Comment Letter O5

ADAMS BROADWELL JOSEPH & CARDOZO
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037
TEL: (650) 589-1660
FAX: (650) 589-5062
ccaro@adamsbroadwell.com

SACRAMENTO OFFICE
520 CAPITOL MALL, SUITE 350
SACRAMENTO, CA 95814-4721
TEL: (916) 444-6201
FAX: (916) 444-6209

DANIEL L. CARDOZO
CHRISTINA M. CARO
THOMAS A. ENSLOW
TANYA A. GULESSERIAN
LAURA E. HORTON
MARC D. JOSEPH
RACHAEL E. KOSS
JAMIE L. MAULDIN
ADAM J. REGELE
ELLEN L. WEHR

June 1, 2015

Via Email and U.S. Mail

Ms. Ashley Gungle, Land Use Environmental Planner
County of San Diego Planning and Development Services
5510 Overland Avenue, Suite 110
San Diego, CA 92123
Email: Ashley.Gungle@sdcounty.ca.gov

Re: Comments on the Draft Environmental Impact Report for the Jacumba Solar Project (PDS2014-MUP-14-041) (SCH No. 2014091034)

Dear Ms. Gungle:

On behalf of the Citizens for Responsible Industry, we submit these comments on the Draft Environmental Impact Report ("DEIR") for the Jacumba Solar Energy Project, a proposed 20 megawatt ("MW") solar photovoltaic ("PV") energy facility proposed to be located on 304 acres of private land in southeastern San Diego County ("County"), approximately 3/5 miles east of Jacumba, near Historic Rt. 80 and Carrizo George Rd RL 80/S92. The solar facility, proposed by Jacumba Solar, LLC, a division of NextEra Energy Capital Holdings ("Applicant") would use PV fixed-tilt rack electric generation system technology to produce solar energy at the utility scale, including approximately 81,108 PV modules fitted on 2,253 fixed-tilt rack panels (solar arrays), inverters, an on-site substation, and a battery storage facility capable of storing approximately 10 MW of energy (collectively, "Project" or "Jacumba Project").[1]

O5-1

The Project site is located in the County's desert region, and is rich with rare and special-status vegetation.[2] The site contains key foraging and nesting habitat for special-status raptors and other birds, such as golden eagles, prairie falcons, and

[1] DEIR, pp. S-1 to S-2.
[2] See DEIR Biological Appendix 2.2-1, Appendix C.
3144-009ev

printed on recycled paper

Response to Comment Letter O5

Adams Broadwell Joseph and Cardozo on behalf of Citizens for Responsible Industry June 1, 2015

O5-1 Comment noted.

Cooper's hawk.[3] The site also contains several stream channels and drainages that are considered jurisdictional non-wetland waters, including a tributary to Carrizo Creek.[4] The nearest sensitive human receptor is a single-family residence located approximately 3,500 feet (1,067 meters) north of the Project site.[5]

Construction of the Project is expected to take 6 months, and will require up to 120 workers and 298 truck trips per day during construction.[6] Upon completion, the Project would be an unmanned facility that would be monitored off site through a supervisory control and data acquisition ("SCADA") system.[7] The overall lifespan of the solar facility is estimated to be 30 years. At the end of its useful life, the Project would either have to be retooled with new technology or decommissioned and dismantled.[8]

O5-1 Cont.

Based upon our review of the DEIR, we conclude that the DEIR fails to comply with the California Environmental Quality Act[9] ("CEQA") in numerous aspects. For example, the DEIR's objectives and alternatives analysis does not comply with CEQA. The Project's objectives are much too narrow, arbitrarily rejecting any alternative that generates less than 20 MW, including the environmentally superior Reduced 15 MW Project Alternative ("Alternative 1"). The DEIR's cumulative impact analyses are also flawed because the DEIR's list of cumulative projects is confined to an overly narrow list of projects within 20 miles of the Project site and arbitrarily excludes projects within that 20 mile radius. The analysis therefore excludes other relevant development projects in the direct vicinity of the Project, and within the San Diego Air Basin. As a result, the DEIR's analyses of cumulative air quality and biological impacts are incomplete.

O5-2

Additionally, the Project will generate a multitude of significant, unmitigated impacts on air quality and biological resources, including significant cumulative impacts. The DEIR either mischaracterizes, misanalyzes, underestimates or fails to identify many of these impacts. First, the DEIR seriously underestimated the cancer risk posed to nearby residents and children from toxic air contaminants ("TACs") released during Project construction. The DEIR's air quality analysis

O5-3

[3] See e.g. DEIR, p. 2.2-51.
[4] DEIR, pp. 2.2-31 to 2.2-32.
[5] DEIR, Air Quality Appendix, p. 53.
[6] DEIR, p. S-3.
[7] DEIR, pp. S-1, 1-12.
[8] DEIR, p. S-1.
[9] Pub. Resources Code ("PRC") §§ 21000 et seq.
3144-009cv

O5-2 This comment is introductory and a summary of more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-26 through O5-30 as well as common themes comment ALT1 and responses to comments O5- 36 through O5-38.

O5-3 This comment is introductory and a summary of more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-55.

relied on incorrect Project factors to calculate health risk. As a result, the DEIR inaccurately concludes that the Project will not have significant health impacts from toxic diesel particulate matter ("DPM") emissions, and fails to mitigate them. Our expert air quality consultants performed the same health risk assessment using the correct Project input value factors, and found that unmitigated DPM emissions released during Project construction will result in a cancer risk of 1.8 per million for adults, 10.4 per million for children, and 34.6 per one million for infants.[10] This risk is well above the San Diego Air Pollution Control District's ("SDAPCD") significance threshold for cancer of 1 in a million, and is therefore a significant impact requiring mitigation.[11]

O5-3 Cont.

The DEIR also omits an analysis of key issues, such as public health impacts from exposure to Valley Fever. Valley Fever, or Coccidiodomycosis, is an infectious disease caused by inhaling the spores of *Coccidiodes immitis*, a fungus commonly found in soils in the Central Valley and Southern California desert regions. The disease can have serious health effects, including fever, chronic pneumonia, meningitis, or even death.[12] The spores are commonly released during soil-disturbing construction activities like those planned for the Project, yet the DEIR fails to even mention it.[13] Valley Fever has become increasingly prevalent in San Diego County in recent years.[14] This critical health impact requires analysis and mitigation in CEQA documents prepared for construction activities like the Project.

O5-4

Finally, the DEIR makes erroneous assumptions about the impacts of the Project on wildlife and special-status plants, without substantial evidence. For example, the DEIR omits a meaningful discussion of the impacts of "lake effect" from solar panel on bird deaths because the DEIR concludes that there is little scientific information about this impact.[15] By contrast, expert biologist Renee

O5-5

[10] See Exhibit A, Soil, Water, Air Protection Enterprise, Comments on the Jacumba Solar Energy Project, Jacumba, California (May 29, 2015) ("SWAPE Comments"), p. 15.
[11] See DEIR, p. 3.1.1-11 (requiring implementation of Toxics Best Available Control Technology ("T-BACT") for projects whose emissions of TACs result in an incremental cancer risk greater than 1 in 1 million); *Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (EIR must disclose an impact as significant when it exceeds a duly adopted CEQA significance threshold).
[12] See Exhibit C, http://www.cdc.gov/fungal/diseases/coccidioidomycosis/risk-prevention.html.
[13] See Exhibit D, Cal. Dep't of Public Health, Preventing Work-Related Coccidioidomycosis (Valley Fever) (June 2013), pp. 1-2.
[14] See Exhibit E, http://www.cdph.ca.gov/HealthInfo/discond/Documents/EnglishValleyFeverBrochure.pdf.
[15] See Dudek, Biological Resources Report for the Jacumba Solar Energy Project (April 2015) ("Bio Appendix"), p. 76.
3144-009ev

O5-4 This comment is introductory and a summary of more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-48.

O5-5 This comment is introductory and a summary of more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided in Responses to Comments O3-6, O3-7, O5-151 and Common Response BIO1.

Owens has submitted evidence with these comments which demonstrates that impacts to bird populations from deaths caused by the "lake effect" can be substantial. Ms. Owens concludes that the Project is likely to result in significant impacts to special-status raptors and other birds that attempt to forage or nest in the Project site.[16] The County must address this impact in a revised EIR and must adopt mitigation measures to reduce the impact to less than significant levels.

O5-5 Cont.

CEQA requires recirculation of a DEIR for public review and comment when significant new information is added to the DEIR following public review, but before certification.[17] The CEQA Guidelines clarify that new information is significant if "the DEIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect."[18]

The purpose of recirculation is to give the public and other agencies an opportunity to evaluate the new data and the validity of conclusions drawn from it.[19] As explained herein, there is significant new information, and significant information that was omitted from the DEIR, which require recirculation in this case. The County may not approve the Project until a legally adequate DEIR is prepared and recirculated for public review and comment.

O5-6

We have reviewed the DEIR and its technical appendices with the assistance of expert consultants, whose comments and qualifications are attached as follows: Matt Hagemann and Jessie Jaeger (**Attachment A**), and Renee Owens (**Attachment B**). The attached expert comments require separate response under CEQA. A revised or supplemental EIR should be prepared and recirculated prior to Project approval to analyze all impacts and require implementation of all feasible mitigation measures.

I. STATEMENT OF INTEREST

Citizens for Responsible Industry is an unincorporated association of individuals and labor unions that would be adversely affected by the potentially adverse public and worker health and safety hazards, and environmental and public

O5-7

[16] See Exhibit B, Renee Owens Comments on the Draft Environmental Impact Report Prepared for the Jacumba Solar Development Project (May 31, 2015) ("Owens Comments"), pp. 9-15.
[17] PRC § 21092.1.
[18] 14 Cal. Code Regs. ("CCR") § 15088.5.
[19] *Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (1981) 122 CalApp3d 813, 822.
3144-009cv

O5-6 The County disagrees that recirculation of the DEIR is required because none of the new information added to the EIR is "significant." The fact that commenter proposed alternative methods of analyzing the significance of an impact does not make it significant new information that would trigger a recirculation. The County is entitled to rely on its experts and other sources of substantial evidence to draw conclusions about the significance of environmental impacts even if commenter and commenter's experts disagree with those conclusions.

CEQA requires an EIR to be recirculated when the addition of new information deprives the public of a meaningful opportunity to comment on substantial adverse project impacts or feasible mitigation measures or alternatives that are not adopted. (*Laurel Heights Improvement Ass'n v Regents of Univ. of Cal*. (1993) 6 C4th 1112; CEQA Guidelines, Section15088.5(a). The critical issue in determining whether recirculation is required is whether any new information added to the EIR is "significant." If added information is significant, recirculation is required under Public Resources Code section 21092.1. The purpose of recirculation is to give the public and other agencies an opportunity to evaluate the new data and the validity of conclusions drawn from it. (*Silverado Modjeska Recreation & Park Dist. v County of Orange* (2011) 197 Cal.App.4th 282, 305; *Save Our Peninsula Comm. v Monterey County Bd. of*

	Supervisors (2001) 87 Cal.App.4th 99, 131; *Sutter Sensible Planning, Inc. v Board of Supervisors* (1981) 122 Cal.App.3d 813, 822.) *In Laurel Heights Improvement Ass'n v Regents of Univ. of Cal*. (1993) 6 Cal.4th 1112, 1130 (Laurel Heights II), the court gave four examples of situations in which recirculation is required: • When the new information shows a new, substantial environmental impact resulting either from the project or from a mitigation measure; • When the new information shows a substantial increase in the severity of an environmental impact, except that recirculation would not be required if mitigation that reduces the impact to insignificance is adopted; • When the new information shows a feasible alternative or mitigation measure, considerably different from those considered in the EIR, that clearly would lessen the significant environmental impacts of a project and the project proponent declines to adopt it; and • When the draft EIR was "so fundamentally and basically inadequate and conclusory in nature" that public comment on the draft EIR was essentially meaningless.

service impact, of the Project. The association includes San Diego County residents, such as Richard Daniels, and California Unions for Reliable Energy ("CURE") and its local union affiliates and their members and families that live and/or work in San Diego and Imperial counties (collectively, "Citizens"). The association was formed to advocate for responsible and sustainable industrial development in San Diego 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 Citizens and the members of the affiliated labor organizations live, work, recreate, and raise their families in San Diego County, including around the Project site. They would be directly affected by the Project's environmental and health and safety impacts. Individual members may also work constructingthe Project itself. They will, therefore, be first in line to be exposed to any environmental hazards that exist onsite.

O5-7 Cont.

The organizational members of Citizens also have 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 business and industry to expand in the region, and by making it less desirable 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 Citizens therefore have a direct interest in enforcing environmental laws to minimize the adverse impacts of projects that would otherwise degrade the environment.

