includes an inadequate discussion and estimation of the potential for the project to affect groundwater supplies and groundwater recharge. The reasons include an overestimation of recharge and a numerical model inadequately constructed to estimate drawdown, as described above. The project could substantially alter the existing drainage pattern, and the DSEIR changes the mitigation such that disturbance would not be restored until the project is over. Construction could cause erosion and sedimentation and would decrease the impervious area so that runoff would increase. There would be project features constructed in waterways that could cause erosion and sedimentation.

The following recommendations are supplemental to or in addition to recommendation and comments made above throughout this letter.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Special Recommendations

The DSEIR should include a mitigation or applicant proposed mitigation setting a speed limit for transport in these areas. B3-C27

The DSEIR should commit the applicant to restoring construction-disturbed areas as soon as possible after construction. B3-C28

Recharge should be reestimated using appropriate procedures for the site, as discussed above. B3-C29

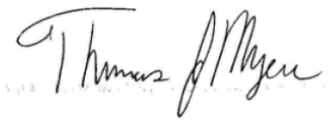
The groundwater modeling reports should be rewritten to adequately describe what they actually do. Calibration in steady state and with transient conditions could be accomplished and presented in the report. Other details discussed above should be included in the modeling report. B3-C30

The groundwater monitoring plan should be revised to remedy the issues discussed above regarding dedicated monitoring wells. Guidance from Sara (2006), Nielsen and Schalla (2006) and Einarson (2006) should be considered in designing a new plan. The commission decision for the Beacon Solar Energy Project (California Energy Commission 2010) includes a requirement for a groundwater monitoring system that is far superior to the one proposed here for Panoche Valley[9]. For example, the monitoring plan requires the project proponent to locate all wells within a potentially impacted zone, defined as predicted drawdown exceeding five ft, for monitoring (CA Energy Commission 2010, p 321); the monitoring plan also requires the project proponent to monitor three wells in the zone with less than one foot of predicted drawdown to judge the accuracy of the predictive model (Id.). B3-C31

The pump test should be redesigned to accommodate the issues identified above. B3-C32

The DSEIR should be rewritten and provided to the public again in DRAFT to fix the errors and omissions in the water resources analysis as discussed within this letter.

Sincerely,



Tom Myers Ph.D.

Hydrologic Consultant

[9] The cited monitoring plan does have issues, such as not requiring dedicated monitoring, and this citation to it is not an endorsement that its plan is perfect.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

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Comment Set B3 – San Benito Residents for Responsible Development (cont.)

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Curriculum Vitae

Objective: To provide diverse research and consulting services to nonprofit, government, legal and industry clients focusing on hydrogeology specializing in mine dewatering, contaminant transport, natural gas development, groundwater modeling, NEPA analysis, federal and state regulatory review, and fluvial morphology.

Education

Years	Degree	University
1992-96	Ph.D. Hydrology/Hydrogeology	University of Nevada, Reno Dissertation: Stochastic Structure of Rangeland Streams
1990-92		University of Arizona, Tucson AZ Classes in pursuit of Ph.D. in Hydrology.
1988-90	M.S. Hydrology/Hydrogeology	University of Nevada, Reno Thesis: Stream Morphology, Stability and Habitat in Northern Nevada
1981-83		University of Colorado, Denver, CO Graduate level water resources engineering classes.
1977-81	B.S., Civil Engineering	University of Colorado, Boulder, CO

Professional Experience

Years	Position	Duties
1993-Pr.	Hydrologic Consultant	Completion of hydrogeology studies and testimony focusing on mine dewatering, groundwater modeling, natural gas development, contaminant transport, NEPA review, and water rights for nonprofit groups and government agencies.
1999-2004	Great Basin Mine Watch, Exec Director	Responsible for reviewing and commenting on mining projects with a focus on groundwater and surface water resources, preparing appeals and litigation, organizational development and personnel management.
1992-1997	Univ of NV, Reno, Res. Assoc.	Research on riparian area and watershed management including stream morphology, aquatic habitat, cattle grazing and low-flow and flood hydrology.
1990-1992	U of AZ, Res. and Teach. Assistant	Research on rainfall/runoff processes and climate models. Taught lab sections for sophomore level "Principles of Hydrology". Received 1992 Outstanding Graduate Teaching Assistant Award in the College of Engineering
1988-1990	U of NV, Reno Res. Asst	Research on aquatic habitat, stream morphology and livestock management.
1983-1988	US Bureau of Reclamation Hydraulic Eng.	Performed hydrology planning studies on topics including floodplains, water supply, flood control, salt balance, irrigation efficiencies, sediment transport, rainfall-runoff modeling and groundwater balances.

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Special Coursework

Years	Course	Sponsor
2011	Hydraulic Fracturing of the Marcellus Shale	National Groundwater Association
2008	Fractured Rock Analysis	MidWest Geoscience
2005	Groundwater Sampling Field Course	Nielson Environmental Field School
2004	Environmental Forensics	National Groundwater Association
2004 and -5	Groundwater and Environmental Law	National Groundwater Association

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

ATTACHMENT D

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

State of California – Natural Resources Agency
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EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

October 10, 2014

Kate Kelly
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Subject: Inquiry Regarding Permitting Status of the Panoche Solar Project

Dear Ms. Kelly:

The California Department of Fish and Wildlife (CDFW) is responding to your October 6, 2014 email inquiry concerning the permitting status of the Panoche Solar Project (Project) and the associated request for our recent correspondence with the Project applicant. Answers to your questions (in italics) follow.

What permits are required? CDFW cannot speak to the permitting requirements of other agencies, but the CDFW permits needed for the Project include: 1) a Lake and Streambed Alteration Agreement pursuant to Fish and Game Code Section 1600 et seq.; and 2) a State Incidental Take Permit (ITP) pursuant to Fish and Game Code Section 2081(b) to satisfy compliance with the California Endangered Species Act (CESA).

Have the permits been applied for and what is the status of those applications? The Project proponents have submitted both a Notification of Lake and Streambed Alteration (2010 and 2014) and an ITP application (May 2014) to CDFW. However, these applications have been deemed incomplete by CDFW as the submitted information had various deficiencies. Attached are the letters (4) sent by CDFW in 2014 regarding the incompleteness of both permit applications.

Will any additional California Environmental Quality Act (CEQA) be required? CDFW has determined that the Project as described in the aforementioned permit applications contained elements that were not considered in the Environmental Impact Report (EIR) prepared by San Benito County for the Project. As a result, CDFW determined that we would be unable to use the EIR as a Responsible Agency unless and until additional CEQA analysis was conducted. San Benito County recently indicated that they would be preparing a Supplemental EIR. The above mentioned incomplete permit application letters specify the CEQA deficiencies as they relate to our potential future permitting actions.

Conserving California's Wildlife Since 1870

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Regarding recent correspondence, in addition to the aforementioned incomplete permit application letters, there has been recent correspondence regarding Project safety access, which is also enclosed.

If you have any questions on these issues, please contact Julie Vance, Environmental Program Manager, at the address provided on this letterhead, by telephone at (559) 243-4005, extension 141, or by electronic mail at Julie.Vance@wildlife.ca.gov

Sincerely,

for/ Jeffrey R. Single, Ph.D.
Regional Manager

Attachments

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

June 26, 2014

Timothy A. Hayes
Director, Environmental
Duke Energy Renewables
550 South Tryon Street, DEC 18A
Charlotte, North Carolina 28202

Subject: Incidental Take Permit Application (2081-2014-035-04) for the Panoche Valley Solar Farm

Dear Mr. Hayes:

The California Department of Fish and Wildlife (CDFW) has reviewed your request dated April 2014 for authorization, pursuant to Fish and Game Code section 2081, subdivision (b), to incidentally take[1] San Joaquin kit fox (*Vulpes macrotis mutica*), San Joaquin antelope squirrel (*Ammospermophilus nelson*), and California tiger salamander (*Ambystoma californiense*), species designated as threatened; and giant kangaroo rat (*Dipodomys ingens*), a species designated as endangered pursuant to the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). (See Cal. Code Regs., tit. 14, § 670.5, subd. (b)(6)(E), (b)(6)(B), (b)(3(G), and (a)(6)(C), respectively.) This letter refers to those species as the Proposed Covered Species. CDFW has determined that the above-referenced application (Application), which concerns the Panoche Valley Solar Farm (Project), is incomplete.

The application for an Incidental Take Permit (ITP) must be in accordance with the California Code of Regulations, title 14, sections 783.2 and 783.3. CDFW determined the Application was incomplete for the following reasons:

1. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(1):** This section is complete.

2. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(2):** This section is complete.

[1] Pursuant to Fish and Game Code section 86, "'Take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 (for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "'take' ... means to catch, capture or kill").

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

3. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(3):** This section requires a complete description of the project or activity for which the ITP is being sought. The Application does not delineate or otherwise define the extent of grading required to construct a grade that is level enough for solar panel array installation. This information is required for CDFW to assess the extent and intensity of direct impacts to the Proposed Covered Species and their habitat. Therefore, the description of the project is not complete.

   Please provide the grading plans for the Project. The Application describes that grading may or may not occur in areas with greater than 3 percent slopes, and maps those areas (Figure 2 in the application), but does not determine whether grading will occur or define the extent of grading required. The areas mapped with a greater than 3 percent slope appear to be generated from topographical survey data and thus do not conform to the proposed panel array blocks. CDFW expects that if these areas require leveling, the grading would not conform to these topographical lines, but would be determined by the size of a level area needed for array installation and would extend beyond the areas of greater than 3 percent slope.

   The extent of grading affects the effects analysis, particularly for California tiger salamander (CTS). Extensive slopes greater than 3 percent occur within the Project limits in close proximity to known CTS breeding sites within and near the west side of the Project. Extensive grading near the breeding ponds would result in the direct loss of a relatively large portion of what is most likely a small breeding population. Review of the Application was the first time CDFW staff had seen any delineation of where Project grading might occur. Prior to receiving this Application, CDFW had assumed, based on verbal discussions to date, that Project-related grading would be much more limited, and thus the potential impacts to CTS more limited in intensity.

   Figure 2 of the application also delineates extensive areas where grading may or may not occur along the eastern side of the Project. These areas include several streams. Please provide the grading plans for this area along with a description and plans showing how surface flows would be diverted through or around graded areas and discharged downstream. Please note that grading these areas would require submittal of a notification (Notification) to CDFW pursuant to Fish and Game Code Section 1600 *et seq.*, and that grading these streams has not been described in the Notifications received for this Project to date.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Page 31 is unclear on whether the panel array areas may or may not be disked, harrowed, and/or rolled prior to panel installation. Please be definitive about the type and extent of this activity and all other types of ground disturbance. CDFW's experience on similar projects is that disking, harrowing, and/or rolling is not necessary prior to installing photovoltaic solar panels in low-relief grasslands such as those present on the Project site. CDFW encourages avoiding these activities so that ground disturbance is minimized and residual habitat values for San Joaquin kit fox, San Joaquin antelope squirrel, giant kangaroo rat, and CTS (collectively, Proposed Covered Species) can be maximized. Maintaining existing grassland vegetation will also minimize fugitive dust.