II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances).[20] The EIR is the very heart of CEQA.[21] "The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so

O5-8

[20] See, e.g., PRC § 21100.
[21] *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.
3144-009cv

After *Laurel Heights II*, these examples were incorporated into the CEQA Guidelines. (CEQA Guidelines Section15088.5(a).)

Any new information that has been added to the EIR since circulation of the DEIR serves simply to clarify or amplify information already found in the DEIR, and does not raise important new issues about significant effects on the environment. The ultimate conclusion about the project's significant impacts do not change in light of any new information added to the EIR. Therefore, any new information in the EIR is insignificant for purposes of CEQA, particularly as set forth in Section 15088.5(b) of the CEQA Guidelines.

Detailed responses to the letter provided by Matt Hagemann and Jessie Jaeger (Exhibit A of the comment letter) and the letter provided by Renee Owens (Exhibit B of the comment letter) are included separately as requested by the commenter (comment responses O5-93 through O5-128 address Exhibit A and comment responses O5-131 through O5-173 address Exhibit B).

O5-7 Comment noted. This comment does not address the adequacy of the DEIR, therefore no further response is required.

O5-8 Comment noted. The County has prepared the DEIR pursuant to the applicable requirements under

as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[22]

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[23] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'"[24] 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."[25]

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures.[26] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced."[27] If the project will have a significant effect on the environment, the agency may approve the project only if it finds 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."[28]

O5-8 Cont.

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. *A clearly inadequate or unsupported study is entitled to no judicial deference.*"[29] As the courts have explained, "a prejudicial abuse of discretion occurs "if the failure to include relevant information

[22] *Comtys. for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal. App.4th 98, 109 ("*CBE v. CRA*").
[23] 14 CCR § 15002(a)(1).
[24] *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.
[25] *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[26] 14 CCR§ 15002(a)(2) and (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at 564.
[27] 14 CCR §15002(a)(2).
[28] PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B).
[29] *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), *quoting, Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 391 409, fn. 12.
3144-009cv

CEQA. This comment does not address the adequacy of the DEIR, therefore no further response is required. The County notes that CEQA has several policies. Among the policies the commenter fails to note are the following:

"Ensure the long-term protection of the environment, *consistent with the provision of a decent home and suitable living environment for every Californian*, shall be the guiding criterion in public decisions" Pub. Res. Code 21001(d); emphasis added. The Proposed Project creates a source of renewable energy to help power homes and create a suitable living environment for Californians.

"If economic, social, or other conditions make it infeasible to mitigate one or more significant effects on the environment of a project, the project may nonetheless be carried out or approved *at the discretion of a public agency* if the project is otherwise permissible under applicable laws and regulations." Pub. Res. Code 21002(c); emphasis added. The administrative record supports and will support the County decision-makers final findings with regards to the feasibility of mitigation at the time they are made with the decision-makers having fully and independently considered all the evidence.

"To provide more meaningful public disclosure, reduce the time and cost required to prepare an

	environmental impact report, and focus on potentially significant effects on the environment of a Proposed Project, lead agencies shall, in accordance with Section 21000, focus the discussion in the environmental impact report on those potential effects on the environment of a proposed project *which the lead agency has determined are or may be significant. Lead agencies may limit discussion on other effects to a brief explanation as to why those effects are not potentially significant.*" Pub. Res. Code 21002.1(e); emphasis added. "The legislature further finds and declares that it is the policy of the state that:…(f) All persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical, and social resources with the objective that those resources may be better applied toward mitigation of actual significant effects on the environment." Pub. Res. Code 21003(f). "In addition to the policies declared by the Legislature concerning environmental protection and administration of CEQA in Sections 21000, 21001, 21002, and 21002.1 of the Public Resources Code, the courts of this state have declared the following policies to be implicit in CEQA:

	'(g) The purpose of CEQA is *not to generate paper*, but to compel government at all levels to make decisions with environmental consequences in mind.' (Bozung v. LAFCO (1975) 13 Cal. 3d 263.; emphasis added) (i) CEQA *does not required technical perfection* in an EIR, but rather adequacy, completeness, and a good-faith effort at full disclosure. A court does not pass upon the correctness of an EIR's environmental conclusions, but only determines if the EIR is sufficient as an informational document. (Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692; emphasis added) "(j) CEQA requires that decisions be informed and balanced. *It must not be subverted into an instrument for the oppression and delay of social, economic, or recreational development or advancement.* (Laurel Heights Improvement Assoc. v. Regents of U.S. (1993) 6 Cal. 4th 1112 and Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal. 3d 553)" See CEQA Guidelines section 15003 ((g), (i) and (j); emphasis added). Here, the County has provided a good faith effort to analyze the environmental impacts of the project using methodologies approved by the project and with the assistance of experts in environmental analysis. The County is not required to generate paper to perform

precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process."[30]

O5-8 Cont.

III. THE DEIR FAILS TO ADEQUATELY DESCRIBE THE PROJECT

The DEIR does not meet CEQA's requirements because it fails to include an accurate, complete and stable Project description, rendering the entire analysis inadequate. California 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]."[31] CEQA requires that a project be described with enough particularity that its impacts can be assessed.[32] Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate project description.[33]

It is impossible for the public to make informed comments on a project of unknown or ever-changing description. "A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental costs...."[34] As articulated by the court in *County of Inyo v. City of Los Angeles*, "a curtailed, enigmatic or unstable project description draws a red herring across the path of public input."[35] Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project's impacts and undermining meaningful public review.[36]

O5-9

A. The DEIR Fails to Adequately Describe the Open Space Preserve

The DEIR contains conflicting and contradictory descriptions of the Open Space Preserve that fail to adequately inform the public of the size and purpose of

O5-10

[30] *Berkeley Jets*, 91 Cal.App.4th at 1355; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946.
[31] *County of Inyo v. City of Los Angeles* (3d Dist. 1977) 71 Cal.App.3d 185, 193.
[32] *Id.* at 192.
[33] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311 ("*Sundstrom*").
[34] *Id.* at 192-193.
[35] *Id.* at 197-198.
[36] *See, e.g., Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376.
3144-009cv

additional analysis the commenter considers technically perfect, that uses different methodologies of analysis, and different thresholds of significance would subvert CEQA into an instrument of oppression and delay of social and economic advancement by further delaying this project's contribution to construction jobs within the County and to helping the state meet and exceed its renewable portfolio standard targets through the creation of clean, solar energy. Here, the County has properly weighed comments from all sources and either made appropriate clarifications in the EIR or explained in good faith why it disagrees with the comment.

O5-9 This comment states that the DEIR does not include "an accurate, complete and stable Project description" yet does not provide specific details regarding the commenter's issue with the project description in this specific comment. CEQA Guidelines section 15124 identifies the required elements of a project description. It provides that "the description of the project shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact:" (a) The precise location and boundaries of the Proposed Project shown on a detailed map, preferably topographic and also including a regional map; (b) a statement of objectives sought by the Proposed

		Project; (c) a general description of the project's technical, economic, and environmental characteristics; (d) a statement briefly describing the intended uses of the EIR including, a list of agencies expected to use the EIR in decision-making, a list of permits and other approvals required to implement the project and a list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies'. The DEIR's project description includes each of these required elements. The Project location and boundaries are depicted on Figures 1-1 and 1-2; a statement of project objectives is included on pages 1-1 to 1-2; the project's technical, economic, and environmental characteristics are described on pages 1-2 through 1-20; and the intended use of the EIR and further permits and approvals required to implement the Project are set forth on pages 1-20 through 1-21.
	O5-10	Discussion of the Open Space preserve is found in Chapter 1, Project Description, and Section 2.2, Biological Resources, of the DEIR. The comment is correct in its description of how the Open Space preserve is described in various sections of the EIR. It should be noted that the size of the preserve is consistently stated throughout each identified section of the DEIR (Chapter 1, Project Description, Section 2.2, Biological Resources, and Appendix 2.2-1) as

the preserve. The Project Description chapter of the DEIR states that the Project will put aside 184 acres as a permanent open space preserve.[37] As explained in that chapter, the purpose of the preserve is to "enable wildlife access across the private lands to adjoining federal lands in an area where cross-border movement is possible."[38] However, proposed Mitigation Measure M-BI-4 then states that the open space preserve will include just 180.4 acres of native habitat, 3.1 acres of already disturbed habitat, and is intended to "mitigate for Project impacts to 99.9 acres of special status upland vegetation communities."[39] Finally, the DEIR Bio Appendix again describes the Open Space Preserve as 184 acres,[40] but admits that the 3.1 acres of disturbed land cannot be considered as replacement habitat with equivalent function or value acreage of that being lost to the Project.[41] The DEIR Bio Appendix also asserts that the Open Space Preserve has been configured "to be consistent with current wildlife movement constraints and movement areas."[42]

O5-10 Cont.

There is no analysis in the DEIR of use of the Open Space preserve to mitigate for special status vegetation. The only mention of this purpose is in the text of Mitigation Measure M-BI-4, and all other discussion of the preserve addresses migrating wildlife. It is therefore unclear whether the preserve is appropriately designed to mitigate either impacts to special-status plants or to migrating wildlife. The DEIR must be revised to clarify this inconsistency, and provide a legally adequate discussion of the Open Space Preserve.

O5-11

B. The DEIR Contains Conflicting Information About the Number of Workers on the Project Site During Operation

The DEIR's Project Description chapter makes clear that there will be no on-site workers used during Project operation. It explains that "[t]he Project would be an unmanned facility that would be monitored remotely."[43] However, Mitigation Measure M-BI-1 purports to require on-site workers to monitor bird kills once the Project is operation. Mitigation Measure M-BI-1 states that "[d]uring operations, site personnel will collect the same data [data on incidentally detected dead avian

O5-12

[37] DEIR, p. 1-2.
[38] *Id.*
[39] DEIR, p. S-15.
[40] DEIR Bio Appendix p. 1.
[41] DEIR, p. 2.2-32.
[42] DEIR Bio Appendix, p. 75.
[43] DEIR, p. 1-12; *see also* DEIR, p. 1-3 ("Upon completion, Jacumba Solar would be monitored off site through a supervisory control and data acquisition (SCADA) system.").
3144-009ev

approximately 184 acres. The specifically identified approximately 180.4 acres of native habitats required to mitigate for Project impacts to 99.9 acres of special-status upland vegetation and approximately 3.1 acres of disturbed land that is not required for mitigation of Project impacts to special-status species totals approximately 183.5 acres for the entire open space preserve (which can be rounded to approximately 184 acres). The provision of the approximately 184-acre preserve for wildlife movement is not mutually exclusive from utilizing the preserve to also mitigate for impacts to special-status species for the simple reason that wildlife can move across both native habitat and disturbed land, whereas the portion of the 184 acre preserve that qualifies as mitigation for special status vegetation is more limited. Classifying the subportions of the approximately 184 acre preserve into types of land does not mean the project description is unstable. A careful reading of the EIR shows the preserve has been described as an approximately 184 acre preserve and remains described as approximately 184 acre preserve throughout the document.

O5-11 Please see response to comment O3-15. The use of the Open Space preserve to mitigate for impacts to special-status plant species is discussed in Section 2.2, Biological Resources, of the DEIR. Specifically, on page 2.2-90, the DEIR states that

		significant long-term direct impacts to Jacumba milk-vetch, pygmy lotus, Mountain Springs bush lupine, Parry's tetracoccus, southern jewelflower, Tecate tarplant, sticky geraea, slender-leaved ipomopsis, desert beauty, pink fairy-duster, Parish's desert-thorn, and Fremont barberry would be reduced to less than significant through implementation of the Open Space preserve as required by mitigation measure M-BI-4.
	O5-12	The commenter is incorrect in the citation of mitigation measure M-BI-1, as identified in Section 2.2 of the DEIR, as all requirements outlined in the mitigation measure apply to the construction phase only. No such statement exists within mitigation measure M-BI-1. The quoted statement appears to be sourced from mitigation measure M-BI-15. The commenter is correct in stating that the Project Description states that the Jacumba Solar Facility will be unmanned and monitored remotely (page 1-12 of the DEIR). Commenter fails to quote the very next sentences stating "Appropriate levels of security lighting would be installed at the Project entrance. The site would be secured 24 hours per day by remote security services with motion-detection cameras." The EIR project description is not inadequate as an informational document because a reasonable person can understand

	that an unmanned facility that is remotely monitored is referring to the fact that there are not full-time security personnel at the site. Solar projects that are much larger than this 20 MW facility often have full-time security staff, instead of remote monitoring so it informs the public decision-making process to tell the public the method used to monitor this particular project. It is clear that the reference to the site as unmanned and remotely monitored is with regards to security. The EIR does not say it is unmanned and remotely monitored *for biological monitoring* and then impose a contradictory on-site biological monitoring mitigation requirement. The commenter claims that the fact that operational workers will be on site from time to time is not disclosed and impacts of such vehicle trips and worker use of the site is not analyzed in the EIR. However, the DEIR project description accurately describes that periodic operation and maintenance staff would visit the Electrical Substation and Energy Storage Facility and the Solar Field would be visited on an as-needed basis in addition to the biannual panel washing (page 1-13 of the DEIR). Operational staff conducting the periodic and as-needed visits to the project site during operations can also fulfill the required quarterly reports outlined in mitigation measure M-BI-15. Furthermore DEIR page 3.1.1-19 discusses the marginal impacts to air quality from emissions associated with inspection vehicles, personnel

wildlife], take photographs, and notify the Project's environmental manager, who will then notify CDFW and PDS on a quarterly basis unless listed species are involved."[44]

O5-12 Cont.