Please provide plans or maps showing all routes for overhead and underground electrical lines. Page 21 of the Application describes that both overhead lines and trenching will be used to collect and transmit electricity; however, no maps or plans of routes for overhead or trenched lines are included in the application.

Please provide plans or maps showing the entire extent of proposed access roads. The maps in the Application do not show any access roads leading into or going between solar panel arrays. For example, the proposed road along the easternmost Project boundary is relatively far from the panel arrays, and not connected to the arrays at any point or by any mapped road. CDFW's experience with similar solar projects is that permanent access roads are constructed around the immediate perimeter of each array and through gaps in the arrays to provide access to the space between panel rows. No such roads are shown in the Application. Likewise, no roads are shown to access the proposed temporary water supply ponds. Please map those roads or explain why they are not proposed for the Project. If they are proposed, then quantify any additional impact from those not already accounted for in the Application.

Please provide an accounting and delineation of both permanent and temporary impact areas. No temporary impacts were discussed in the application. CDFW assumes that the "laydown areas" comprise temporary impacts, and that temporary impacts will occur beyond the footprint of permanent Project features. Clarifying or revising the use of the term "project footprint" may help. The Application assigns the term "project footprint" to the general outline of the Project area, while other activities would not occur throughout all of that area. CDFW requests that, for clarity in the Application and in any potential ITP, that the term "Project Footprint" be applied to the area of permanent and temporary impacts.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Please provide specifications for each type of electrical conductor that would be placed underground and the risk of Potential Covered Species being electrocuted if they breach the insulation.

Please provide the grading plans for the proposed CTS mitigation ponds that would be constructed on mitigation lands, and a description of the effects to the other Proposed Covered Species from these construction activities. Please note that at least one of the proposed ponds appears to be on a stream and would require Notification to CDFW pursuant to Fish and Game Code Section 1600 *et seq.* Constructing impoundments in streams has not been described in the Notifications received for this Project to date.

Please provide an accounting and delineation of the impacts from the AT&T pole and cable installation described on page 27 of the Application.

4. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(4):** This section requires describing the location where the project or activity will occur or be conducted. The description of where grading will occur and where electrical conductors will be installed is not sufficient in detail for CDFW to determine the extent of those activities' impacts to Proposed Covered Species. See the discussion in number three (3), above. Therefore, the description of the Project location is not complete.

5. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(5):** This section requires an analysis of whether and to what extent the project or activity for which the permit is sought could result in the taking of species to be covered by the permit. This section is incomplete because the application does not sufficiently describe and delineate the extent of grading and electrical infrastructure, as discussed above. This section would also be more complete if it included a figure showing the extent of project features and work areas overlaid on the giant kangaroo rat survey results. This would also help to demonstrate whether the Project design minimizes impacts to giant kangaroo rats by avoiding precincts to the maximum extent practicable.

6. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(6):** This section is complete.

7. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(7):** This section is complete.

8. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(8):** This section is complete.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

9. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(9):** This section is complete.

10. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(10):** This section requires a description of the funding source and the level of funding available for implementation of the minimization and mitigation measures. No description of the funding source or level of funding available was provided. Please include an estimate of the cost of the proposed mitigation land acquisition and identify the source and level of funding available for the acquisition.

11. **Cal. Code Regs., tit. 14, § 783.2, subd. (a)(11):** This section is complete.

12. **Cal. Code Regs., tit. 14, § 783.3, subds. (a) & (b):** This section describes the requirements for California Environmental Quality Act (CEQA) compliance. This section is complete, although while reviewing the application, CDFW encountered several potential inconsistencies between the proposed Project in the Application and the Final Environmental Impact Report's (FEIR) Project description and biological mitigation measures. Below is a list of the items that CDFW noted while reviewing the Application. This is not necessarily a complete list of all potential inconsistencies. CDFW requests that you review the Project description and mitigation measures in the FEIR to ensure that the Project as described in the Application is consistent with the FEIR:

    a. The Application states that the photovoltaic panels will cover 2,352 acres of the total 2,492-acre footprint. Alternative A Revised as approved by the County had a total footprint of 289 fewer (2,203) acres.

    b. FEIR mitigation measure BR-23.1 requires that "Prior to the start of construction, the Applicant shall record a permanent biological conservation easement on the entire footprint of the approved project that requires preservation in perpetuity of project areas retired from the development footprint at the time they are retired." CDFW will need to understand the terms of this easement to ensure that any potential ITP conditions of approval do not conflict with the easement. For example, the Application proposes leaving all underground conductors in place upon decommissioning; would this conform to the easement terms?

    c. CDFW understood, as a result of verbal discussions with Duke Energy, that all of the proposed mitigation lands had already been acquired and would be conserved prior to starting Project construction. The Application discusses acquiring the Silver Creek Ranch and Valley Floor Conservation

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Lands prior to Project construction phase 1, and the Valadaeo Ranch prior to Project construction phase 2. Please assess whether this phased mitigation approach would meet the FEIR's requirements pertaining to timing of mitigation land acquisition and mitigation ratio requirements within each phase.

d. The FEIR places constraints on the Project that preclude CDFW from permitting the proposed types of stream crossings, potential grading in streams, and any work within 100 feet of streams. Specifically:

Mitigation Measure BRG-2 in the FEIR reads as follows:

> *There shall be no ground disturbance within 100 feet of washes and streams. Observe an avoidance buffer of 100 feet as measured from the top-of-bank on both sides of these features. Project access roads shall be designed to reach all portions of the project without direct effect on washes, except where this provision conflicts with the San Benito County Fire Code. No bridges shall be installed over washes unless required by the San Benito County Fire Code or CAL FIRE/San Benito County Fire Department. Driving across washes shall be prohibited except for emergency ingress and egress and as required by the San Benito County Fire Code or CALFIRE/San Benito County Fire Department.*

The FEIR requires that the Project avoids streams unless doing so conflicts with fire code or fire department requirements. If conflicts with fire code arise, then the measure requires bridges over the washes, with a 100-foot setback from creek banks. The 100-foot buffer from top-of-bank precludes the proposed in-stream structures, trenching, bridge abutments that would be just outside the banks, rip-rap bank stabilization/abutment protection, grading across streams, and many elements of the solar facility that are proposed within 100 feet of streams.

These and any other inconsistencies need to be resolved by either adjusting the Project or by revisiting the CEQA analysis to align the CEQA document with the Project as proposed in the Application. CDFW's issuance of an ITP is a discretionary action under CEQA, and therefore preparation of a CEQA document is necessary prior to ITP issuance. (See Cal. Code Regs., tit. 14, § 783.3.) CDFW can accept an ITP application

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

as complete if CEQA is the only outstanding issue, and if the type of CEQA document being prepared has been identified; however, the ITP cannot be fully drafted or issued until the CEQA process has been completed for all elements of the project being permitted through the filing of a Notice of Determination.

CDFW looks forward to working with you on developing a complete Application. If you have any questions regarding these comments, or would like to arrange for additional consultation, please contact Dave Hacker, Senior Environmental Scientist, by phone at (805) 594-6152, or by mail at 3196 South Higuera St. Suite A, San Luis Obispo, California 93401.

Sincerely,

Jeffrey R. Single, Ph.D., Regional Manager
Central Region
California Department of Fish and Wildlife

ec: Ryan Mathis
California Department of Fish and Wildlife

Chris Diel
United States Fish and Wildlife Service (christopher_diel@fws.gov)

Gary Armstrong, Director
San Benito County Planning and Building (garmstrong@cosb.us)

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

State of California – Natural Resources Agency
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(559) 243-4593
www.wildlife.ca.gov

EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

April 21, 2014

Steve Rutledge
Panoche Valley Solar Farm, LLC
400 South Tryon Street
Charlotte, North Carolina 28202

Subject: Incomplete Notification of Lake or Streambed Alteration
Notification No. 1600-2014-0042-R4
Panoche Valley Solar Farm - San Benito County

Dear Mr. Rutledge:

On March 21, 2014, the California Department of Fish and Wildlife (Department) received your Notification of Lake or Streambed Alteration (Notification). On April 20, 2014, the Department determined that your Notification is incomplete because the information checked below is either missing or insufficient. To complete your Notification, please review the Notification instructions and provide the following notification sections, along with a copy of this letter, to the Department.

- ☒ *Section 4:* Agreement term requested
- ☐ *Section 5:* Agreement type
- ☒ *Section 6:* Notification fee balance
- ☐ *Section 7:* Prior notification order
- ☐ *Section 8:* Project location, map, and directions from nearest highway
- ☐ *Section 8:* USGS quad map name, township/range, section, and ¼ section
- ☒ *Section 10:* Complete project description
- ☒ *Section 10:* Project plans
- ☒ *Section 11A-D:* Project impacts
- ☐ *Sections 11E and 11F:* Biological or hydrologic studies
- ☒ *Section 12:* Measures to protect fish, wildlife, and plants
- ☐ *Section 13:* Permits issued
- ☐ *Section 14:* Environmental review documents
- ☒ *Section 17*: Signature and date
- ☐ Notification Attachment: A ☐ B ☐ C ☐ D ☐

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

☒ Other: Alternative access routes and Environmental Impact Report (EIR) measure compliance (see Section 12, below).

Section 4: The Notification indicates that a long-term agreement (greater than five years) is being requested, but that the project term would be from the year 2014 to 2019. Please clarify whether you are requesting a regular or long-term agreement. From Department staff discussions with you and based on the rest of the information in the Notification, a regular (less than five years) term would likely be appropriate.

Section 6: As discussed when Department staff met with you on March 21, 2014 and April 11, 2014, the Notification is incomplete because the Notification does not include the required Notification fee payment.

Please itemize the fee for each crossing. Each crossing is considered a separate project and therefore requires a separate fee. The fee for each project is based upon the cost of implementing each project, and not the cost of the larger solar project. Refer to the Notification instructions and 2014 fee schedule (links at http://www.dfg.ca.gov/habcon/1600/forms.html) for further guidance, or contact Department staff if needed.

Section 10: The Notification describes several stream crossings in general terms that might be deployed at each of the 27 smaller stream crossing locations and at Location #3 on Las Aguilas Creek. This description is not sufficient for the Department to determine the potential effects of each of those crossings. Please provide detailed, written descriptions and crossing designs specific to each crossing location, with at least 75% engineering designs.

For proposed culvert locations, the Department recommends that you consider using elliptical or complete arch culverts with the inverts installed below the potential scour depth, and sized large enough that energy dissipaters would not be necessary.