These two statements are clearly inconsistent. If the Project site is "unmanned," there would be no on-site workers to monitor or intercept dead birds. If that is the case, then Mitigation Measure M-BI-1 is infeasible. Alternatively, if the Project site will host on-site personnel once operational, that fact must be disclosed in the DEIR and the impacts of vehicle trips and other worker use of the site analyzed. The DEIR must be revised to clarify this issue.

O5-13

C. The DEIR Fails to Adequately Describe Project Decommissioning

CEQA mandates that lead agencies must include in a project description the "whole of an action" which is being approved, including *all* components and future activities that are reasonably anticipated to become part of the project.[45] This includes, but is not limited to, "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[46] The requirements of CEQA cannot be avoided by chopping a large project into many little ones or by excluding reasonably foreseeable future activities that may become part of the project.[47] The County, as the lead agency, must fully analyze the whole of the project in a single environmental review document and may not piecemeal or split the project into pieces for purposes of analysis. Nevertheless, the DEIR fails to adequately describe Project decommissioning activities and fails to analyze air quality and biological impacts of decommissioning activities. Instead, the DEIR defers analysis and creation of a Decommissioning Plan to post-Project approval. As a result, the DEIR fails to describe the full scope of the Project being approved in the DEIR, and fails to disclose the full range and severity of the Project's significant environmental impacts. This violates CEQA's fundamental requirement that an EIR must fully inform the public of a project's environmental consequences. For this reason, every phase of the Jacumba Project must be assessed with the same level of specific details.

O5-14

[44] DEIR, p. S-22.
[45] 14 Cal. Code Regs ("CEQA Guidelines") §15378 (emphasis added).
[46] *Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263, 283-84.
[47] Pub. Resources Code § 21159.27 (prohibiting piecemealing); *see also, Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 370.
3144-009cv

transport vehicles, panel washing equipment, and service trucks during operation and maintenance of the solar project. Finally, by way of example, the DEIR's traffic analysis states that a conservative 20 ADT were included during the operational phase to account for workers traveling to the site.

O5-13 Please refer to Response to Comment O5-12.

O5-14 The comment states that every phase of the Jacumba Project must be assessed with the same level of specific details and accuses the County of deferring the analysis to the creation of a Decommissioning Plan created post-Project Approval. The DEIR accurately identified decommissioning as a mitigation measure (M-AE-3) for aesthetic impacts. The law is contrary to commenter's statement because CEQA makes it clear that secondary impacts from implementing mitigation measures are not required to be analyzed in the same level of detail as the project. CEQA Guidelines 15126.4(a)(1)(D) states, "[i]f a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed, *but in less detail than the significant effects of the project as proposed*." (emphasis added). Indirect effects are changes to the physical environment that occur later in time or farther removed in distance than direct effects. 14 Cal Code Regs Section15358(a)(2)

	Accordingly, because project decommissioning is a mitigation measure that will not be implemented until decades from project approval, there is limited analysis regarding its indirect, secondary impacts that can be foreseen. Nevertheless, in response to this comment and in a good faith effort to provide an adequate analysis that further clarifies the impacts from the decommissioning mitigation measure, the FEIR includes additional information about impacts related to decommissioning (including air quality impacts related to soil disturbance activities) and mitigation measures have been amended to address any potentially significant indirect, secondary impacts. The revised Section 2.1 Aesthetics, which is further supported by technical memorandums for air quality and GHG, biological resources, cultural resources, hazards (fire), noise, and paleontological resources addresses the secondary environmental impacts associated with decommissioning. The DEIR does include a description of the anticipated water demand for decommissioning, Section 1 Project Description, and includes evaluation of the effects of drawing that water supply in sections 3.1.4 Hydrology and Water Quality and 3.1.8 Utilities and Service Systems. Because decommissioning would not increase the disturbance footprint and would generally involve reduced activity compared to construction, the secondary impacts would not include a new significant impact or a substantial increase in the severity of an

	impact identified in the EIR for construction. The supplemental, clarifying analyses provided in attached memorandums [Appendices 9.1-1 through 9.1-7] do not identify any new significant impacts or mitigation measures. For clarity, the mitigation measures identified for construction activities throughout the DEIR have been revised to include decommissioning activities. With regards to commenter's claim that the decommissioning plan is improper deferred mitigation, the County disagrees. The details of decommissioning are necessarily deferred until closer to the time of project construction when the exact design or the project and types of materials that will be used are known. This information aids the County in approving a Decommissioning Plan that maximizes recycling of those materials. Nevertheless, the Mitigation Measure M-AE-3 contains proper performance standards that assure the future Decommissioning Plan will be effective in reducing significant visual impacts of the project to below a level of significance because it requires any such plan to remove all above-grade structures and non-shared transmission facilities from the site, recontour the site, hydroseed the site with vegetative cover, and meet the Regional Water Quality Control Board's requirements for stabilizing the site from a hydrology and water quality standpoint. This satisfies CEQA's requirements for proper deferred mitigation.

The Project would be operational for 30 years and has three distinct phases: construction, operation/maintenance and decommissioning.[48] The DEIR describes the general activities that would be involved with decommissioning the Project, but does not describe the length of time involved in decommissioning, nor does it include any analysis of air quality or biological impacts of this phase of the Project. Evidence in the DEIR suggests that decommissioning will have impacts similar to the construction phase of the Project, and will entail removal of both ground-level and underground components, thus involving soil disturbing activities.[49] There can be no reasonable question that, if construction activities will result in significant impacts to air quality and biological resources, then surely decommissioning activities will as well.[50] These impacts must be described and analyzed in a revised DEIR.

O5-15

IV. THE DEIR FAILS TO ADEQUATELY ESTABLISH THE EXISTING ENVIRONMENTAL SETTING FOR BIOLOGICAL RESOURCES

The DEIR fails to adequately describe the environmental setting for biological resources against which the Project's environmental impacts are to be measured. This contravenes the fundamental purpose of the environmental review process, which is to determine whether there is a potentially substantial, adverse change compared to the existing setting. CEQA requires that a lead agency include a description of the physical environmental conditions, or "baseline," in the vicinity of the project as they exist at the time environmental review commences.[51] As the courts have repeatedly held, the impacts of a project must be measured against the "real conditions on the ground."[52] The description of the environmental setting constitutes the "baseline" physical conditions against which the lead agency assesses the significance of a project's impacts.[53]

O5-16

[48] DEIR, pp. 1-3, 1-10 to 1-13.
[49] DEIR, pp. S-13 to S-14.
[50] Indeed, other lead agencies, such as the California Energy Commission ("CEC") have included extensive analyses of decommissioning in their EIRs for renewable energy projects. See Exhibit F.
[51] 14 CCR § 15125(a); *Comtys. for a Better Envt v. So. Coast Air Qual. Mgmnt. Dist.* (2010) 48 Cal. 4th 310, 321 ("*CBE v. SCAQMD*").
[52] *CBE v.* SCAQMD, 48 Cal. 4th at 321; Save *Our Peninsula Com. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 121-22; *City of Carmel-by-the-Sea v. Bd. of Supervisors of Monterey County* (1986) 183 Cal.App.3d 229, 246.
[53] 14 CCR § 15125(a); *CBE v.* SCAQMD, 48 Cal. 4th at 321.
3144-009cv

O5-15 Please refer to Response to Comment O5-14. Decommissioning would involve the removal of facilities on the approximately 108–acre project site that would at that time be a developed solar facility. The removal of the facility would not increase the acreage of the footprint or result in impacts that are additional or more severe than those already discussed in the DEIR for construction activities.

O5-16 The existing setting for the purposes of the DEIR is established in Section 1.4 and specifically for biological resources is discussed in Section 2.2, Biological Resources. These sections include a thorough description of the existing conditions, including vegetation communities, water resources, plants, wildlife, wildlife movement, soils, and topographic setting information.

The DEIR failed to conduct sufficient background analysis of several bird and special-status plant species to establish an accurate baseline from which to assess the Project's impacts to biological resources. First, the DEIR conducted inadequate surveys for golden eagles. As explained by biologist Ms. Owens, the DEIR relies on data provided for previous projects that is either out-of-date or does not include site-specific golden eagle surveys.[54] Old surveys from different project sites are not substantial evidence of existing conditions at *this* Project site.[55] As a result of the DEIR's lack of site-specific information on the existing setting, the DEIR fails to identify the current state of use of the site by golden eagles for foraging and nesting, and fails to include any mitigation for significant impacts to foraging raptors. O5-17

The DEIR also includes flawed assumptions about which species may be impacted the Project because the DEIR failed to document several special-status species that are reported by the California Natural Diversity Database ("CNDDB") as occurring on or near the Project site. The DEIR states that it obtained species data from the CNDDB.[56] However, the DEIR failed to document several species that are listed on the CNDDB. Omitted species include migrating tricolored blackbirds and Southern Grasshopper Mouse foraging habitat.[57] The DEIR's baseline information on these species is therefore inadequate. O5-18

Ms. Owens explains that the DEIR also includes inadequate surveys for the federally endangered Quino checkerspot butterfly. As with golden eagles, the data on Quino conditions that is included in the DEIR is both outdated and flawed in its reporting protocol.[58] The DEIR acknowledges that critical habitat for the Quino occurs less than 3 miles away from the Project site.[59] Thus, establishing an accurate baseline for conditions related to this endangered species is critical to an effective analysis of Project impacts. The DEIR must be revised to include current and accurate Quino surveys prior to construction commencement. O5-19

Finally, the DEIR failed to conduct any surveys for rare plants. Instead, the DEIR relies on modeling and assumptions for the anticipated presence of rare plants on the Project site, which do not constitute the "real conditions on the ground" for these species. As a result, the DEIR contains a flawed analysis of O5-20

[54] See Exhibit B, pp. 2-3.
[55] 14 CCR § 15125(a).
[56] DEIR, p. 2.2-2.
[57] Exhibit B, pp. 14-19.
[58] Exhibit B, pp. 23-24.
[59] See DEIR Bio report, Figure 5, USFWS Critical Habitat.
3144-009cv

O5-17 Please see response to comments F1-3. The County disagrees that the DEIR fails to provide sufficient background on use of the site by golden eagles. The DEIR states that there is no nesting habitat on site and acknowledges that the Project site is likely used for foraging for golden eagles. It also summarizes golden eagle observations in the vicinity of the Project site. M-BI-4 conserves 180.4 acres of native habitat suitable for raptor foraging.

O5-18 The existing setting for biological resources is discussed in Section 2.2, Biological Resources, of the DEIR. Appendix G to the Biological Resources Report concludes that neither species (tricolored blackbirds and Southern Grasshopper Mouse) is likely to be present.

O5-19 The County disagrees that the surveys completed for this project were inadequate. Winter and breeding season foraging surveys were conducted on site as discussed in RTC O3-16 and surveys completed by WRI have been acknowledged by the USFWS as being valuable (Heather Beeler, USFWS pers com 2015). That data is relevant with regard to the locations of nests in the vicinity. The DEIR analyzes potential effects to golden eagle in accordance with the County's EIR Format and General Content Requirements for Biological Resources, dated September 26, 2006, including describing the

	guideline for determining significance pursuant to the Guidelines for Determining Significance, Guideline 4.1 (E) (County of San Diego 2010a), which states "any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles". As stated in the DEIR, there are no active golden eagle nests within 4,000 feet of the Proposed Project; therefore, the Proposed Project does not meet significance threshold for this guideline. However, impacts to functional foraging habitat for raptors, including foraging habitat for golden eagle, were quantified, is considered a potentially significant impact from the Proposed Project, and is mitigated through habitat preservation. Suitable habitat for the golden eagle is outlined on page 2.2-20 of the DEIR. These habitat types and their existing acreages on the Proposed Project site (i.e., vegetation communities) are included on Table 2.2-7, Summary of Impacts, Mitigation, and Open Space for Vegetation Communities and Jurisdictional Areas of the DEIR. Both of the species mentioned in this comment – tricolored blackbird and southern grasshopper mouse – are reported in Appendix G of the Biological Resources Report (BRR). A complete review of the CNDDB, FWS data, and other data sources was

	compiled as discussed in Section 2.2.3.2 of the DEIR and BRR. Further, all species directed by the County to be address, were addressed. It should be noted that the "sensitive" category for tricolored blackbird is "Colony" (Appendix G of the BRR) and that colonies are not expected to occur due to unsuitable breeding habitat, thus no additional analysis is required by the County. Similarly, grasshopper mouse was identified as having a low potential to occur based on geography and vegetation communities. They typically occur in rougher terrain, and all of the CNNDB data points within 10 miles were collected over 20 years ago. This is a species that the County does not require focused trapping for. Please see response to comments O3-8. Detailed responses to Ms. Renee Owen's comment letter are provided in Responses to Comments O5-131 through O5-174. See also responses to comments O3-8 through O3-12 concerning the adequacy of QCB surveys.
	O5-20 Please see response to comment O3-15. The Desert Beauty is discussed as potential species in section 2.2 (pp. 2.2-11 and 2.1-12) of the DEIR. The Mt Laguna aster is not identified as expected to occur due to unsuitable vegetation as provided in Appendix D (page D-15) of Appendix 2.2-1 Biological Resources Report of the EIR.