It appears that multiple streams would be crossed near Location 3, where the Notification includes only one stream crossing. Please review this area and include all stream crossings associated with the solar project in any subsequent submittals. The Department requests a visit to verify the stream delineation.

Section 11: Section 11B indicates a 2,492-acre area of impacts. Please quantify the impacts only with the Department's jurisdiction (i.e., stream beds and banks), as opposed to the whole solar project footprint. Also please quantify impacts per project location and based on at least 75% engineering plans.

Section 12: The proposed bridge at Location 2 would require construction access from Little Panoche Road along Yturiarte Road to build the southern abutment. Blunt nosed-

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

leopard lizard (*Gambelia sila*, BNLL) observations were recorded on Yturiarte Road (a dirt road) during surveys for the solar project. For this reason the Department has recommended and still recommends avoiding Yturiarte Road during any activities associated with the solar project. Please indicate how "take" of the federal endangered and State endangered and fully protected BNLL will be avoided along Yturiarte Road.

Section 17: Please provide an original (not photo copied) signature in Section 17 of the Notification form.

Other: As the Department described in its letter dated November 10, 2010, regarding Notification No. 1600-2010-0159-R4 for the Panoche Solar Farm Project, the EIR places constraints on the solar project that preclude the Department from permitting the types of stream crossings being proposed.

Mitigation Measure BRG-2 in the final EIR reads as follows:

> *There shall be no ground disturbance within 100 feet of washes and streams. Observe an avoidance buffer of 100 feet as measured for from the top-of-bank on both sides of these features. Project access roads shall be designed to reach all portions of the project without direct effect on washes, except where this provision conflicts with the San Benito County Fire Code. No bridges shall be installed over washes unless required by the San Benito County Fire Code or CAL FIRE/San Benito County Fire Department. Driving across washes shall be prohibited except for emergency ingress and egress and as required by the San Benito County Fire Code or CALFIRE/San Benito County Fire Department.*

The final EIR requires that the project avoid streams unless doing so conflicts with fire code or fire department requirements. If conflicts with fire code arise, then the measure requires bridges over the washes, with a 100-foot setback from creek banks. The 100-foot buffer from top-of-bank precludes the proposed in-stream structures, trenching, bridge abutments that would be just outside the banks, and many elements of the solar facility that are within 100 feet of streams.

In our November 10, 2010 letter, the Department recommended a meeting with the fire department to discuss their requirements and alternative access road layouts. That meeting has yet to happen, and the letter from the fire department included with the Notification is not signed. The Department requests an in-person meeting with the appropriate representatives of the Department, the fire department, and Panoche Valley Solar, LLC to discuss the emergency access and perimeter roads that are required for the solar project prior to submitting materials in response to this letter.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

On similar permitted and operating solar projects in the Department's Central Region (for example Topaz Solar Farm and California Valley Solar Ranch), it is typical for solar arrays to have individual perimeter roads that adjoin a central access road, rather than having one road that surrounds all of the arrays. All of the proposed solar arrays for the Panoche Valley Solar Farm can be accessed at multiple points directly from Little Panoche Road. The Department recommends accessing the arrays in this manner to reduce the number of stream crossings and minimize impacts to wildlife. In particular, the Department recommends accessing the arrays west of Little Panoche Road directly from that road, with one perimeter road south of Las Aguilas Creek and one north of Las Aguilas Creek. This modification would eliminate the two proposed bridges, minimize impacts to wildlife habitat, eliminate the potential for take of BNLL on Yturaiirte Road, and avoid the conflict with the EIR requirements, while providing more access points to each array than are currently proposed. For example, two access points directly from Little Panoche Road, north of Panoche Creek, would provide more direct access to the southwestern solar arrays than the proposed bridge over Panoche Creek from Yturiarte Road, without any creek crossings.

Please note that you may not proceed with your project until your Notification is deemed complete, and you have obtained a Lake or Streambed Alteration Agreement, if required. If you have any questions regarding this matter or need additional information, please consult the "Notification Instructions" and/or "Questions and Answers" that were included in the notification materials. You may also contact Dave Hacker, Senior Environmental Scientist, at (805) 594-6152 or david.hacker@wildlife.ca.gov.

Sincerely,

Julie Vance
Program Manager

cc: Dave Hacker

ec: Steve Rutledge (R.Rutledge@duke-energy.com)

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
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EDMUND G. BROWN, Jr., Governor
CHARLTON H. BONHAM, Director

May 21, 2014

Steve Rutledge
Panoche Valley Solar Farm, LLC
400 South Tryon Street
Charlotte, North Carolina 28202

Subject: Second Incomplete Notification of Lake or Streambed Alteration
Notification No. 1600-2014-0042-R4
Panoche Valley Solar Farm - San Benito County

Dear Mr. Rutledge:

On May 1, 2014, the California Department of Fish and Wildlife (Department) received your revised Notification of Lake or Streambed Alteration (Notification). On May 21, 2014, the Department determined that your Notification is incomplete because the information checked below is either missing or insufficient. To complete your Notification, please review the Notification instructions and provide the following notification sections, along with a copy of this letter, to the Department. The Department, in its letter to you dated April 21, 2014, identified most of these same items as incomplete, in response to your Notification received on March 21, 2014.

- ☐ *Section 4:* Agreement term requested
- ☐ *Section 5:* Agreement type
- ☒ *Section 6:* Notification fee balance
- ☐ *Section 7:* Prior notification order
- ☒ *Section 8:* Project location, map, and directions from nearest highway
- ☐ *Section 8:* USGS quad map name, township/range, section, and ¼ section
- ☒ *Section 10:* Complete project description
- ☒ *Section 10:* Project plans
- ☒ *Section 11A-D:* Project impacts
- ☐ *Sections 11E and 11F:* Biological or hydrologic studies
- ☒ *Section 12:* Measures to protect fish, wildlife, and plants
- ☐ *Section 13:* Permits issued
- ☐ *Section 14:* Environmental review documents

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

☒ *Section 17*: Signature and date

☐ Notification Attachment: A ☐ B ☐ C ☐ D ☐

☒ Other: 1) "Addendum Report" and Appendix B missing. 2) Alternative access routes and Environmental Impact Report (EIR) measure compliance (see Section 12, below).

Section 6: As previously requested in the Department's letter dated April 21, 2014, please calculate the total Notification fee by calculating the fee for each individual crossing, or "project." Each crossing is considered a separate project and therefore requires a separate fee. Refer to the Notification instructions and 2014 fee schedule (links at http://www.dfg.ca.gov/habcon/1600/forms.html) for further guidance, or contact Department staff if needed.

Section 8: The Notification does not include a map of the solar project site that shows where each crossing is proposed. Please include a map with numbered crossings, or "project" locations, corresponding with crossing designs as discussed below for Section 10.

Section 10: The plans and descriptions provided are not sufficient for the Department to determine the potential effects of constructing the crossings. The Notification does not include plans for the 27 smaller stream crossing locations. Appendix E contains an "Exhibits" file with several crossing designs for larger crossings, but without reference to where they would be applied. The location numbers on the plans in Appendix E appear to not correspond with the mapped location numbers provided in the March 2014 Notification, and the same location numbers are on multiple crossing designs (e.g. "Crossing 4" is on both a low-flow crossing design and a culvert design). Please provide detailed, written descriptions and crossing designs specific to each crossing location, with at least 75% engineering designs.

For proposed culvert locations, the Department recommends that you consider using elliptical culverts or complete arch culverts with the inverts installed below the potential scour depth, and sized large enough that energy dissipaters would not be necessary.

The proposed solar project includes a road the crosses a stream near Las Aguilas Creek, east of Little Panoche Road, but the Notification does not include any information about this stream crossing (see Figure 1 below). Please review this area and include all stream crossings associated with the solar project in any subsequent submittals. The Department requests a site visit to verify the stream delineation.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

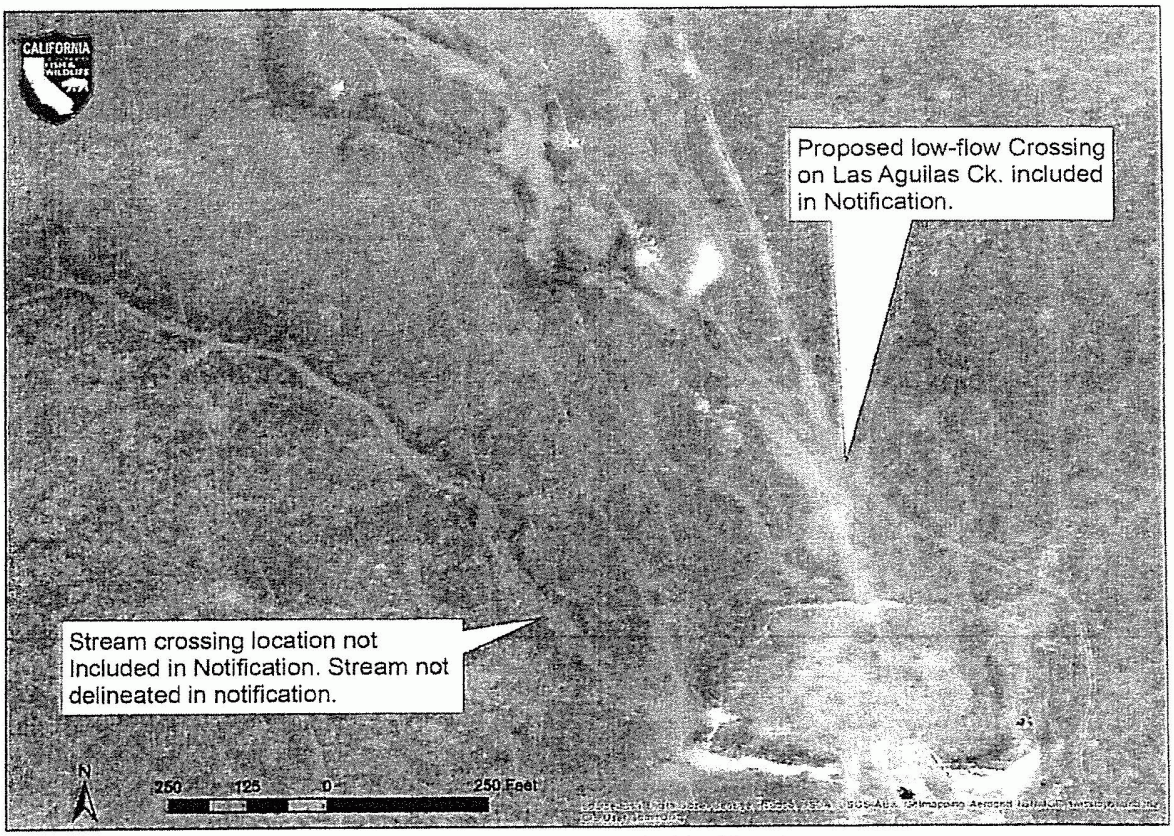


Figure 1. Stream crossing location not included in Notification.