Project impacts to rare plants, in particular to desert beauty and Mt. Laguna aster.[60] This omission must be corrected.

O5-20 Cont.

The failure to describe the existing setting for numerous biological resources precludes informed decision making and public participation, contrary to the goals of CEQA. The County must gather relevant data and provide an adequate description of the existing setting in a revised DEIR.

O5-21

V. THE DEIR FAILS TO ADEQUATELY ESTABLISH THE EXISTING ENVIRONMENTAL SETTING FOR WATER RESOURCES

The DEIR fails to disclose whether waters on the Project site are "navigable waters" of the United States subject to regulation as non-wetland jurisdictional waters by the U.S. Army Corps of Engineers ("USACE"), or whether the waters are State waters, subject to regulation by the California Department of Fish and Wildlife ("CDFW"). The DEIR also fails to disclose whether the Project will require waste discharge permits from the Regional Water Quality Control Board ("RWQCB").

O5-22

The DEIR explains that surface waters at the Project are dominated by ephemeral drainages that convey runoff during and/or shortly after rain events.[61] The Project site contains approximately 10 separate basins which contain an active water flow during and immediately after significant rain events.[62] While the DEIR asserts that there are no U.S. Geological Survey ("USGS") mapped creek channels within the Jacumba Valley that connect directly to Carrizo Gorge, it is presumed that the valley is hydrologically connected to the northerly-draining Carrizo Wash.[63] The Project site is also within the watershed of, and hydrologically connected to, the Salton Sea, which is an impaired water under the Federal Clean Water Act ("CWA") Section 303(d).[64] The DEIR concludes that, in total, there are approximately 3.3 acres (24,361 linear feet) of potential jurisdictional waters of the United States/state identified within the solar site.[65] The DEIR clearly explains the connection between these Project waters and larger, Federally regulated "waters of the United States":

O5-23

[60] Exhibit B, pp. 20-21.
[61] DEIR, p. 3.1.4-2.
[62] DEIR, p. 3.1.4-3.
[63] DEIR, p. 3.1.4-3.
[64] DEIR, p. 3.1.4-20 to 21.
[65] DEIR, p. 2.2-32.
3144-009cv

O5-21 Please see response to comments O5-16 and O5-18.

O5-22 Discussion of the existing water resources within and surrounding the Project site is found in Section 2.2, Biological Resources, and Section 3.1.4, Hydrology and Water Quality, of the DEIR. The Project site's aquatic resources are characterized in the DEIR and are described as potentially jurisdictional. The DEIR analyzes impacts to these resources. The status of aquatic resources as waters of the U.S./state is a legal determination, not biological one. CEQA does not require that the legal status of waters be resolved prior to the circulation of the DEIR or certification of the FEIR. Specifically, the following language is included on page 2.2-32 describing the waters on site: "these non-wetland waters were determined to be under the potential combined jurisdiction of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW."

Further, mitigation measure M-BI-14 requires the project to comply with state and federal regulations for impacts to waters of the U.S. and state, including obtaining agency permits per Sections 401 and 404 of the Clean Water Act and Section 1602 of California Fish and Game Code.

O5-23 See response to comment O5-22. The legal status of the site's aquatic resources affects whether permits from regulatory agencies are required, not whether

Flows within these drainages are directed northwest from the site and into a tributary to Carrizo Creek, which flows into Carrizo Creek, turns into Carrizo Wash, and connects San Felipe Wash and eventually the Salton Sea (USGS 2014) (see Figure 2.2-2 and Figure 2.2-4, Hydrologic Setting) and therefore form a significant nexus to a traditional navigable water of the United States.[66]

Despite this clear connection to Federal waters, the County failed to analyze whether the Project site drainages are themselves subject to regulation as "waters of the United States." Instead, the DEIR simply states that "[t]he solar site was surveyed to determine the presence of potential waters of the United States and state.... these waters do not meet any one of the three criteria required to be considered a County RPO wetland. However, these non-wetland waters were determined to be under the *potential combined jurisdiction* of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW."[67] As a result, the DEIR's description of the existing setting for water resources fails to inform the public whether the Project site contains sensitive Federally-regulated or State-regulated waters, and fails to accurately disclose whether the Project will require additional permits from USACE, the RWQCB, or CDFW in order to construct and operate the Project, in violation of CEQA.[68]

O5-23 Cont.

Full disclosure regarding whether the Project is permissible under applicable laws and is important because there is an intricate and substantive regulatory scheme that would be triggered by a determination that a Project site drainage is a "navigable waters" for purposes of Federal regulation. The Federal permitting and licensing regulations trigger the requirement to analyze the least environmentally damaging practical alternative and the need for specific mitigation measures to reduce impacts to navigable waters.[69]

O5-24

[66] DEIR, p. 2.2-32.
[67] DEIR, p. 2.2-32.
[68] PRC § 21002.1 (EIR must disclose whether project is otherwise permissible under applicable laws and regulations).
[69] PRC § 21002 (agency may not approve a project unless it has implemented all feasible mitigation measures which would substantially lessen the significant environmental effects of the project); 14 CCR §15002(a)(2) (EIR must "identify ways that environmental damage can be avoided or significantly reduced"); *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722 (agency abuses its discretion by failing to proceed in a manner required by law when it fails to address potentially significant impact in the EIR).
3144-009cv

the Project is permissible under applicable laws. Additionally, Section 3.1.4 of the DEIR discusses the potential for runoff resulting from the Project site to affect the Salton Sea. Specifically, page 3.1.4-21 states:

Conceptually, the Proposed Project site is hydrologically connected to the Salton Sea because it is within its watershed. However, due to the arid climate and the site's distance away from the Salton Sea (over 40 miles away), stormwater runoff from the Project site is unlikely to reach these features before infiltrating into the ground or evaporating.

Additionally, as stated in Section 2.2 of the DEIR on page 2.2-60, the Project site does not contain any wetlands under the jurisdiction of ACOE, RWQCB, CDFW, or County.

O5-24 Comment noted. See response to comment O5-22. The County is aware of the applicable regulations of the Clean Water Act that may affect permitting of the Proposed Project. As specified in mitigation measure MM-BI-14, the project is required to comply with state and federal regulations for impacts to waters of the U.S. and state, including obtaining agency permits per Sections 401 and 404 of the Clean Water Act and Section 1602 of California Fish and Game Code.

Section 404 of the CWA authorizes the USACE to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."[70] Section 401 of the CWA requires that an applicant for a federal license or permit to discharge into navigable waters must provide the federal agency with a water quality certification, declaring that the discharge will comply with water quality standard requirements of the CWA. The USACE is prohibited from issuing a CWA permit until the applicant receives a CWA Section 401 water quality certification or waiver from the RWQCB.[71] The RWQCB, in turn, may not issue a Section 401 permit unless the RWQCB finds that the Project is consistent with water quality standards, effluent guidelines, New Source Performance Standards ("NSPS"), and the CWA's toxics provisions, among other considerations.[72] A project may be required to adopt mitigation measures or alternatives to a proposed design in order to meet these requirements.[73] Lastly, the Applicant may be required to enter into a streambed alteration agreement ("SAA") with CDFW if the Project is found to impede or impair a State water. In order to issue an SAA, CDFW may require a project to implement measures intended to protect fish and wildlife resources that may be impacted by the project's impacts on the water body.[74]

O5-24 Cont.

Here, the County must determine whether the Project will require dredge or fill permits and, in turn, whether the Project and its design comply with applicable water quality standards. If not, the Applicant may be required to implement mitigation measures, alternatives, or changes to Project design that would cause the Project to come into compliance with Federal regulations. Without this compliance, no Federal permits can issue, and the Project could not proceed.

O5-25

[70] 33 U.S.C. § 1344.
[71] 33 U.S.C. § 1341.
[72] CWA §404(a)(1);.33 USC 1341(a)(1).
[73] *Id.*
[74] Cal. Fish & Game Code § 1602(1)(F)(4)(a)(1).
3144-009ev

O5-25 See response to comments O5-22 through O5-24.

VI. THE DEIR CONTAINS OVERLY NARROW OBJECTIVES AND A DEFICIENT ALTERNATIVES ANALYSIS

A. **The DEIR's Objectives and Alternatives Analysis are Inadequate Because the Project's Objectives Automatically Disqualify the Environmentally Superior Alternative**

O5-26

CEQA requires that an EIR's statement of objectives be sufficiently broad to permit consideration of a reasonable range of alternatives.[75] A lead agency "may not give a project's purpose an artificially narrow definition" so as to eliminate alternatives other than the proposed project.[76] Here, the DEIR improperly rejects the environmentally superior alternative to the Project as infeasible because the Project objectives are artificially narrow.

O5-27

Objective 1 for the Proposed Project is to "***Develop approximately 20 megawatts (MW) of renewable solar energy*** that can operate during on-peak power periods to indirectly reduce the need to emit greenhouse gases (GHGs) caused by the generation of similar quantities of electricity from either existing or future non-renewable sources to meet existing and future electricity demands."[77] By limiting the primary Project objective to developing "20 megawatts (MW) of renewable solar energy" (Objective 1), the DEIR precludes meaningful consideration of the alternatives analyzed. This is most noticeable with regard to Alternative 1, an alternative which the DEIR admits would substantially reduce the Project's impacts to biological resources and was found to be the environmentally superior alternative.[78]

O5-28

The principal reason given in the DEIR for rejecting Alternative 1 was that it did not meet Objective 1. In other words, Alternative 1 was rejected because it is not a 20-MW solar project. The reasoning violates CEQA. A set of objectives and alternatives that, by definition, renders all of the alternative projects inconsistent with the objectives is a meaningless exercise and inconsistent with CEQA's requirement to analyze a reasonable range of alternatives. The Project objectives,

[75] 14 CCR § 15124(b); *In re Bay-Delta Programmatic Envtl. Impact Report Coordinated Proceedings ("In re Bay-Delta")* (2008) 43 Cal. 4th 1143, 1166; *Cal. Oak Found. v. Regents of Univ. of Cal.* (2010) 188 Cal. App. 4th 227, 272.
[76] *In re Bay-Delta*, 43 Cal. 4th 1143, 1166.
[77] DEIR, p. S-3 (emphasis added).
[78] DEIR, p. 4-18.
3144-009cv

O5-26 This comment states the project objectives are "artificially narrow" and as a result preclude consideration of a reasonable range of alternatives and eliminate alternatives other than the Proposed Project. However, the project's objectives are not "artificially narrow" such that they preclude informed decision making or consideration of a reasonable range of project alternatives as required by CEQA. (CEQA Guidelines, Section 15126.6(a).) To the contrary and consistent with the requirements of CEQA, detailed project objectives describe the underlying purpose of the project and aid the lead agency in developing a reasonable range of alternatives to evaluate in the EIR and thus provide more exact information to the decision-makers and public. (CEQA Guidelines, Section 15124(b); *Habitat & Watershed Caretakers v City of Santa Cruz* (2013) 213 Cal.App. 4th 1277, 1300 [project objectives must "illuminate" the underlying purpose of a project rather than just describe the nature of a project.]; see also *In re Bay-Delta et al. (2008) 43 Cal. 4th 1143, 1166* ["Although a lead agency may not give a project's purpose an artificially narrow definition, a lead agency may structure its EIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal."])

		The comment also states that the DEIR improperly rejects the environmentally superior alternative. This is not true. Section 4.7 of the EIR discusses the environmentally superior alternative and on Page 4-18, the EIR states that Alternative 1 (the Reduced 15 MW Project Alternative) would not meet Objective 1. The EIR does not, however, reject Alternative 1. The decision makers at the County will ultimately make a decision about whether or not to reject Alternative 1; the EIR merely identifies Alternative 1 as the environmentally superior alternative as required by Section 15126.6(e)(2) of the CEQA Guidelines. Please also see Common Response ALT1. As described in Common Response ALT1, Alternative 1 (the Reduced 15 MW Alternative) would also not meet Underlying Fundamental Project Objectives 1 and 2.
	O5-27	This comment states that Objective 1, to develop approximately 20 MW of renewable energy, precludes meaningful consideration of the alternatives analyzed. The County disagrees with this statement. Consistent with CEQA Guidelines section 15126.6(a), the alternatives studied in the DEIR, including Alternative 1, (i) meet *most* of the basic project objectives, (ii) are potentially feasible and (iii) avoid or substantially lessen the proposed project's significant environmental effects. (Pub Res C Section21002; CEQA Guidelines, Section15126.6(a)–(b). The purposes of evaluating such alternatives is to foster

	informed decision making and public participation. The DEIR serves this purpose while satisfying the CEQA's substantive requirements for consideration of alternatives. For example, Alternative 1 illustrates to decision makers and the public the relative environmental impacts of a project with a reduced footprint that undergrounds the gen-tie line. As the comment points out, Alternative 1 does not meet every project objective, but that is not required by CEQA. CEQA only requires that alternatives meet *most* of the project's basic objectives. (CEQA Guidelines, Section 15126.6(a); *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 CA4th 477; *California Native Plant Soc'y v City of Santa Cruz* (2009) 177 CA4th 957, 991 [no requirement that the alternatives included in an EIR's analysis satisfy every key objective of the project].) Similarly, CEQA does not require that each alternative in an EIR must be feasible; it only requires that alternatives be "potentially feasible." (*City of Long Beach v. Los Angeles Unified Sch. Dist*. (2009) 176 CA4th 889, 920.) As noted in Response to Comment O5-26, the decision maker ultimately decides whether an alternative is feasible or not. Based on the foregoing, Alternative 1 is properly included as a project alternative even if there is substantial evidence in the record that it does not meet the project objective developing a 20 MW solar facility.

coupled with an alternative that is almost identical to the Project but could never meet those objectives is patently unreasonable.[79]

O5-28 Cont.

B. Alternative 1 is the Environmentally Superior Alternative and Must be Selected as the Project

The DEIR admits that Alternative 1 is the environmentally superior alternative because it substantially reduces the Project's impacts on biological resources, involves substantially less acreage than the Proposed Project, and proposes to develop more disturbed land than the proposed Project.[80] The DEIR does not make a specific finding that Alternative 1 is infeasible. Nor does the DEIR contain substantial evidence to support such a finding. Therefore, the County must select Alternative 1 as the Project.[81]

O5-29

The sole reason provided by the DEIR for rejecting Alternative 1 is that it does not meet Objective 1 (20 MW project). Failure to meet a single Project objective is an invalid reason for rejecting a feasible alternative.[82] The County is poised to make the same mistake made by the lead agency in *Preservation Action Council*. In that case, the developer proposed to construct a Lowe's home improvement store in the City of San Jose on a site that contained a historic landmarked warehouse building. As originally proposed, the Project would demolish the two-story historic building in order to construct a single-story Lowe's store. The EIR for the project contained a reduced-size alternative that would preserve the historic building, but would alter the store design such that the store would be two stories, rather than one. The City (and Lowe's) rejected the reduced size alternative because it "would not meet the applicant's objectives for the project," which included the applicant's "desire [that] the layout of the store to be on a single level, simple and rectangular in shape for efficient circulation and layout of

O5-30

[79] See 14 CCR 15126.6a; *Watsonville Pilots v. Watsonville* (2010) 183 CA4th 1059, 1087 (alternatives in EIR must meet most project objectives).
[80] DEIR, pp. 4-8 to 4-11, 4-18.
[81] *Preservation Action Council v. City of San Jose* (2006) 141 Cal. App. 4th 1336, 1356 ("*Preservation Action Council*").
[82] PRC §21002. Indeed, even if Alternative 1 were less profitable as a result of producing just 15 MW rather than the 20 MW of the proposed Project, that would not render Alternative 1 infeasible. "The mere fact that an alternative might be less profitable does not itself render the alternative infeasible unless there is also evidence that the reduced profitability is "sufficiently severe as to render it impractical to proceed with the project." Preservation Action Council, 141 Cal. App. 4th at 1357; *Citizens of Goleta Valley v. Board of Supervisors*, 197 Cal.App.3d 1167, 1181.
3144-009cv

The County notes that commenter does not consistently refer to Objective 1 as being "approximately 20 MW." In some places the comment properly states that the objective is to develop "approximately 20 MW," but in other places the comment selectively quotes the objective as saying it is to "develop 20 MW." That is not an accurate description of the objective because the objective would allow alternatives with more or less than 20 MW so long as there is substantial evidence that the alternative MW is "approximately 20 MW." As stated, the County's final decision-maker, which may be the Planning Commission or the Board of Supervisors, will decide if the 15 MW alternative is approximately 20 MW and the commenter has the opportunity to participate in public hearings to provide its opinion on what "approximately 20 MW" means.

O5-28 See Response to Comment O5-26 and O5-27.

O5-29 This comment states that Alternative 1 is the environmental superior alternative and must be selected as the project. The County agrees that Alternative 1 is the environmentally superior project, but does not agree that it must be selected as the project. See Response to Comment O5-27. The decision maker will ultimately determine whether Alternative 1 is feasible, meaning "capable of being accomplished in a successful manner within a

		reasonable period of time, taking into account economic, environmental, social, technological, and legal factors." (Pub. Res. Code Section21061.1; 14 CEQA Guidelines, Section15364.) It may determine that a 15 MW project is infeasible because, for example, it does not further the RPS goal and goals associated with reducing greenhouse gas emissions as set forth in AB 32 to the same extent as the Proposed Project. It may decide that a 15 MW project is not close enough to 20 MW to meet a fundamental project objective that the project be "approximately 20 MW." Please also see common response ALT-1. Accordingly, there is substantial evidence in the record to support an infeasibility finding should the County's decision-maker make such a finding. The commenter has the opportunity to participate in public hearings to provide its opinion on what it believes makes the alternative feasible.
	O5-30	This comment says "rejecting" Alternative 1 is unlawful and similar to the facts presented in *Preservation Action Council v. City of San Jose*. The City in the *Preservation Action Council* case rejected a reduced floor format that would have reduced impacts to a historic building because the applicant said a reduced footprint would put it at a "competitive disadvantage." The court found fault with that conclusion because it did not believe that the applicant's market concerns was substantial evidence

display and storage units."[83] The City ultimately made a finding that the alternative was infeasible because it was Lowe's' belief that a smaller store would place it at a "competitive disadvantage" in a "large market such as San Jose" due to its inability "to meet the demands and requirements of a large market store in terms of throughput and merchandise availability."[84] The court rejected this reasoning as ambiguous and concluded that Lowe's market concerns did not constitute substantial evidence of infeasibility. The Court remanded the project back to the City to reevaluate the feasibility of the reduced-size alternative.

O5-30 Cont.

Similarly here, the DEIR states that Alternative 1 must be rejected, despite its significant environmental benefits, because it would not meet Objective 1.[85] Objective 1 is to "[d]evelop approximately 20 MW of renewable solar energy that can operate during on-peak power periods to indirectly reduce the need to emit greenhouse gases (GHGs) caused by the generation of similar quantities of electricity from either existing or future non-renewable sources to meet existing and future electricity demands."[86] Alternative 1 is identical in components and energy production to the Project, save for a 5 MW reduction in output. There is therefore nothing about Objective 1 that Alternative 1 fails to satisfy except the number of MW of production. The DEIR's claim that a 5 MW reduction in energy production is sufficiently problematic to render Alternative 1 infeasible is almost identical to Lowe's claim that it could not function in a two-story store because it wanted a single-story store, and should be rejected for the same reasons. Just as in *Preservation Action Council*, there is no evidence, let alone substantial evidence, that the 5MW reduction would render Alternative 1 infeasible as defined by CEQA.[87]

O5-31

Where a project is found to have significant adverse impacts, ***CEQA requires the adoption of a feasible alternative that meets most of the project objectives but results in fewer significant impacts.***[88] Alternative 1 was found

O5-32

[83] 141 Cal. App. 4th at 1346.
[84] *Id.* At 1355.
[85] DEIR, p. 4-18.
[86] DEIR, p. 4-2.
[87] A "feasible" alternative is one that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. PRC §21061.1; 14 CCR §15364.
[88] *CCEC v. Woodland*, 225 Cal. App. 4th at 203; *County of El Dorado v. Dept. of Transp.* (2005) 133 Cal. App. 4th 1376 (agency must consider small alternative to casino project).
3144-009cv

of infeasibility. The County acknowledges that any findings it makes with regard to Alternative 1 must be supported by substantial evidence, but rejects the comparison to the facts in *Preservation Action Council* because the County's concern with producing 5 MW less than the 20 MW project is not based on the applicant's market concerns. Objective 1 references important public goals, such as production of renewable energy during peak period times to indirectly reduce the need to emit greenhouse gases caused by the generation of similar quantities of electricity from either existing or non-renewable sources to meeting existing and future electricity demands. Whether or not a project closer to 20 MW meets the applicant's market concerns is not a factor in the County's determination of Alternative 1's feasibility. To the extent the decision-makers in the City of San Jose improperly supported its infeasibility finding with the applicant's private market concerns, those are not the facts in this CEQA analysis. Please also refer to common response ALT-1 and Response to Comment O5-27 thru O5-29.

O5-31 See Responses to Comments O5-30

O5-32 The fact that Alternative 1 achieves some project objectives, and impedes to some degree the attainment of other project objectives is grounds under CEQA Guidelines 15126.6(c) for the County

	to analyze Alternative 1 as one of its project alternatives in the EIR, but the ultimate determination regarding whether Alternative 1 is feasible rests with the County decision-makers. Failure to meet a fundamental project objective is still grounds for the County to find that Alternative 1 is infeasible because it falls in the category of "social and other considerations" for infeasibility. The California Supreme Court held in *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings*, 43 Cal.4th 1143, 1165 that "an EIR need not study in detail an alternative that is infeasible or that the lead agency has reasonably determined cannot achieve *the project's underlying fundamental purpose*." As explained by one court, "CEQA does not restrict an agency's discretion to identify and pursue a particular project designed to meet a particular set of objectives. CEQA simply requires the agency to thereafter prepare and certify a legally adequate EIR that provides the agency and the public alike with detailed information regarding the proposed project's significant environmental impacts, as well as reasonable alternatives that would 'feasibly attain most of the basic project objectives but would avoid or substantially lessen [those impacts] (Guidelines 15126.6(a).) As this language demonstrates, CEQA clearly recognizes that the agency will look to the proposed project's particular objectives when

	developing its range of project alternatives (Guidelines 15124(b), 15126.6).” (*California Oak Foundation v. the Regents of the University of California* (2010) 188 Cal. App. 4th 227, 276-277.) The Court held in favor of the County finding: ‘CEQA does not restrict an agency’s discretion to identify and pursue a particular project designed to meet a particular set of objectives.’ [citation omitted] ‘Although a lead agency may not give a project’s purpose an artificially narrow definition, a lead agency may structure its EIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal.’ [citation omitted] ‘For example, if the purpose of the project is to build an oceanfront resort hotel [citation] or a waterfront aquarium [citation], a lead agency need not consider inland locations.” (ibid.) Likewise, a lead agency need not consider lower density housing that would defeat the underlying purpose of providing affordable housing. [citation omitted.] *Here, the underlying purpose of the Project was to streamline the winery approval process to promote the growth of local grapes and the related wine industry.* In compliance with CEQA, the FEIR thus properly identified and discussed mitigation measures that allowed a by-right use without further discretionary approvals as well as Project alternatives…

to be feasible for all but one reason, and reduces several significant impacts of the project. Therefore, the County must select Alternative 1 as the Project. O5-32 Cont.