Section 11: Section 11B indicates a 2,492-acre area of impacts. Please quantify the impacts only within the stream beds and banks, as opposed to the whole solar project footprint. Please quantify impacts per project location and based on at least 75% engineering plans.

Section 12: The proposed bridge across Panoche Creek would require construction access from Little Panoche Road along Yturiarte Road to build the southern abutment. Blunt nosed-leopard lizard (*Gambelia sila*, BNLL) observations were recorded on Yturiarte Road (a dirt road) during surveys for the solar project. For this reason the Department has recommended and still recommends avoiding Yturiarte Road during any activities associated with the solar project. Please indicate how "take" of the federal endangered and State endangered and fully protected BNLL will be avoided along Yturiarte Road.

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Section 17: As requested in the Department's letter dated April 21, 2014, and in the instructions at http://www.dfg.ca.gov/habcon/1600/forms.html, please provide an original (not photo copied or digital) signature in Section 17 of the Notification form.

Other: The Notification references an "Addendum Report" in several sections. That report was not included with the Notification. Please provide that report.

The CD included with the Notification has a folder titled "Appendix B" with no contents, and the Notification does not refer to an Appendix B. Please make sure that the Notification references the correct appendices, and that those appendices are provided, so that the Department has all of the information to evaluate the proposed project.

As the Department described in its letter dated November 10, 2010, regarding Notification No. 1600-2010-0159-R4 for the Panoche Solar Farm Project, the EIR places constraints on the solar project that preclude the Department from permitting the types of stream crossings being proposed.

Mitigation Measure BRG-2 in the final EIR reads as follows:

> *There shall be no ground disturbance within 100 feet of washes and streams. Observe an avoidance buffer of 100 feet as measured from the top-of-bank on both sides of these features. Project access roads shall be designed to reach all portions of the project without direct effect on washes, except where this provision conflicts with the San Benito County Fire Code. No bridges shall be installed over washes unless required by the San Benito County Fire Code or CAL FIRE/San Benito County Fire Department. Driving across washes shall be prohibited except for emergency ingress and egress and as required by the San Benito County Fire Code or CALFIRE/San Benito County Fire Department.*

The final EIR requires that the project avoids streams unless doing so conflicts with fire code or fire department requirements. If conflicts with fire code arise, then the measure requires bridges over the washes, with a 100-foot setback from creek banks. The 100-foot buffer from top-of-bank precludes the proposed in-stream structures, trenching, bridge abutments that would be just outside the banks, rip-rap bank stabilization/abutment protection, and many elements of the solar facility that are proposed within 100 feet of streams.

The EIR concludes that, for many species, including blunt-nosed leopard lizard, implementing measure BRG-2 will reduce the effects to less than significant.

In its November 10, 2010 letter, the Department recommended a meeting with the fire department to discuss their requirements and alternative access road layouts. That

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

meeting has yet to happen, and the letter from the fire department included with the Notification is not signed. The Department requests an in-person meeting with the appropriate representatives of the Department, the fire department, and Panoche Valley Solar, LLC to discuss what the fire code requirements are, and discuss alternative road configurations that would comply with fire code while minimizing and avoiding impacts to streams and wildlife, prior to re-submitting a Notification in response to this letter.

On similar permitted and operating solar projects in the Department's Central Region (for example Topaz Solar Farm and California Valley Solar Ranch), it is typical for solar arrays to have individual perimeter roads that adjoin a central access road, rather than having one road that surrounds all of the arrays. All of the proposed solar arrays for the Panoche Valley Solar Farm can be accessed at multiple points directly from Little Panoche Road. The Department recommends accessing the arrays in this manner to reduce the number of stream crossings and minimize impacts to wildlife. In particular, the Department recommends accessing the arrays west of Little Panoche Road directly from that road, with one perimeter road south of Las Aguilas Creek and one north of Las Aguilas Creek. This modification would eliminate the two proposed bridges, minimize impacts to wildlife habitat, eliminate the potential for take of BNLL on Yturiarte Road, and avoid the conflict with the EIR requirements, while providing more access points to each array than are currently proposed. For example, two access points directly from Little Panoche Road, north of Panoche Creek, would provide more direct access to the southwestern solar arrays than the proposed bridge over Panoche Creek from Yturiarte Road, without any creek crossings.

Please note that you may not proceed with your project until your Notification is deemed complete, and you have obtained a Lake or Streambed Alteration Agreement, if required. If you have any questions regarding this matter or need additional information, please consult the "Notification Instructions" and/or "Questions and Answers" that were included in the notification materials. You may also contact Dave Hacker, Senior Environmental Scientist, at (805) 594-6152 or david.hacker@wildlife.ca.gov.

Sincerely,

Julie Vance
Environmental Program Manager

cc: Dave Hacker

ec: Steve Rutledge (R.Rutledge@duke-energy.com)

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

ATTACHMENT E

Comment Set B3 – San Benito Residents for Responsible Development (cont.)

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

September 22, 2014

Mike O'Connor
Chief
Hollister Fire Department
110 Fifth Street
Hollister, California 95023-3926

Subject: Fire Code Requirements and Access to the Proposed Panoche Valley Solar Farm

Dear Chief O'Connor:

California Department of Fish and Wildlife (Department) staff received your letter (enclosed) dated July 14, 2014, regarding the Panoche Valley Solar Farm (Project). The Department very much appreciates you having taken the time to meet with staff at the proposed Project site earlier in July to discuss the fire code requirements and proposed emergency access routes. The Department understands that while many access road configurations could satisfy fire code requirements, safety is paramount in operating the proposed Project.

After the meeting, staff reviewed the existing roads leading to the proposed emergency access bridge location on Panoche Creek and observed conditions that the Department would like to bring to your attention. These conditions were not entirely apparent during the field meeting and are pertinent to the decision to permit the bridges and roads that are proposed to be constructed within active floodplains and proposed biological mitigation lands. Due to the seasonal constraints and conditions discussed below, the Department requests your input on the alternative access road plan attached to this letter. This alternative plan would not include bridges at Panoche and Las Aguilas Creeks, and would provide increased access to the entire perimeter of the northwestern solar panel array. The Department is not suggesting placing any considerations ahead of human safety; we submit this plan for your consideration with the belief that it provides comparable or better emergency vehicle access based on the observations discussed below, and request your input on anything we may have overlooked in this alternative plan compared to the applicant-proposed plan, which is also attached.

The Department's field observations suggest that the proposed Project site would be equally accessible with or without a new bridge over Panoche Creek. This is in part due to the fact that when the roads are wet (which would be outside of the fire season), the bridge would not be accessible, and the fact that the stream channel is crossable at most locations west of Little Panoche Road during the dry season without any bridges or culverts. During all seasons, with or without the proposed bridge, the Project would be directly accessible along the 2.5 miles of frontage on Little Panoche Road, which is an existing, paved road with a bridge over Panoche Creek.

Yturlarte Road, which would provide the only access to the proposed new bridge over Panoche Creek, is accessible only from Little Panoche Road 0.75 miles east of the proposed bridge and Panoche Road, 2.75 miles west. It is important to note that the dirt roads between Panoche Road and Yturlarte Road are private and mostly not maintained. Further, multiple locked gates, cross fences, and abandoned vehicles block access. Additionally,

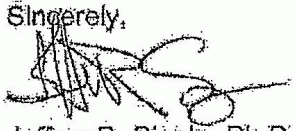
Comment Set B3 – San Benito Residents for Responsible Development (cont.)

Yturiarte Road on its west end is not signed and has the appearance of a private driveway, with gates on either side of the first creek crossing. Yturiarte Road crosses Panoche Creek twice with no bridges, culverts, or other improvements between there and the proposed bridge location. If Panoche Creek were flowing, thus necessitating a bridge, the proposed bridge could not be accessed by approaching from the west because of these two existing, unimproved crossings. If these crossings were flooded or wet, then the only access to the proposed bridge would be from the east side, where vehicles could access the Project site directly from the 2.5 miles of frontage along Little Panoche Road without the proposed bridge. In addition, Yturiarte Road approaching from either direction does not have an all-weather surface and appears to be impassable when wet.

The proposed bridge is also proposed for fire access, outside of the wet season. During the fire season, the creek is dry and crossable at most locations west of Little Panoche Road, between the Project site and north of Yturiarte Road, as discussed during the July field meeting. Also as discussed with staff, the barbed-wire fences are typically not an impediment for wildland engine access, and gates could further improve access across the ranch fences. A gate would have to be built across the proposed bridge access road regardless. Approximately 0.25 miles west of the proposed bridge site, vehicles could also approach the Project area across rangelands directly from Yturiarte Road without crossing Panoche Creek or any other major drainage.

Thank you for reviewing and considering this alternative plan. The Department looks forward to hearing your thoughts on our proposal. Please feel free to contact me or Dave Hacker, Senior Environmental Scientist (Specialist), at (805) 594-6152 or david.hacker@wildlife.ca.gov with any questions regarding this letter or if you would like to meet to discuss it further.