VII. THE DEIR'S CUMULATIVE IMPACTS ANALYSIS IS INADEQUATE

An EIR is required to discuss the cumulative impacts of a project "when the project's incremental effect is cumulatively considerable."[89] An EIR is required to discuss significant impacts that the proposed project will cause in the area that is affected by the project.[90] "This area cannot be so narrowly defined that it necessarily eliminates a portion of the affected environmental setting."[91] O5-33

The Guidelines specifically direct the County to "define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used."[92] The courts have held that it is vitally important that an EIR avoid minimizing the cumulative impacts. Rather, it must reflect a conscientious effort to provide public agencies and the general public with adequate and relevant detailed information about them.[93] An EIR's cumulative impacts discussion "should be guided by the standards of practicality and reasonableness," but several elements are deemed "necessary to an adequate discussion of significant cumulative impacts" including "[a] list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency."[94] O5-34

The DEIR incorrectly concluded that the Project would have no significant cumulative impacts, and as a result, contains no mitigation measures for cumulative impacts.[95] The error in the DEIR's analysis is threefold. First, the DEIR relies on an overly narrow list of cumulative projects with which to compare Project impacts, thereby omitting from its analysis impacts from other relevant cumulative projects in the region. Second, the DEIR's cumulative air quality O5-35

[89] 14 CCR § 15130(a).
[90] *Bakersfield Citizens*, 124 Cal.App.4th at 1216 (emphasis added); see 14 CCR § 15126.2(a).
[91] *Bakersfield Citizens*, 124 Cal.App.4th at 1216.
[92] 14 CCR § 15130(b)(3); Bakersfield Citizens, 124 Cal.App.4th at 1216.
[93] PRC § 21061.; *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1984) 151 Cal.App.3d 61, 79. *See also Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 723.
[94] 14 CCR § 15130(b); *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, 928-29.
[95] See DEIR, p. S-36.
3144-009cv

O5-33 This comment is introductory to more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-36 through O5-45.

O5-34 This comment is introductory to more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-36 through O5-45.

O5-35 This comment is introductory and a summary of more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-36 through O5-45.

June 1, 2015
Page 19

impacts analysis is impermissibly narrow because it fails to analyze project's within the entire San Diego Air Basin ("SDAB"). Third, the DEIR relies on the erroneous assumption that, because the Project's individual air quality impacts may be incrementally small, they are not cumulatively considerable. This "drop in the bucket" approach is the opposite of what CEQA requires in a cumulative impacts analysis. As a result, the DEIR fails to perform any quantitative analysis of cumulative emissions, instead stating that it would be to "speculative" to analyze impacts from other projects. [96] This dismissive approach to a cumulative impacts analysis fails to meet CEQA's requirements for analysis of the Project's incremental contribution to cumulative impacts.

O5-35 Cont.

A. The DEIR Relies on a Deficient Cumulative Projects List

The DEIR arbitrarily limits its cumulative impacts analysis to thirteen (13) projects in southeastern San Diego County.[97] Although the DEIR allegedly analyzes cumulative projects within 20 miles of the Project site, it arbitrarily omits any reference to several other projects, including other solar projects, within that range. The DEIR also excludes other reasonably foreseeable projects from its analysis that are over 20 miles away, but which are nevertheless relevant to analyze cumulative impacts which require a range of more than 20 miles to analyze (e.g. air quality impacts).[98] An example of a key omission in the DEIR's cumulative air quality analysis is the fact that the limited 20-mile scope of cumulative projects list limits the DEIR's analysis of air quality impacts to the southeastern corner of the San Diego Air Basin, rather than air basin as a whole.[99]

O5-36

An example of the limited nature of the cumulative projects list is the omission of three nearby solar farms. The DEIR purports to include the Soitec Solar Projects, another set of San Diego County solar projects, in its cumulative projects list.[100] The Soitec Project EIR analyzed four individual solar farm projects. However, the DEIR arbitrarily excludes 3 of the 4 Soitec solar projects from its list, despite the fact that the projects are less than 10 miles away. The DEIR includes Rugged Solar Farm in its list, which is one of the Soitec Projects. However, the DEIR excludes Soitec's LanWest and LanEast Solar Farms, which are even closer to

O5-37

[96] DEIR AQ Appendix, p. 49.
[97] DEIR, pp. 1-27 to 1-28, Figure 1-9.
[98] DEIR, p. 2.2-71 (biological resources); DEIR AQ Appendix, p. 47 (limiting air quality analysis to southeastern corner of San Diego Air Basin rather than air basin as a whole).
[99] DEIR AQ Appendix, p. 47.
[100] DEIR, pp. 1-26 to 1-28.
3144-009cv

O5-36 The list of cumulative projects is found in Table 1-7 in Chapter 1, Project Description, of the DEIR. The County, in compliance with CEQA Guidelines 15130, utilized both a list method and a General Plan projection method as applicable to each resource area. The EIR's cumulative impact analysis for air quality considers the air quality in the context of the entire San Diego Air Basin ("SDAB")[1] and San Diego Air Pollution Control District ("SDAPCD") air quality plans, not the list of projects within a 20-mile radius. (DEIR, p. 1-23, 3.1.1-25.) The cumulative hydrology and water quality analysis also covers areas within the same watershed and groundwater aquifer as the Project. (DEIR, p. 3.1.4-30.) Additionally, the extent of the cumulative impact area was adequately defined for each environmental issue area as the nature of cumulative impacts varies between issue areas.

O5-37 The cumulative list in Table 1-7 of the FEIR is updated to reflect the latest status of cumulative projects. The cited project in the comment (Tierra Del Sol) was withdrawn at the time of the Draft EIR preparation and has since been reinitiated and included in the FEIR. The LanWest and LanEast program components of the Soitec EIR have been withdrawn from the County and are not considered likely or reasonably foreseeable projects.

[1] The commenter correctly points out that the cumulative impact area includes the southeastern corner of the San Diego Air Basin, where the project is located. However, the cumulative impact study area is not limited to just the southeastern corner of the San Diego Air Basin.

the Project than Rugged.[101] The DEIR also excludes the Tierra del Sol Solar Farm from its list, which is a similar distance from the Jacumba Project as Rugged (which was included on the list). Tierra del Sol was also analyzed at a project-level in the Soitec EIR, so there is no question that is reasonably forseeable. Therefore, the DEIR should have included all of the Soitec projects in its analysis of cumulative impacts.

O5-37 Cont.

Indeed, other projects in the vicinity of Jacumba, in both San Diego County and Imperial County, have analyzed a far greater range of cumulative projects in their CEQA documents.[102] An example is the ECO Substation. The ECO Substation is located approximately 0.25 miles from the Project, and is the substation which would transmit energy generated by the Project.[103] The ECO Substation FEIR/FEIS, prepared in 2011 by the California Public Utilities Commission ("CPUC") and the Bureau of Land Management ("BLM"), analyzed projects within 36 miles of the substation, almost double the distance covered by the Jacumba Project's cumulative projects list.[104] The ECO Substation FEIS/FEIR's cumulative projects list also included 50 projects, ranging in type from renewable energy projects (solar, wind), to cell towers, and even construction of a Catholic church.[105] If the ECO Substation is located a quarter of a mile from the Project and analyzed such a comprehensive list of cumulative projects in its CEQA document, there is no basis for the Jacumba DEIR to include a less comprehensive list.

O5-38

The DEIR also omits several projects from its cumulative impacts analysis that are identified on the San Diego County Planning Departments "Current Projects" webpage.[106] Examples of the omitted County-listed projects are Soitec (discussed above) and the North County Environmental Resources Recycling Facility, a recycling and construction / demolition debris ("CDI") recycling facility. CDI facilities are known for having significant air quality impacts.[107] The North Coast facility must therefore be included in the Project's cumulative air quality analysis.

O5-39

[101] DEIR, pp. 1-27 to 1-28; see Exhibit G (Soitec Project description at Figure 1-1 (Regional Location Map) and Figure 1-2 (Specific Location Map).
[102] See Exhibit H.
[103] DEIR, pp. 1-7, S-4.
[104] See Exhibit H (ECO Substation FEIR/FEIR Cumulatives section, p. F-6 [Existing Projects Covered in the Cumulative Impact Analysis = 23,493 acres (approximately 36 miles]).
[105] *Id.*, pp. F-7 to F-21.
[106] See http://www.sandiegocounty.gov/content/sdc/pds/Current_Projects.html#par_title.
[107] See Exhibit I (CDI info from CalRecycle).
3144-009cv

O5-38 When the CPUC serves as the lead agency it uses its judgment in defining the cumulative impact area, but nothing in CEQA requires the County's judgment to match the CPUC's when the County serves as the lead agency. The County disagrees with the comparison to the ECO Substation FEIS/FEIR cumulative project list due, in part, to the different state of development projects in progress at time of the preparation of the two different environmental documents.

The County believes that the cumulative project list in the FEIR represents all relevant past, present and reasonably foreseeable projects necessary to evaluate the projects incremental impacts that are "individually limited but cumulatively considerable." (Pub. Resources Code, Section21083(b)(2).) The cumulative projects list is updated compared to the ECO substation list and projects have been constructed or withdrawn since that document was released. The projects listed in the ECO substation list also included projects that are located well into Imperial County, outside the geographic area determined to be applicable for the Jacumba Solar project based on the types of potential effects, scale of the Proposed Project and locations of other projects as well as resources. The ECO Substation project also had to consider transmission lines and supporting infrastructure that fed into the project expanding the geographic scope of the project's cumulative consideration, compared to the Proposed

		Project. See Response to Comment 05-38.
	O5-39	The North County Environmental Resources Recycling Facility project is located in the North County Metropolitan Planning Area within San Diego County, approximately 68 miles from the Jacumba Project site. Due to the substantial distance, it was not included in the cumulative projects list found in Chapter 1 of the EIR. Commenter expressed particular concerns that the North County Environmental Resource Recycling Facility would have air quality impacts relevant to Jacumba's air quality analysis. As stated above, the EIR clearly states that the County did not rely on this list methodology for its air quality analysis. The list methodology for purposes of the air quality cumulative analysis is not appropriate because by its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of all cumulative past and present development. Future attainment of State and Federal ambient air quality standards is a function of successful implementation of the District's attainment plans. Consequently, the San Diego Air Pollution Control District's (SDAPCD) application of thresholds of significance for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. As such, isolated projects, including the North County Environmental Resource Recycling Facility project,

B. The DEIR's Cumulative Air Quality Impacts Analysis is Impermissibly Narrow

In order to analyze cumulative air emissions, an EIR must assess whether the Project, in conjunction with other reasonably forseeable projects, results in air emissions that are above relevant Air District thresholds.[108] In particular, the County had a duty to analyze the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the state and federal ambient air quality standards.[109]

O5-40

The SDAB is currently classified as a federal nonattainment area for ozone ("O3") and a state nonattainment area for particulate matter less than 10 microns ("PM10"), particulate matter less than 2.5 microns ("PM2.5"), and O3.[110] The DEIR admits that this nonattainment status is the result of "cumulative emissions from all sources of these air pollutants and their precursors ***within the SDAB***."[111] However, rather than analyze the Project's cumulative air quality impacts in relation to the SDAB as a whole, the DEIR restricted its cumulative analysis of air quality impacts to just San Diego County, which is in the southeastern corner of the SDAB.[112] This geographical area is impermissibly narrow because it omits a large portion of the SDAB from its analysis, making it impossible to determine whether, and to what extent, the Project causes an incremental increase or exceedence in nonattainment pollutants or other significance thresholds established by the Air District.

O5-41

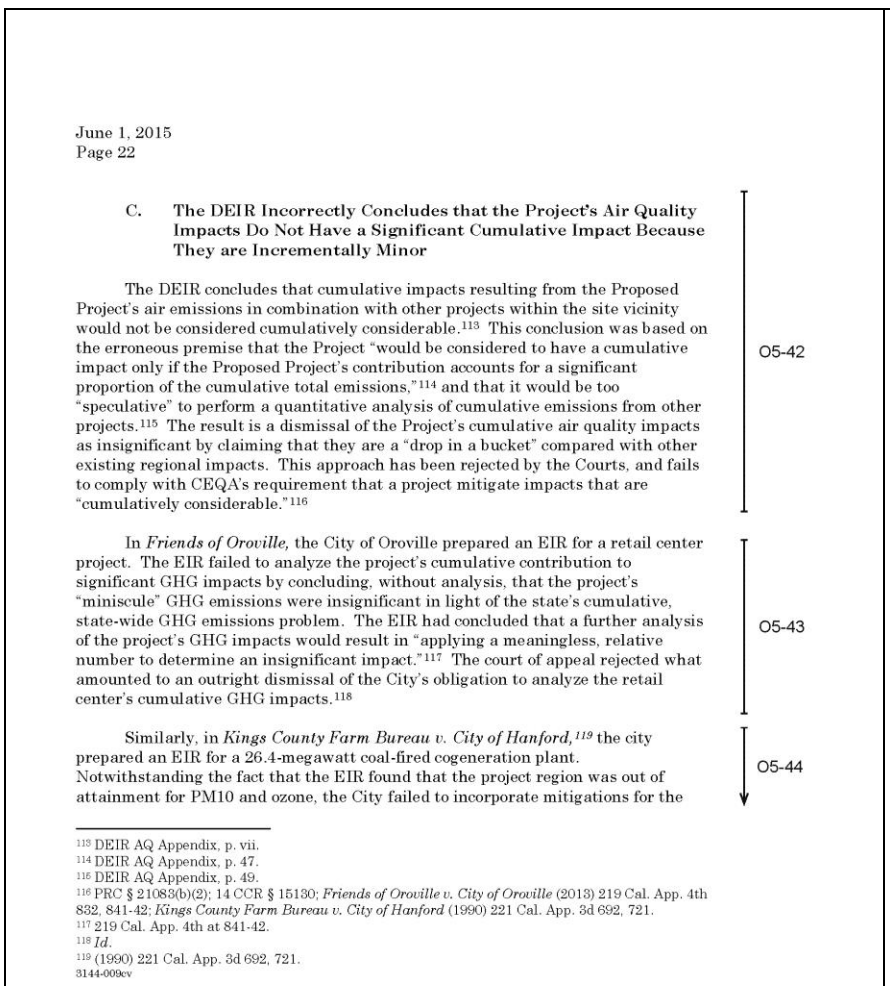
[108] 14 CCR 15130(a)(1); 14 CCR 15065(a)(1), (3); *Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (EIR must disclose an impact as significant when it exceeds a duly adopted CEQA significance threshold); *CBE v. CRA*, 103 Cal.App.4th at 110-111; DEIR AQ Appendix, p. 47 (acknowledging that Project may have cumulatively considerable impact on air quality if Project emissions," in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds.").
[109] DEIR AQ Appendix, p. 47.
[110] DEIR, p. 3.1.1-3.
[111] DEIR AQ Appendix, p. 49 (emphasis added).
[112] DEIR AQ Appendix, p. 47.
3144-009cv

were not analyzed on an individual basis as part of the cumulative air quality analysis. Moreover, the North County Environmental Resource Recycling Facility project would be required to analyze its contribution to cumulative impacts as part of its project-level environmental review under CEQA, including consistency with local air quality plans.

Furthermore, a Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program, including, but not limited to an air quality attainment or maintenance plan that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located [CCR Section15064(h)(3)]. As stated in Chapter 3.1.1, the project would not conflict with the Regional Air Quality Strategy which serves as the local air quality plan for the region, nor would it exceed daily thresholds for any criteria air pollutants. Therefore, impacts would not be considered cumulative considerable. Cumulative air quality impacts are analyzed in Section 3.1.1.4 of the DEIR. See response O5-41 and O5-42 for information regarding cumulative impacts and analysis methodology.

O5-40 Cumulative air quality impacts are analyzed in Section 3.1.1.4 of the DEIR. See response O5-41

	and O5-42 for information regarding cumulative impacts and analysis methodology.
	O5-41 This comment recites that the SDAB is a nonattainment area for ozone (federal and state), PM_{10} (state) and $PM_{2.5}$ (state). The comment also misconstrues the cumulative air quality study area as being limited to the southeastern corner of the SDAB. The cumulative impact study area for air quality includes the entire SDAB (DEIR p. 3.1.1-25), as the commenter advocates. The SDAPCD regulates air quality within the SDAB, and the thresholds established by the SDAPCD are intended to be applied to individual projects occurring within the SDAB as an enforcement mechanism to gauge, on an individual or project-level basis, that the project would not contribute to a cumulative air quality condition that may prevent the SDAPCD from achieving National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) attainment status for criteria pollutants. The Proposed Project's contribution to emissions within the entire SDAB is considered insignificant when compared to all activity taking place throughout the air basin. The SDAB and San Diego County boundaries are the same (i.e., they cover the same geographic area). It would not be practical to compare the project to every individual project taking place within the SDAB/County of San Diego. Therefore, on a regional level, the SDAB's attainment



June 1, 2015
Page 22

C. **The DEIR Incorrectly Concludes that the Project's Air Quality Impacts Do Not Have a Significant Cumulative Impact Because They are Incrementally Minor**

The DEIR concludes that cumulative impacts resulting from the Proposed Project's air emissions in combination with other projects within the site vicinity would not be considered cumulatively considerable.[113] This conclusion was based on the erroneous premise that the Project "would be considered to have a cumulative impact only if the Proposed Project's contribution accounts for a significant proportion of the cumulative total emissions,"[114] and that it would be too "speculative" to perform a quantitative analysis of cumulative emissions from other projects.[115] The result is a dismissal of the Project's cumulative air quality impacts as insignificant by claiming that they are a "drop in a bucket" compared with other existing regional impacts. This approach has been rejected by the Courts, and fails to comply with CEQA's requirement that a project mitigate impacts that are "cumulatively considerable."[116]

O5-42

In *Friends of Oroville,* the City of Oroville prepared an EIR for a retail center project. The EIR failed to analyze the project's cumulative contribution to significant GHG impacts by concluding, without analysis, that the project's "miniscule" GHG emissions were insignificant in light of the state's cumulative, state-wide GHG emissions problem. The EIR had concluded that a further analysis of the project's GHG impacts would result in "applying a meaningless, relative number to determine an insignificant impact."[117] The court of appeal rejected what amounted to an outright dismissal of the City's obligation to analyze the retail center's cumulative GHG impacts.[118]

O5-43

Similarly, in *Kings County Farm Bureau v. City of Hanford,*[119] the city prepared an EIR for a 26.4-megawatt coal-fired cogeneration plant. Notwithstanding the fact that the EIR found that the project region was out of attainment for PM10 and ozone, the City failed to incorporate mitigations for the

O5-44

[113] DEIR AQ Appendix, p. vii.
[114] DEIR AQ Appendix, p. 47.
[115] DEIR AQ Appendix, p. 49.
[116] PRC § 21083(b)(2); 14 CCR § 15130; *Friends of Oroville v. City of Oroville* (2013) 219 Cal. App. 4th 832, 841-42; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 721.
[117] 219 Cal. App. 4th at 841-42.
[118] *Id.*
[119] (1990) 221 Cal. App. 3d 692, 721.
3144-009cv

status is dictated by all cumulative activity taking place within the SDAB/County of San Diego.

O5-42 This comment challenges the Air Quality and Greenhouse Gas Technical Report for the Jacumba Solar Energy Project dated April 2015 prepared by Dudek to the extent it indicates that the project only has a cumulatively significant air quality impact if "the Proposed Project's contribution accounts for significant proportion of the cumulative total emissions." This is not the threshold described in the EIR and this language has been struck from the Air Quality Report. As stated in the EIR, a cumulatively significant impact may exist where direct impacts are less than significant but "the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Table 3.1.1-5, SDAPCD Air Quality Significance Thresholds." (DEIR, p. 3.1.1-27.)

The project's cumulative air quality analysis focuses on whether the project would result in a cumulatively considerable increase in emissions. The nonattainment status of regional pollutants is a combined result of past and present development within the SDAB, and this regional impact is cumulative rather than being attributable to any one source. Because of the

	inherently cumulative nature of air quality conditions, the SDAPCD and County of San Diego generally provide that the same thresholds of significance apply to both a direct and cumulative impact analysis for air quality impacts. However, the EIR acknowledges that a project that does not have a significant direct impact on air quality could still have a cumulatively significant air quality impact if multiple construction projects proceed concurrently in the same vicinity. (DEIR p. 3.1.1-27 to 28.) Even if multiple construction projects occur at the same time, this project's cumulative contribution to air quality impacts would be less than significant. Each of these construction projects would be required to comply with SDAPCD regulations concerning construction equipment emissions controls, fugitive dust controls, etc. (fugitive dust abatement measures including watering the site three or more times per day to comply with SDAPCD Rule 55, adherence to County Code Section 87.428 – Dust Control Measures, CARB air toxic control measures, and construction phasing to reduce emissions). Moreover, as discussed in the DEIR, the Jacumba area is rural and has very low background levels of air pollution. Emissions reported in the DEIR include the combination of on-site and off-site emissions. On-site emissions would be primarily localized within the site boundaries and controlled through application of on-

		site control measures, and construction equipment would be continually mobile throughout the entire site and would not be concentrated in any one area. Off-site emissions from haul trucks and worker trips would occur over the entire County resulting in low emission concentrations over a large geographic area. Only a fraction of the distance associated with construction worker and haul trucks, and thus emissions from those trips, would occur within the immediate project area. Moreover, emissions from the Proposed Project would dissipate at furthering distances from the site, and cumulative projects occurring within the Proposed Project vicinity would be located at distances such that emissions generated from the project would not result in a cumulatively considerable impact. Also, the project would be constructed over a short timeframe, after which time all construction emissions would cease. As such, the project would not contribute to a cumulative significant impact for which the SDAB is in nonattainment and would not prevent the SDAB from achieving attainment as a result of temporary emissions from project construction. Once operational, the project would result in minimal emissions as a result of operation and maintenance activities and would not contribute to a cumulatively considerable impact during operation.
	O5-43	Comment noted. This comment does not address the adequacy of the DEIR; therefore, no further response is

		required. It bears noting that the EIR did not omit consideration of GHG emissions upon concluding the Project's GHG emissions are "miniscule." The EIR analyzed the Project's GHG emissions based upon the County's threshold of significance in accordance with the CEQA Guidelines for analyzing greenhouse gases. GHG emissions are inherently global, not regional. Chapter 3.1 of the DEIR describes the methodology adopted by the County for evaluation of GHG. The commenter has failed to explain why the County's methodology is flawed or why an evaluation of GHG impacts relative to regional projects is required. It should be noted that the 900 MT screening threshold adopted by the County is consistent with the guidance provided by the California Air Pollution Control Officers Association (CAPCOA) in "CEQA and Climate Change White Paper", dated 2008.. Likewise the EIR analyzed the Project's non-GHG air emissions in accordance with the County's threshold of significance for cumulative air quality impacts.
	O5-44	Comment noted. This comment describes another project and does not address the adequacy of the DEIR; therefore, no further response is required. It bears noting that the DEIR did not omit consideration of air quality impacts upon finding the project's contribution was "incremental" or minimal. The EIR analyzed the Project's GHG emissions based upon the County's threshold of significance. Likewise the EIR analyzed

project's cumulative air quality impacts from project emissions because it concluded that the Project would contribute "less than one percent of area emissions for all criteria pollutants."[120] The city reasoned that, because the project's air emissions were small in ratio to existing air quality problems, that this necessarily rendered the project's "incremental contribution" minimal under CEQA. The court rejected this approach, finding it "contrary to the intent of CEQA." The court stated:

> We find the analysis used in the EIR and urged by GWF avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under GWF's "ratio" theory, the greater the over-all problem, the less significance a project has in a cumulative impacts analysis. We conclude the standard for a cumulative impacts analysis is defined by the use of the term "collectively significant" in Guidelines section 15355 and the analysis must assess the collective or combined effect of energy development. The EIR improperly focused upon the individual project's relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.[121]

O5-44

The County made the same mistake in the DEIR. Just as the *Oroville* EIR failed to compare Project GHG emissions to other regional projects, and the Kings County EIR failed to perform a cumulative analysis of the project's air emissions, the DEIR's air quality appendix fails to even compare the Jacumba Project's VOCs, CO, Sox, PM10, PM2.5, and NOx construction emissions with any other regional projects. Rather, the DEIR simply states that its own emissions will not result in cumulative impacts. "Due to the limited period of construction activities and the localized nature of pollutants, the Proposed Project would not result in a cumulatively considerable impact during construction."[122] This lack of analysis is precisely what the courts have rejected. The County must prepare a revised DEIR, which properly analyzes and mitigates the Project's cumulative air quality impacts.

O5-45

[120] *Id.* at 719.
[121] *Id.* at 721.
[122] DEIR AQ Appendix, p. 49.
3144-009cv

the Project's non-GHG air emissions in accordance with the County's threshold of significance.

O5-45 The DEIR performs a legally adequate analysis of the project's GHG and air quality emissions. Please see response O5-41 and O5-42 for further discussion on cumulative air quality impacts. The commenter states the DEIR's analysis of air quality emissions is flawed because it "fails to even compare the Jacumba Project's VOCs, CO, SO_X, PM_{10}, $PM_{2.5}$ and NO_x construction emission with any other regional projects. Rather the DEIR simply states that its own emissions will not result in a cumulatively considerable impact during construction. This lack of analysis is exactly what the courts have rejected." The County disagrees. The Court explained cumulative air quality analysis in *City of Long Beach v. Los Angeles Unified School Dist*. (2009) 176 Cal App. 4th 889 as follows:

> Turning to the law of cumulative impact analysis, " '[t]he cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.'