Sincerely,



Jeffrey R. Single, Ph.D.
Regional Manager

Attachments

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Byron Turner
County of San Benito Planning Department
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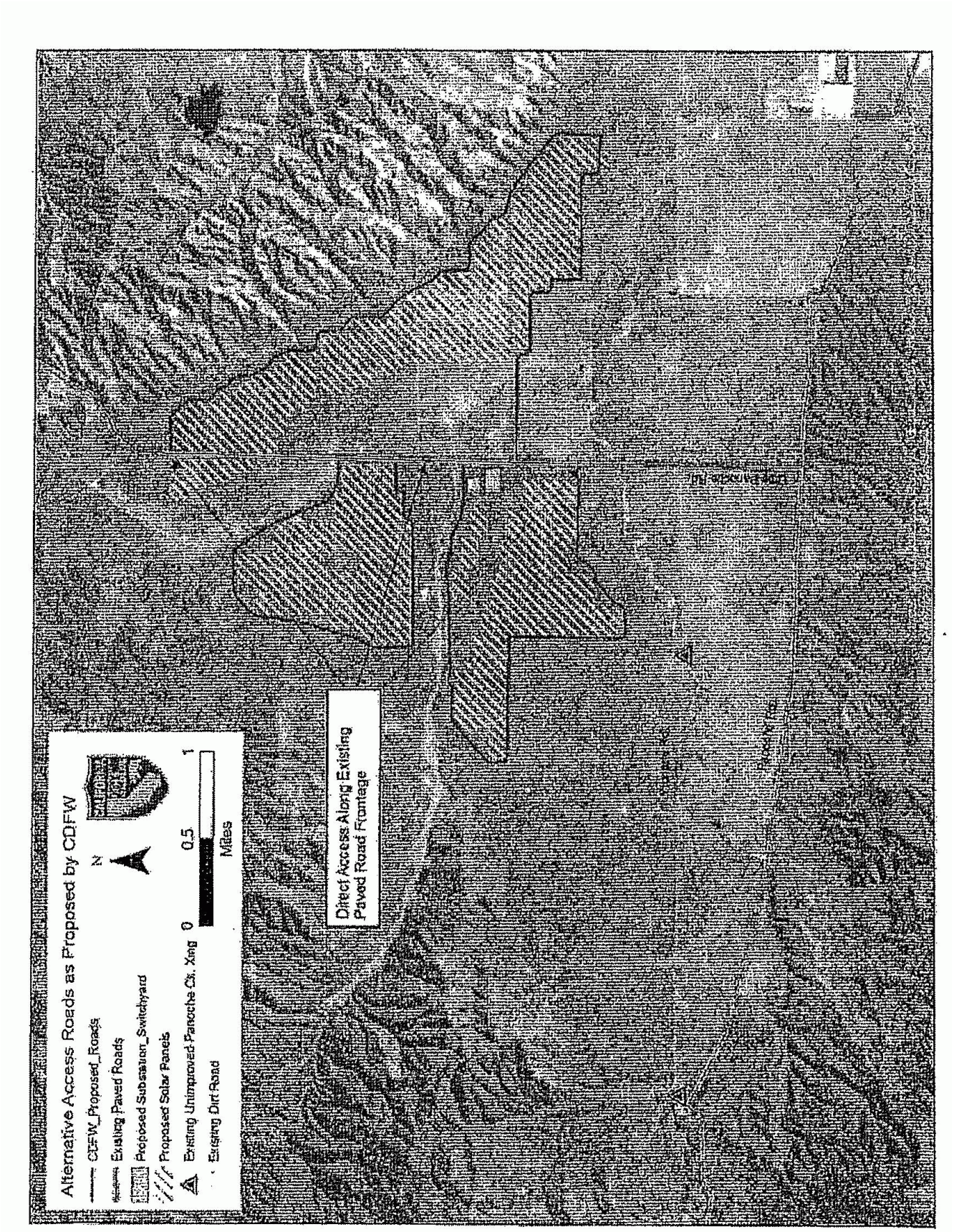
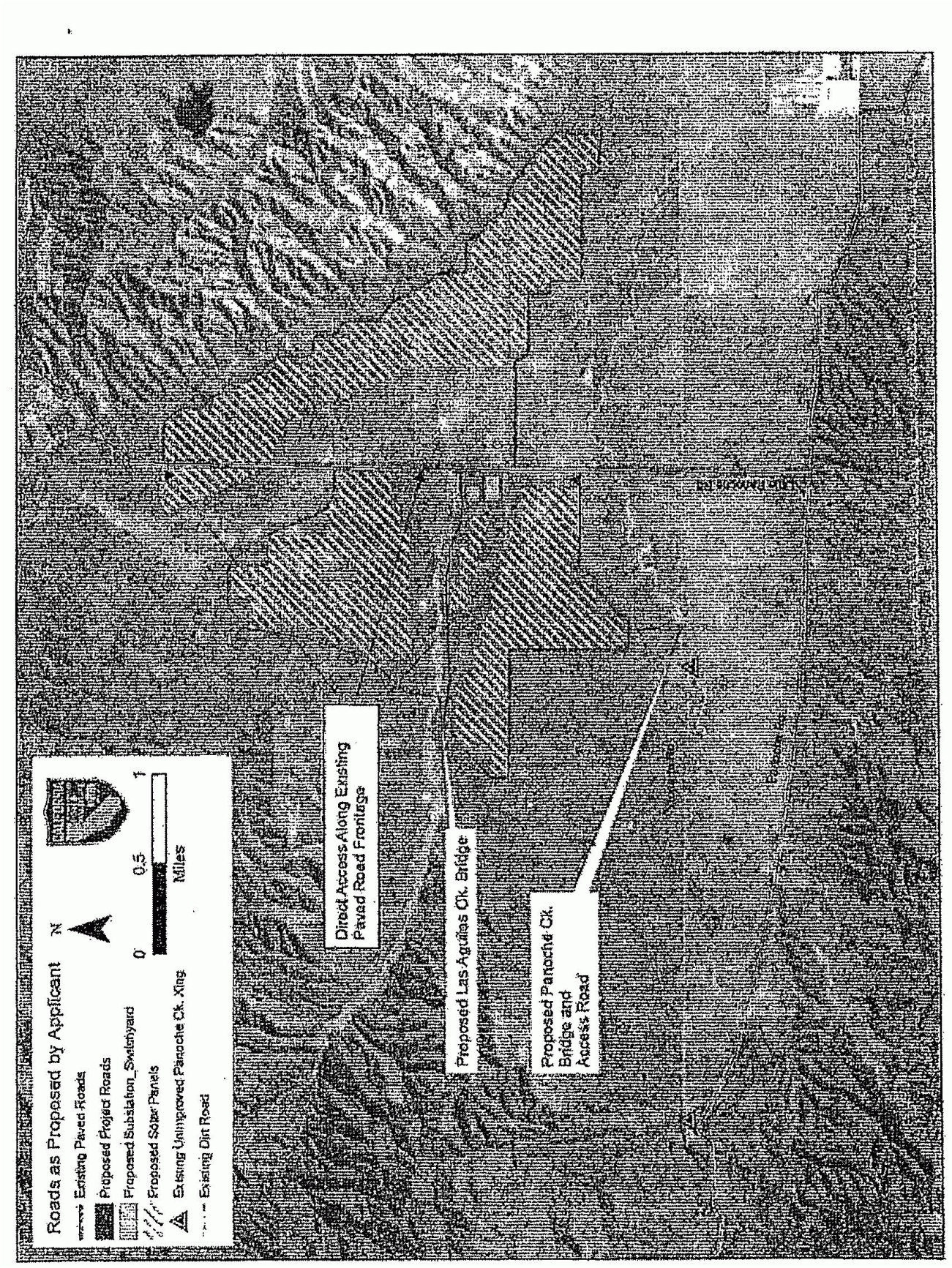
Comment Set B3 – San Benito Residents for Responsible Development (cont.)



Comment Set B3 – San Benito Residents for Responsible Development (cont.)



Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society

February 10th, 2015

Michael Krausie, Associate Planner
c/o Aspen Environmental Group
235 Montgomery Street, Suite 935
San Francisco, CA 94104

Via Email: panochesolar@aspeneg.com

Re: Panoche Draft Supplemental EIR
State Clearinghouse No. 2010031008

Dear Mr. Krausie,

The following are comments on behalf of the Santa Clara Valley Audubon Society (SCVAS) and the Sierra Club (SC) regarding Draft Supplemental Environmental Impact Report (SEIR) for the Revised Panoche Valley Solar Project (Revised Project). These comments augment comments submitted by SC and SCVAS and The Nature Conservancy, Audubon California, Defenders of Wildlife and the Center for Biological Diversity. B4-1

The mission of SCVAS is to preserve, protect, and educate our community about native birds and their ecosystems in Santa Clara County and surrounding regions. SCVAS members often use the Panoche Valley area for bird watching and other recreational and scientific purposes.

The Sierra Club is a national nonprofit organization of approximately 2.5 million members and supporters (approximately 250,000 of whom live in California) dedicated to exploring, enjoying, and protecting the wild places of the earth. The Sierra Club's concerns encompass protecting our lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to combat fossil fuels and climate change. Sierra Club members have long advocated for the rare species who call the Panoche Valley home. Many Sierra Club members regularly visit the Panoche Valley to bird watch and enjoy nature.

SCVAS and SC commented on the originally proposed Panoche Valley Solar Project (the "Original Project") and associated environmental documents. We opposed the Original Project and litigated the 2010 approval of the Original Project and the Original FEIR.

We continue to believe that the project should be rejected based on impacts to the rare and

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

endangered species of the area as well as impacts to regional ecological values and the local residents. While both SCVAS and SC understand and are deeply committed to the value of solar energy in California's future, this is simply egregious siting. We would not support a school relying on filling a portion of San Francisco Bay. We would not support a church perched on an unstable hillside above California's coast. The Revised Project would be very worthwhile in almost any location—but the Panoche Valley is simply not one of these locations. B4-1

1. Project Objectives

B4-2

The SEIR states"The Revised Project is expected to be able to attain all of these project objectives.[1]" (SEIR B-3) Accurate project objectives are key to determining whether there are feasible alternatives or mitigation measures available which would substantially lessen the significant environmental impacts of the project. (Pub, Resources Code 21002) As described below, the project is not necessary to meeting one objective—meeting the state's mandatory renewable energy portfolio goals, making this objective no longer relevant. As the project is located within a designated core recovery area for an increasingly imperiled range of species, it is difficult to see it will attain the objective of minimizing impacts on the environment by locating a project outside of designated conservation area, a second objectives. Finally, due to the abundance of threatened and endangered species on the project site, and the complex and time-consuming permits required from state and federal agencies to allow take of these species, each with public notice and review periods, there is serious doubt whether the project could achieve full operation in 2016 to qualify for the Investment Tax Credit.

We request that project alternatives, particularly the no project alternative, be re-evaluated in light of the Revised Project's own inability to attain two objectives, and the irrelevance of a third.

B4-3

The Revised Project will clearly not meet the stated project objective of minimizing environmental impacts by location outside of designated habitat conservation area. The SEIR states one of the basic project objectives is to: " Minimize impacts on the community and the environment by locating the facility…outside of parkland and designated habitat conservation areas." (SEIR, B-3) This is confounding as, only pages later, the SEIR notes, "The Ciervo-Panoche Region has been identified in the *Recovery Plan for Upland Species of the San Joaquin Valley, California (USFWS, 1998)* as an important area for the conservation for many federally and state-listed plants and animals. (ES-7). Indeed, the referenced Recovery Plan for Upland Species, a final, publicly reviewed document, identified the Panoche Valley as one of only three core population areas essential to recovery of these San Joaquin Valley upland species such as the highly endangered San Joaquin kit fox, the endangered blunt- nosed leopard lizard and the endangered giant kangaroo rat. Recent reviews of the status of the San Joaquin kit fox by the USFWS has shown that this species continues to decline and is in danger of extinction due to loss of habitat and threats to its remaining core habitat area. Indeed, since the time the Recovery Plan was released, the other two core recovery areas – the Carrizo Plain and natural areas of Western Kern County – have been significantly degraded by development, making the Panoche

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

Valley core recovery area increasingly important for species conservation.

B4-3 cont.

Please respond as to whether, under the Revised Project, this project objective has been met could be obtained by the Revised Project.

B4-4

The Revised Project is not necessary to meet the stated project objective of meeting the State's Renewable Portfolio Standard goals, since the California renewables market has matured considerably since the release of the original EIR. The state is well on target for meeting California's Renewable Portfolio Standard (RPS) 33% by 2020 target, without this project. Indeed, per the most recent California Public Utilities Commission (CPUC) quarterly RPS compliance report, released *before* Southern California Edison (SCE) filed an advice letter with the CPUC, "the IOUs are on track to meet the RPS requirement of 25% renewables by 2016 and are well-positioned to meet the 33% requirement by 2020."[2] California's progress in meeting its RPS targets, and market maturity is reflected in the large amount of renewable projects seeking power purchase agreements—per the report of an Independent Evaluator on SCE's 2013 RPS procurement cycle—the cycle which SCE selected the Revised Project—"approximately 35,000 GWh/year of RPS energy was offered by the unique proposals or projects. This compares to SCE's target for this solicitation of approximately 1,600 GWh or nearly 22 times need. SCE also estimates that the 134 unique projects submitted represented 12,434 MW (AC) of capacity. Overall, SCE received 367 Proposals."[3] Per the Independent Evaluator, even with new requirements imposed by SCE that actually reduced the number of proposals, the resulting number of was quite proposals, which "indicates the California renewable market is now very mature" [4]

B4-5

In September 2014, the state and federal governments have released the draft Desert Renewable Energy Conservation Plan (DRECP), a massive effort focused on designating low impact lands for renewable energy development, and others for conservation of covered plant and animal species. The DRECP is a "major component of California's renewable energy planning efforts"[5] and covers 22 million acres in Southern California. The DRECP designates enough acreage for 20,000 megawatt of utility-scale renewable energy. The DRECP's megawatt target is based on the State achieving a 50% target on a 2040 timeline.

B4-6

It is our assertion that this project objective, requires updating due to the maturity of California's renewables market, progress in meeting California's RPS goals and the release of governmental planning efforts which provide for more than enough energy to exceed the states renewable energy standard targets. Please evaluate whether the Revised Project is currently needed in order to meet California's RPS goals in light of the maturity of California's renewables market since the original EIR. If it is not, this project objective should be revised and the results of that revision should be subject to further public review. Please also include an alternative within the DRECP plan area.

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[2] California Public Utilities Commission, Renewable Portfolio Standard Status Report, Q3 2014, page 4) http://www.cpuc.ca.gov/NR/rdonlyres/CA15A2A8-234D-4FB4-BE41-05409E8F6316/0/2014Q3RPSReportFinal.pdf)

[3] SCE Advice Letter 3119-E concerning a RPS power purchase agreement between SCE and Panoche Valley Solar farm (Advice Letter) Independent Evaluator Report, page 22.

[4] Advice Letter, Independent Evaluator Report p. 23.

[5] http://www.drecp.org

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

The Revised Project will not be able to meet the basic project objective of achieving full operation in 2016 to qualify for the Investment Tax Credit under the Energy Improvement and Extension Act of 2008 (H.R. 1424). The financial structure of the Revised Project is dependent on obtaining the full 30% ITC. In order to meet the ITC deadline of full operation by 2016, even under the ambitious 18-month timeline proposed in the SEIR, the Revised Project will need to commence construction before the final quarter in early-mid 2015. The Revised Project is still quite far from obtaining the permits required to begin construction- permits, which can take many months to over a year to obtain, if they can be obtained at all without violating the underlying environmental statute. These permits include a Section 401 Permit from the Army Corps of Engineers, A Section 404 permit from the Army Corps of Engineers. Each of these permits will trigger review under the National Environmental Policy Act (NEPA). The Army Corps of Engineers published a notice of intent to prepare a draft Environmental Impact Statement (EIS) on July 19, 2012 but a draft EIS has yet to be released. The United States Fish and Wildlife Service is a cooperating agency. Similar to an EIR, the EIS goes through a public review process prior to the document being finalized and a record of decision being completed. NEPA documents and decisions are also subject to public comment and challenge, adding time and uncertainty. The Project developer is pursuing the Section 7 process under the Federal Endangered Species Act to address the Project's impacts to federally listed threatened and endangered species. The USFWS is reviewing the materials submitted by the developer to obtain a Biological Opinion. The terms of a Biological Opinion are discretionary and Project must be designed to avoid and minimize its impacts so as to not jeopardize the survival or recovery of the species in question. Meeting Section 7 requirements frequently involves redesign of a Project and creates additional uncertainty for Project size, output, and schedule. The complexity of meeting the Section 7 requirements becomes even more difficult when the species are critically imperiled and declining as is the case with the San Joaquin kit fox. The Section 7 process is also subject to NEPA and cannot be completed until the NEPA documents are completed. As stated above the NEPA EIS has not yet been released for its initial public review, and will have opportunities for public review, comment and appeal. Additionally, the Revised Project will require numerous permits from the California Department of Fish and Wildlife—including incidental take permits for the San Joaquin Kit Fox, San Joaquin Antelope Squirrel, California tiger salamander (a State designated threatened species) and Giant Kangaroo Rat (a State designated endangered species). The ITP process includes provisions for public review, comment and appeal.

B4-7

Please evaluate whether the Revised Project can meet the goal of obtaining the ITC, and respond accordingly by revising the project objective if the Revised Project cannot meet this objective, or analyzing alternatives, including alternative low-impact locations in the San Joaquin Valley which could perhaps deliver energy but not meet the ITC deadline.

2. Biological Resources

B4-8

The SEIR contains substantial changes from the project as approved. Many of these changes will result in increased and significant impacts to special status species and other biological resources.

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

In Mitigation Measures BR-6.1, 8.1,10.1. 11.1, 14.2, 16.1, 17.1, 19.1 the SEIR relies on yet-to-be approved plans for avoidance and mitigation measures for the altered project, including Avian Conservation Strategy, Eagle Conservation Plan, Mountain plover Avoidance and Mitigation Plan, California tiger salamander (CTS) breeding habitat, giant kangaroo rat (GKR) and San Joaquin antelope squirrel (SJAS) relocation plans, San Joaquin kit fox (SJKF) Conservation Measures, and blunt-nosed leopard lizard (BNLL) Avoidance Plan, and BNLL Protection Plan. For all of these, statements are made that the plans and measures will be subject to U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) approval. Most or all of these plans contain components that are inconsistent with recommendations that have been made by these agencies, and approval should not be assumed. **B4-9**

The BNLL Avoidance plan (MM BR-10.1) is contrary to comments made by the CDFW in a letter dated July 8, 2010. In that letter, a clear case was made for a minimum buffer of 395 acres around each BNLL detection, rather than the 52.4 acres proposed in the SEIR. The larger acreage is based on more complete information about potential BNLL home ranges and on the fact that, when detected, animals are unlikely to be at the center of their home range. The CDFW letter also explains that preconstruction surveys or on-site monitoring will not prevent take of BNLL, as below-ground lizards will not be detected. The SEIR has changed language which will eliminate the requirement for preconstruction surveys for BNLL immediately prior to the onset of construction, instead providing the surveys within 30 days of construction. This change will allow BNLL that enter the site in the 30 days that may elapse between survey and disruption to go undetected, thus increasing likelihood of take. The reduced requirement for pre-construction surveys, combined with the biologically inadequate buffer delineation, would result in a significant and unavoidable impact to BNLL. **B4-10**

It is stated in the SEIR (p. C6-44) that the minimum density of GKR found on the project site in 2014 surveys was greater than the density predicted by the Habitat Suitability Model (HSM) for the project. This indicates that impacts to GKR will be greater than originally predicted. Further, "the Applicant estimated 197-506 giant kangaroo rats could be expected to inhabit the approximately 63 acres of occupied habitat that would be impacted by the Revised Project. During periodic population increases, giant kangaroo rats may reproduce in large numbers, making it problematic to predict the upper limit of such a population; however, these conditions would not be considered typical." Surveys were completed in one year, during a period of unusually low rainfall. Neither the density of GKR, nor the number and distribution of "occupied" survey cells for the 2014 survey period can be concluded to be "typical." During other years, GKR densities in the project site are likely to be far higher, and include a far higher acreage. This new information indicates that the project will have increased, significant and unavoidable impacts to this species. At least two consecutive years of surveys during years of average precipitation are needed before an accurate baseline can be established. **B4-11**

New information in the SEIR includes drafts of Relocation Plans for GKR and SJAS (APM BIO-15, MM's BR-16.1, 17.1). It should be noted that neither of these plans have been approved by the USFWS or the CDFW. Both plans rely on relocation of animals from the project site to portions of conservation lands that are unoccupied by the species in question. Relocation will not include any habitat improvement for the species at the new sites beyond installation of artificial burrows. This makes the assumption that 1) suitable sites can be found in the **B4-12**

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

conservation lands, 2) although the sites are not currently used by GKR/SJAS, all conditions are suitable for sustained viability of the species released there, 3) that a lack of burrows is the only limiting factor, and artificial burrows will compensate, and 4) there is adequate connectivity between the relocation sites and other GKR and/or SJAS populations for the new populations to contribute to the continued viability of the species. If the relocation sites are not occupied, it may be because other conditions are not suitable for survival and reproduction of GKR or SJAS. The relocation plans propose that the relocated GKR population be monitored for 5 years, and the SJAS be monitored for 60-90 days to determine "success." Both species need to be monitored for a minimum of 5 years, and more definitive success criteria need to be provided. Success should include evidence of movement between the new sites and existing populations, as well as reproduction and survivorship comparable to other populations. No remediation has been proposed if success is not achieved. Success needs to be demonstrated, and remediation for lack of success needs to be ensured before any disturbance of the existing populations on the project site is allowed. Literature cited in the SEIR regarding other kangaroo rat relocations were primarily regarding Tipton kangaroo rat in another part of California, and should not be assumed applicable to GKR at this site.

B4-12 cont.

In MM BR 19.1 the SEIR cites the Haight et al. (2002) spatial model to classify high and moderate suitability of mitigation lands for SJKF. Haight et al. presented a theoretical model for cost-risk analysis to aid in budgeting funds for land protection for high-risk species. There is no indication that the authors intended their determination of habitat suitability to be used to classify habitat quality for mitigation ratio determination, as is being used in this context.

B4-13

The SEIR proposes a 4:1 acreage mitigation ratio for impacted lands, with 2:1 protection of land with "high suitability," and 2:1 of land with "moderate" suitability. Little information is provided regarding suitability determination, beyond classification of lands by slope of less than 5% as high suitability, and less than 15% as moderate suitability (per the Draft SJKF Conservation Measures). Important criteria such as vegetation type and density, prey availability, surrounding land use and topography, and existing SJKF density are not included in the determination of suitability. A cursory view of the topographic map of the region makes it obvious that the proposed mitigation lands are dissimilar to the project site in regard to location and distribution of flat acreage. The project site occupies the heart of the prime valley habitat, while most of the conservation lands are at the periphery adjacent to or including hills, thus providing very different conditions for SJKF as well as other special status species. While different than the mitigation ratios proposed in the project FEIR, the new SEIR mitigations are inadequate. In addition to deficiencies of the proposed conservation lands vs. the project site, protection of land without additional measures to improve carrying capacity for special status species will result in loss of habitat and animal numbers, and result in significant impacts.

The SEIR, at page B-12, describes the emplacement of "sheep fencing as needed." How would these fences be designed, and would they have any impacts, given DFG and FWS asked for changes to other fencing? What area would the fences cover at any given time? Given that grazing may occur from January to May, nearly half the year, this should be explained further. In addition, changes in language on page C.6-65 (MM BR-G.2) make it unclear whether project plans still include the use of sheep or goats to control vegetation on the project site. In any case, the change does allow the use of dogs on the site for livestock management. Livestock dogs may

B4-14

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

not be trained to avoid chasing, harassing, or killing wildlife, and will leave scent markings that may impact movements and activities of SJKF and other native species. This would introduce a new potentially significant impact. B4-14 cont.

On page BR-94, (MM BR-19.1) it is stated "Collaring of individual SJKF, for location monitoring, may be used as an impact avoidance measure." There is no further discussion of how this measure will be used, who will capture and monitor collared animals, nor of the fact that permits would be required from both the USFWS and the CDFW to capture, handle, and collar individuals of this endangered species. B4-15

The redesigned project contains five planned crossings of federally jurisdictional washes. Several changes have been made in the SEIR regarding avoidance of impacts to washes and streams (These include the deletion of APM BIO-8 " Washes and streams should be avoided by the project including a 50-ft buffer as measured from the top-of-bank on both sides of these features" SEIR, page B-21), and introduction of language that allows ground disturbance within 100 feet of washes and streams "as described and allowed by the USACE 404 permit and approved LSAA, and except any work directly associated with and required to complete those actions described and allowed by the USACE 404 permit and approved LSAA" (page C.6-66). The SEIR also introduces changes that allow access roads to have direct effect on washes, subject to USACE 404 permit and approved LSAA. Please explain why this mitigation measure was eliminated and what mitigation measures are being taken to protect these resources at a comparable level. B4-16

SEIR Figure C.6-8 shows impacts to drainages at more than 30 locations on and near the project site, including an unexplained location west of the site. In Impact BR-20 the SEIR states that over 3500 linear feet of drainages along the east side of the project will be filled. Although it is not clearly stated, apparently all of the drainages on the east side of the project site will be filled. Additionally, the revised project will include fill in an ephemeral creek on the west portion of the project site, associated with single span bridges. Justification for these changes in the SEIR relies merely on future mitigation or avoidance measures through agency permits, and does not fulfill disclosure provisions of CEQA. These changes must be justified based on substantial new evidence. The Final SEIR should provide hydrological modeling of baseline stormwater surface flows as well as Project stormwater surface flows, and potentially significant impacts of these changes in the project to hydrology, sensitive habitats, and to special status species, including the BNLL, must be addressed and mitigation measures must be disclosed for public review.

It is stated in the Description of Revised Project (page B-3) "An additional transportation corridor, a maintained fenced-off dirt path, would be placed south of Aquilas Creek and north of the perimeter fence line. This transportation corridor would replace the existing Vasquez Creek Road and would provide access to the western portion of the Valadeao Ranch Conservation Lands from Little Panoche Road for landowners and ranchers." Why change from the previous Vasquez County Road to the New Vasquez County Road? The Revised Project Vasquez now contains 4 acres of impact (SEIR, Table B-2), appears to run closer to a waterway, and is fenced on both sides. B4-17

Comment Set B4 – Sierra Club and Santa Clara Valley Audubon Society (cont.)

Project maps show this newly proposed road to be adjacent to Aquilas Creek, along the southern boundary of the proposed SLKF movement corridor. There is no information provided regarding the proximity of the road to the creek, nor is there any mention of the new road in the Biological Resources portion of the SEIR. Discussion is needed regarding the amount of traffic anticipated, type of fence, location of the road and the fencing relative to the creek, as well as impacts of road and fence construction and traffic on SJKF, BNLL, and the other special status species. B4-18

The SEIR relies on future review and approval of a Wetland Habitat Mitigation and Monitoring Plan, and Habitat Management Plan for mitigation lands. Not only should these plans be available for public review prior to project approval, wetlands should be established and functioning prior to disturbance of existing sensitive habitat. B4-19

The project has been changed to include three temporary construction ponds instead of evaporation ponds (MM BR-22.1). The use, size, location, and management of these are unclear. In fact, only two are shown on the project maps. The ponds could have impacts to special status species that have not been discussed. Ponds could act as "sink" for California tiger salamander if used as breeding ponds. Mortalities could occur when ponds are removed. If ponds are accessible to wildlife, they could result in increased number of animals that are not adapted to dry conditions (such as non-native red fox), which could impact special status species by increased competition and/or predation. B4-20

It is mentioned in the Biological Resources section of the project that construction will occur over 18 months instead of 5 years, as in the "Approved Project," but here is no analysis of the changes in impacts that can be expected. The concentrated work schedule means that there will be significantly more traffic, noise, ground vibration, water use, dust and other air pollutants, and human activity on the project site and along transportation corridors leading to the project site during the 18-month period. Particularly since the region has been impacted by a prolonged drought which has led to suppressed and stressed animal populations, this increase in activity over 18 months may have a more devastating and long-term effect than the previously-proposed five-year schedule. The SEIR needs to have a thorough discussion of expected impacts on the many special status species on and adjacent to the project site. The SEIR should also mitigate by requiring that construction does not start until after 2 years of average or more rainfall is recorded in the valley. B4-21

The use of interstitial space between PV panel rows for transportation corridors (APM BIO-26) could result in burrow collapse and mortality of special status species (including San Joaquin kit fox, giant kangaroo rat, San Joaquin antelope squirrel, blunt-nosed leopard lizard (BNLL), burrowing owl, American badger). It is stated that: "…a large number of giant kangaroo rat precincts would be located within the solar arrays and in areas where roadways or other Project infrastructure would be constructed…" If animals do habitat areas within the project site, they will be subject to increased mortality. B4-22

Upgrades of PG&E interconnection facilities and telecommunications infrastructure, including 12 work sites, could impact special status species, including the full-protected BNLL. Proposed mitigation for impacts includes preconstruction surveys for BNLL. Detection of BNLL based on visual observation cannot ensure avoidance of "take," as lizards may go undetected in B4-23

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underground burrows. Mortalities could occur if burrows are disturbed or crushed during construction activities. It is stated in the Executive Summary (ES) that "Incidental take of any special-status species will be authorized through a 2081 issued by CDFW for this work and through the Biological Opinion issued by USFWS for the Project. The species protection measures included in those documents will be used to avoid and minimize impacts to biological resources." Per the California Fish and Game Code, incidental take of BNLL or other fully-protected species cannot be permitted. B4-23 cont.

On page C.6-82, it is stated that positive survey results for vernal pool fairy shrimp (VPFS) "have been incorporated into the analysis of the Supplemental EIR (BR-8)." However, no discussion of Impact BR-8 is included in the SEIR (C.6-97). The VPFS surveys reports indicate that surveys were conducted on the project site, with VPFS found in one location, but no surveys were conducted along the proposed transmission line sites B4-24

3. Changes to Mitigation Measures and APM Measures B4-25

In *Napa Citizens for Honest Government v. Napa County Board of Supervisors*, 91 Cal. App. 4th 342 (2001) (*Napa Citizens)* c, citizens groups challenged a supplemental EIR and updated specific plan for development near a county airport. The County Board of Supervisors had eliminated mitigation measures imposed years earlier on the original specific plan for the area, finding that those mitigation measures were infeasible. The EIR challenge claimed that a Lead Agency could not eliminate previously adopted mitigation measures. The court disagreed, finding that CEQA allowed for flexibility and changed circumstances so long as certain findings were made and those findings were backed by substantial evidence. Essentially, the court said that a Lead Agency could change or eliminate mitigation measures so long as they have a legitimate reason for the change (i.e. the measure is infeasible), and that reason is supported by substantial evidence. (*Napa Citizens*, page 359)

In making its decision, however, the court in Napa Citizens did not intend that Lead Agencies should easily abandon mitigation measures. The court stated, "…the deference provided to governing bodies with respect to land use planning decisions must be tempered by the presumption that the governing body adopted the mitigation measure in the first place only after due investigation and consideration." (Ibid.) Thus, where the SEIR proposes to change or eliminate previously adopted mitigation measure, it should only do so after explaining the need for the change (e.g. the previous measure was infeasible, circumstances had changed) and that explanation should be backed by substantial evidence. In a number of ways, the Revised Project has reduced or eliminated protection for waterways and washes, changed standards for employee education, and seemingly reduced protections for sensitive species, especially the Blunt-nosed Leopard Lizard (BNLL). This appears to have been done to accommodate the Revised Project, rather than the species at risk. At times, more specific standards have been replaced by vague plans to be later devised and which the public has no current ability to review or comment on. We included some examples in our comments above, and include additional examples and comments below:

APM-BIO-8, which has been eliminated completely. This measure required that "Washes and streams should be avoided by the project including a 50-ft buffer as measured from the top of B4-26

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bank on both sides of these features." (SEIR, page B-21). Please explain why this mitigation measure was eliminated and what mitigation measures are being taken to protect these resources at a comparable level. B4-26 cont.

APM-BIO-9 has similarly eliminated buffer zones. It previously read in part, "Therefore, in these few cases where complete avoidance of washes and streams are not feasible the project will establish 30-ft buffers from small mammal burrows (whether BNLL are detected in them or not) in wash bottoms and 50-ft buffers from any observed BNLL locations in these features. These buffer zones will be demarcated…" (SEIR, page B-21) In place of this, preconstruction surveys and monitors are prescribed. (ibid) Please explain why these buffers were eliminated. B4-27
Protection for burrows with no detection of BNLL seems to have been completely eliminated. If the original FEIR provided such protection, it seems that the EIR consultants felt such protection valuable in protecting BNLL. Why has that opinion seemingly changed?

APM-BIO-10 has also been eliminated. It previously read, in part, "Project elements will avoid all observations of BNLL based on a 5-acre buffer that will encompass the sighting and include the best available habitat within this five acres; the closest edge of the buffer to the sighting will be 50 feet." (SEIR, page B-21) B4-28

APM-BIO-23 has also eliminated a requirement for, "a 50-foot buffer…around all sightings [of BNLL] with highly visible markers." (SEIR, B-24)Again, please explain why this mitigation measure was eliminated and what measures are in place to provide comparable protection for BNLL. Are highly visible markers no longer required? B4-29

APM-BIO 26 has also been eliminated. It required that, "…all project vehicles shall be confined to defined access routes that will be staked and/or flagged" unless a biological monitor allowed alternations to routes. (SEIR, page B-24) Given the increased level of traffic due to the compressed construction schedule, traffic, the risk of vehicles to impact protected plant and animal resources, makes this measure even more necessary. Please explain why this mitigation measure was eliminated and what measures are in place to provide comparable mitigation. B4-30
APM-BIO-11 formerly contained all construction activity including vehicular traffic to a construction zone demarcated by fencing and again references establishing buffer zones. (SEIR, page B-21) In place of this is the following addition, "The BNLL Protection Plan will be implemented at the site for construction activities." (ibid) Please explain why this mitigation measure was gutted and what mitigation measures will be in place to ensure comparable protection for BNLL and other species.

APM BIO-20 formerly required badges that, "…will include the employee's picture and will be color coded and dated in order to show that the employee is current with required training." (SEIR, page B-23) The Revised Project instead replaces this measure with a badge "or hardhat sticker" that does not require a picture, coding and dating. (ibid) Given the focus on worker training programs in the SEIR as a means to avoid or minimize impacts to special-status species, it is extremely important that worker training be enforced.? This change would allow an employee or contractor to avoid required training programs by borrowing a helmet. B4-31

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APM AQ-3 formerly required wheel washers where vehicles enter and exit the site, presumably to prevent sediment from local roadways and fugitive dust. This measure has been revised to require gravel track systems. (SEIR, page B-20)
Please explain why this change was made and the role gravel trucks could play in fugitive dust emissions.

B4-32

4. Traffic and Roadways

B4-33

Significant environmental impacts due to traffic on substandard roadways have been increased by shortening the time period of construction from 5 years to 18 months. The increase in traffic in the Revised Project seem very likely to not only impact public safety but increase the potential for road kill of sensitive species such as the San Joaquin kit fox. The SEIR must analyze impacts to wildlife from traffic collision from the compressed construction schedule and incorporate measures to avoid or mitigate these impacts.

B4-34

As a reminder, at page c. 14-4 the significance criteria for traffic impacts are provided:

> "Construction would create unsafe conditions on public roadways, such as limited access, unsafe design features, reduced sight distance, slow vehicles, damage to public roads, etc.; or The project would cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, congestion at intersections or individually or cumulatively exceed a level of service standard established by the County congestion management agency for designated roads or highways). As provided by Policy 4 of the Transportation Element of the San Benito County General Plan, the minimum level of service standard of County roadways is LOS C. "

Table C.14-3 illustrates the dramatic increase in auto and truck traffic over this 18-month time period when the Revised Project is compared to the Approved Project. (SEIR, page C.14-5) including: "Employee generated trips increase from an estimated 268 to 950 Material deliveries increases from 30 to 200. Total daily trips increases from 298 to 1,150, nearly a four-fold increase."
The "American Association of State Highway and Transportation Officials Guidelines specify a minimum roadway width of 18-20 feet for rural major access roadways with design speeds of 35-45 mph." (SEIR, page C.14-2) Both Panoche Road and Little Panoche Road are classified as major rural access roadways. Panoche Road contains bridges as narrow as 14 feet wide. (ibid) Also, "There are several sharp curves through the mountainous sections of Panoche Road in which sight distance is restricted by mountain slopes and vegetation." (ibid) Note that "unsafe design features" and "reduced sight distances" are part of the significance criteria mentioned above. Additionally, at certain times of the year, trucks and cars would be under nighttime driving conditions. Little Panoche Road contains, "sections of the roadway that were as narrow as 16 feet. Typical width of large trucks is 8.5 feet. Thus, the sections of roadway are narrower than the recommended 18 feet would not be adequate to accommodate two-way travel of large trucks." (ibid) The SEIR proposes to mitigate this dangerous condition solely through "signage and flagging." (ibid)

B4-35

Previously adopted Mitigation Measure TR-1.1 also requires the Applicant to identify measures to **ensure** safe transport of all trucks to the project site." (emphasis added)Given the four-fold

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increase in project related traffic in the Revised Project as compared to the Approved Project, it is unclear if the Traffic Control Plan has or could be modified to **ensure** safe transport of **all** trucks to and from the project site. We urge the following mitigation measures in order to better ensure the safety of the public in light of the four-fold increase in Revised Project-related traffic:

B4-35 cont.

- First, the project applicants should be required to bring all sections of roads and bridges on both Panoche Road and Little Panoche Road to specifications recommended by the American Association of State Highway and Transportation Officials Guidelines (i.e. a minimum of 18 feet wide).

B4-36

- Second, on Panoche Road, the project applicants should be required to provide an analysis of where sight lines and sharp curves could be modified to better accommodate public safety prior to the beginning of construction.

B4-37

The impacts by the Revised Project on surrounding roadway quality will come in a more compressed timeframe, likely leading to a degradation in roadway quality and resulting increase in safety hazards. The SEIR acknowledges this in saying,

> "Because portions of Little Panoche Road may not be adequate to sustain heavy truck travel, and because the addition of project traffic would hasten the deterioration of this roadway, previously adopted Mitigation Measures TR-1.2 (Rehabilitate and monitor roadway pavement) and TR-1.3 (Repair roadway damage) are necessary to ensure the safety of public roadways."

It is unclear whether requirements on the applicant to maintain roads over this time period been increased from the Approved Project in response to the significant increase in traffic usage, and if so, to what standard? Mitigation Measures TR 1.2 and TR 1.3 appear to be unchanged from the FEIR to the SEIR. Measure TR.1-4 does provide the kind of specifics needed to greater ensure road safety, if enforced, but does not address standards for road maintenance, constituting overly vague statements, in violation of CEQA. Actual standards for and/or schedules of road maintenance should be added. We contend that the SEIR's significance criteria under CEQA, as quoted at the beginning of this section of our comments, cannot be met given current road conditions and the hastened pace of construction proposed by the Revised Project. At a minimum, the substandard road conditions should be brought to standard, where feasible, prior to project construction.

B4-38

5. Air Quality

The increase in traffic due to the compressed construction schedule will lead to a significant increase in air quality impacts during that time. Additionally, there will be construction traffic in connection with the construction of the PG&E infrastructure, located within the San Joaquin Valley Air Quality District, which has historic issues with non-compliance. Dust and air quality impacts from construction are deferred to a dust mitigation plan. Without that plan, it is not possible to ascertain the adequacy of avoidance and mitigation measures for dust impacts.

B4-39

6. Water

According to revised estimates, water usage over the 18-month time period of the Revised Project increases approximately ten-fold, with peak daily water usage expected to go from .13

B4-40

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acre-feet to 1.72 acre-feet and peak annual demand from38.57 acre-feet to 314.87 acre-feet. (SEIR, Table B-4) Given these increases and in light of recent drought conditions, the faster drawdown of water may impact onsite and offsite watercourses ant the ability of vegetation to receive adequate water, impacting local protected species that rely on this vegetation.

B4-40 cont.

Additionally the primary mitigation measure appears difficult to implement in low-rainfall years, such as have been prevalent recently. MM-WR-1.1 states the basic standard that,

> "If…the project pumping has resulted in water level decline of 5 feet or more below the baseline trend at nearby private wells, the applicant shall be prohibited from using the well(s) as a water source for the project, or shall reduce groundwater pumping until water levels stabilize or recover." (SEIR, page C-16-9)

However, earlier in this same section of the SEIR, it acknowledges that

> "Water level elevations in a number of wells in Panoche Valley have declined over the last 5 years by approximately 5 to 15 feet. However, water level elevations in other wells within the Panoche Valley have risen during the same period."" (SEIR C.16.1)

The SEIR must identify how a significant drawdown in local wells would be determined to be the fault of "project pumping" rather than drought. The SEIR must also identify how local sample wells will be chosen, given acknowledged inconsistencies in well elevations (SEIR C.16.1) The SIER must also identify what alternate source of water the project would utilize if a significant drawdown is identified as being caused by project pumping, and how that water will be accessed.

The SEIR should also explain why three new, unlined construction water storage ponds would be built after another; lined pond was removed from the plans. (SEIR, page B-2) It seems likely these new ponds, despite fencing, create an attraction for species such as California Tiger Salamander and others, thus bringing them into harms way from construction activities, and increasing likelihood of mortality when the ponds are removed. It is not clear the pond fencing proposed is sufficient to exclude even these smaller species.

B4-41

The SEIR, at page B-11, discusses the need for a septic and leach field. It implies this system was not modified, despite the faster construction timetable of the Revised Project and vast increase in workers. The SEIR should identify how this system will deal with the significantly increased number of workers and activities on the site at one time and whether the plans were modified to accommodate increased usage. One applicable significance criteria for the issue mentioned just above is whether a project would, "Violate any water quality standards or waste discharge requirements, create any substantial new sources of polluted runoff, or otherwise degrade surface water or groundwater quality." (SEIR C.16-3)

B4-42

7. Microwave System

B4-43

PG&E proposes to construct up to 3 new cell towers, one of which could be up to 300 feet high. We have two concerns regarding possible impacts to avian species, particularly migratory birds[6].

[6] See: *Status of U.S. Fish and Wildlife Service Developments with communications towers, with a focus on migratory birds.* (2014)

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Given that the SEIR, at page B-32, notes the microwave towers as being PG&E's **preferred** secondary communication system, we ask for an analysis of the alternatives of developing these cell towers at this location, and whether any of these alternatives reduce the potentially biologically significant impacts associated with the towers.
If the cell towers are built as identified in the SEIR, we recommend a monitoring system for impacts to avian species.

B4-43 cont.

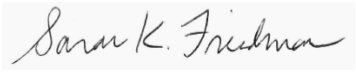
8. Mitigation Monitoring and Enforcement

B4-44

Public Resources Code Section 21081 requires a mitigation monitoring or reporting plan and "periodic reports" in order to "ensure" that mitigations required of a given development project are in fact implemented successfully. Clearly, the existence of an adequate system to monitor and enforce the required mitigation measures is necessary to ensure the public that those mitigation measures imposed on development are completed. We request greater clarity on the following points:

- Does the County have a funding mechanism in place to ensure that lack of staff resources will not be an excuse for poor follow-through in mitigation monitoring?
- How does the County pay for staff time and resources spent in mitigation monitoring? Will this funding source continue at an adequate level throughout the period of monitoring required by this project?
- CEQA calls for "periodic" reports regarding mitigation compliance. How often will such reports be required, and what must those reports contain?
- What legal mechanisms does the County have in place to address problems with mitigation implementation or permit compliance? For example, can the County fine the developer, call the permit up for modification or revocation, or issue a stop-work order? Please list the possible enforcement mechanisms.

We thank you for the opportunity to provide comments on this project,



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http://www.fws.gov/midwest/es/planning/pdf/USFWS2013RevisedGuidanceCommTowersSupportingInfo27Sept.pdf

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