	(CEQA Guidelines, Section 15355, subd. (b).) 'Cumulative impact analysis "assesses cumulative damage as a whole greater than the sum of its parts." ' [Citation.]" (Irritated Residents, supra, 107 Cal.App.4th at p. 1403; see Los Angeles Unified School Dist., supra, 58 Cal.App.4th at pp. 1024-1025; see also Guidelines, Section 15130, subd. (a)(1).) The cumulative impact analysis is an important element of the EIR. *"[T]he relevant issue to be addressed in an EIR is not the relative amount of impact resulting from a proposed project when compared to existing {Page 176 Cal.App.4th 906} environmental problems caused by past projects, but rather whether the additional impact associated with the project should be considered significant in light of the serious nature of the existing problems."* (Guide to CEQA, supra, p. 473 (italics omitted, italics added), citing Los Angeles Unified School Dist., supra, 58 Cal.App.4th at pp. 1025-1026.) " 'Guidelines section 15130, subdivision (b) provides that "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is

	provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." ...[A] good faith and reasonable disclosure of such impacts is sufficient.' [Citation.]" (Irritated Residents, supra, 107 Cal.App.4th at p. 1403.) "We review an agency's decision regarding the inclusion of information in the cumulative impacts analysis under an abuse of discretion standard. 'The primary determination is whether it was reasonable and practical to include the projects and whether, without their inclusion, the severity and significance of the cumulative impacts were reflected adequately.' [Citation.]" (Environmental Protection & Information Center v. California Dept. of Forestry & Fire Protection (2008) 44 Cal.4th 459, 525 (EPIC).) Long Beach first challenges the geographic scope of the FEIR's analysis of the cumulative impacts on air quality and traffic. Long Beach argues that LAUSD violated Guidelines section 15130, subdivision (b)(2) fn. 6 by "apparently only includ[ing] projects that LAUSD unilaterally, without explanation or justification, determined had 'the potential to impact study area intersections' "

(emphasis omitted), fn. 7 and omitted to consider the long list of projects {Page 176 Cal.App.4th 907} named in various comments to the DEIR, which projects Long Beach feels should have been included in the analysis. fn. 8

"An EIR should define the relevant area affected in its analysis of cumulative impacts. [Citation.]" (Kostka, supra, Section 13:45, p. 654.) "Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." (Guidelines, Section 15130, subd. (b)(3).)

"The factors to consider in determining which projects to include in the list include the nature of the resource in question, the location of the project, and the type of project. [Citation.] The CEQA Guidelines specify that location may be important when the location of other projects determines whether they contribute to an impact. For example, projects located outside a watershed would ordinarily not contribute to cumulative water quality impacts within the watershed." (Kostka, supra, Section 13:42, p. 651; Guidelines, Section 15130, subd. (b)(2).)

An EIR's cumulative impact analysis should

include all sources of related impacts, not simply similar sources or projects. (Kostka, supra, Section 13.44, p. 653.) Thus, "when the cumulative impact being considered is water runoff from logging operations, the EIR should evaluate all projects that contribute to runoff and erosion problems, not only other logging projects..." (Ibid.) Additionally, "[p]roject type[s] may be important... when the impact is specialized, such as a particular air pollutant…" (Guidelines, Section 15130, subd. (b)(2).) The area affected will depend on the nature of the impact being analyzed.

While the geographic context or scope to be analyzed "cannot be so narrowly defined that it necessarily eliminates a portion of the affected environmental setting" (Bakersfield, supra, 124 Cal.App.4th at p. 1216, citing Guidelines, Section 15126.2, subd. (a)), *selection of the geographic area affected by the cumulative impacts falls within the lead agency's discretion. (Guidelines, Section 15130, subd. (b)(3);* fn. 9 Ebbetts Pass Forest Watch v. Department of Forestry & Fire Protection (2004) 123 Cal.App.4th 1331, 1351 (Ebbetts Pass)) {Page 176 Cal.App.4th 908} The selection of the assessment area is left to the agencies' expertise, and "[a]bsent a showing of arbitrary action, we

must assume that the agencies have exercised this discretion appropriately. [Citation.]" (Ebbetts Pass, supra, at p. 1351.)

LAUSD's general analysis of cumulative impacts contained in its "Cumulative Scenario" section explains that it addressed the cumulative impact for each subject area, e.g., traffic, air quality, in the chapter associated with that subject.... An EIR may set out a cumulative impacts section within each chapter that analyzes a particular type of impact. If this approach is used, it may also be advisable to include a summary of the analysis in a separate section on cumulative impacts. (See Kostka, supra, Section 13.51, p. 661.) The FEIR's approach complies with this recommendation for presenting the cumulative impact analysis.

Turning to Chapter 3A of the FEIR, devoted specifically to air quality, the cumulative impact portion covers a different, broader area than Long Beach suggests. The FEIR relies on the SCAQMD's CEQA Handbook for methods for determining the cumulative significance of land use projects, and relies on the strategy in the 2003 Air Quality Management Plan (AQMP) fn. 10 for reducing the high levels of

	pollutants within the South Coast Air Basin. LAUSD's response to comments indicates that it considered the entire South Coast Air Basin with respect to ozone and particulate matter, and listed a container facility, a trucking company, terminals, and Long Beach Unified School District, among other projects. *Accordingly, the FEIR contains a reasonable explanation for the geographic limitation used and its determination that the project will not cause an incremental effect. (Guidelines, Section 15130.) LAUSD did not abuse its discretion in defining the geographic scope of the cumulative impact area for air quality*. (emphasis added.) Like the EIR in the Long Beach case, the County cumulative project list has been questioned in light of the region's status of not being in attainment of certain criteria pollutants, but the County provided a reasonable explanation that in fact the geographical limitation for air quality cumulative impact assessment is not a list of regional projects, but the entire regional air basin. The Long Beach case also makes it clear that the County is not supposed to evaluate the project's air quality impacts based upon its relative impact compared to existing environmental problems, but rather whether the impact associated with the project should be considered significant in light of the serious nature of the region's

	existing air quality problems. The County did exactly this because it evaluated weather or not the project's VOCs, CO, SO_X, PM_{10}, $PM_{2.5}$ and NOx construction emissions exceeded the thresholds of significance the County and the San Diego Air Pollution Control District have determined would create a cumulatively considerable impact because they would interfere with this region's air quality management plan designed to restore the region to attainment status for all criteria air pollutants. As stated in the EIR, a cumulatively significant impact may exist where direct impacts are less than significant but "the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Table 3.1.1-5, SDAPCD Air Quality Significance Thresholds." (DEIR, p. 3.1.1-27.) The facts show the project's construction emissions are below these thresholds. This does not mean the project is doing nothing to assist in improving air quality. Separate from CEQA, the project must comply with SDAPCD regulations concerning construction equipment emissions controls, fugitive dust controls, etc. (fugitive dust abatement measures including watering the site three or more times per day to comply with SDAPCD Rule 55, adherence to County Code Section 87.428 – Dust Control Measures, CARB air toxic control

VIII. THE DEIR FAILS TO ADEQUATELY ANALYZE, QUANTIFY, AND MITIGATE SIGNIFICANT AIR QUALITY IMPACTS

The failure to provide information required by CEQA is a failure to proceed in the manner required by CEQA.[123] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.[124] In reviewing challenges to an agency's approval of an EIR based on a lack of substantial evidence, the court will "determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements."[125]

O5-46

Even when the substantial evidence standard is applicable to agency decisions to certify an EIR and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'"[126]

O5-47

A. The DEIR Failed to Adequately Disclose and Mitigate the Project's Significant Air Quality Impacts from Construction

1. *The DEIR Fails to Analyze Public Health Impacts from Valley Fever.*

The DEIR does not even mention Valley Fever, which has become endemic in San Diego County. Valley Fever incidents have been reported from the coast to the deserts in San Diego County in recent years.[127] It is well established that Valley Fever spores are stirred up during earthmoving and other construction activities like the Project, and may cause incidents of Valley Fever in construction workers, local residents, and other persons who come into contact with the airborne

O5-48

[123] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
[124] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[125] *Id., Madera Oversight Coal., Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102.
[126] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[127] See Exhbit J, http://www.cdph.ca.gov/data/statistics/Documents/YearlySummaryReportsofSelectedGeneralCommDiseasesinCA2011-2013.pdf#page=29)

measures, and construction phasing to reduce emissions).

In accordance with CEQA Guidelines, Section 15130 and the holding in the Long Beach case, the County has provided a reasonable explanation for the geographic limitation used and its determination that the project will not cause an incremental effect. The County did not dismiss the project's air quality impacts on the grounds that they are "miniscule" or small in ratio to either the existing air quality problem or in relationship to other larger projects in the region. Accordingly, Friends of Oroville and Kings County Farm Bureau cases cited in the comment are inapplicable to the facts of this project.

O5-46 Comment noted. This comment does not address the adequacy of the DEIR nor does it speak to a specific issue; therefore, no further response is required.

O5-47 Comment noted. This comment does not address the adequacy of the DEIR nor does it speak to a specific issue; therefore, no further response is required.

O5-48 The Proposed Project is located in southeastern San Diego County, which, based on information compiled by the County of San Diego, has a very low background risk of coccidioidomycosis ("Valley Fever") (County of San Diego 2008). According to the County of San Diego Health and Human Services Agency (HHSA), 144, 138, 159, 160, and

	121 confirmed cases of coccidioidomycosis were reported in San Diego County during a five-year period from 2009 to 2013 (County of San Diego 2014a). Furthermore, according to County of San Diego HHSA, there were no cases of coccidioidomycosis from 2008 to 2014 reported in zip codes 91905 (Boulevard), 91934 (Jacumba Hot Springs), 91906 (Campo), and 91962 (Pine Valley) (County of San Diego 2014b, 2014c). In addition, according to the California Department of Public Health, the number of cases in San Diego County has declined each year since 2011 through 2014 [http://www.cdph.ca.gov/data/statistics/Documents/YearlySummaryReportsofSelectedGeneralCommDiseasesinCA2011-2014.pdf#page=29]. Accordingly, there is no evidence that Valley Fever is a significant impact in the vicinity of the project. CEQA Guidelines 15143 states "[t]he EIR shall focus on the significant effects on the environment. The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence." The evidence above demonstrates that there is no evidence that Valley Fever is a significant impact or is a significant health threat in the vicinity of the project. Therefore, in accordance with the CEQA Guidelines, it is appropriate for the County not to focus the EIR's analysis on this issue. CEQA also does not require mitigation where there is no significant impact. CEQA Guidelines 15126.4(a)(3). The County finds there is no significant effect. Therefore, the County is not obligated to impose mitigation measures that either

	the California Department of Public Health or the commenter's consultant at SWAPE recommends. Nevertheless, the County has already required the applicant to perform air quality related mitigation measures that incidentally are consistent with some of the mitigation measures that have been recommended. A 2013 Hazard Evaluation System and Information Service (HESIS) Fact Sheet entitled, "Preventing Work-Related Coccidioidomycosis (Valley Fever)", prepared by the California Department of Public Health recommends implementation of dust control measures including regular application of water during soil disturbance activities to reduce worker exposure to Valley Fever (California Department of Public Health 2013). The Proposed Project is already required to comply with SDAPCD Rule 55 (fugitive dust abatement measures including watering the site three or more times per day) and County Code Section 87.428 (and would implement measures recommended under Clearing and Grading in Section 1.2.1), which regulate construction activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site, thereby controlling dust that the commenter claims has the potential to spread Valley Fever.

	In addition, applicable regulations regarding hazards (including Valley Fever) protection and exposure are already included in Title 8 of the California Code of Regulations. For example, Section 342 requires employers to immediately report to the nearest District Office of the Division of Occupational Safety and Health any serious injury or illness, or death, of an employee occurring in a place of employment or in connection with any employment (8 CCR 342). Furthermore, Section 3203 requires that every employer establish, implement and maintain an effective Injury and Illness Prevention Program (Program) (8 CCR 3203(a)). The Program must include procedures for identifying and evaluating workplace hazards including scheduled periodic inspections to identify unsafe conditions and work practices (8 CCR 3203(a)(4)). Section 5144 requires that respirators shall be used and provided by the employer when such equipment is necessary to protect the health of the employee (8 CCR 5144(a)(2)). The primary purpose of Section 5144 is to prevent atmospheric contamination and control occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. When such measures are necessary to protect the health of an employee, the employer shall be responsible for the establishment and maintenance of a respiratory protection program (8 CCR 5144(a)(2). The requirements of the respiratory protection program are outlined on California Code of

	Regulation Title 8, Section 5144 (c). Accordingly, even if there was a potentially significant impact from Valley Fever, the project must comply with the law and the state's regulatory system would adequately address any impact from Valley Fever that could occur. It should also be noted that Valley Fever does not present a serious health risk to most people. Most people who contract Valley Fever experience mild flu-like symptoms or no symptoms at all. In most cases, the body's immune response is effective and no specific course of treatment is necessary. About 5 percent of cases of Valley Fever result in pneumonia (infection of the lungs), while another 5 percent of patients develop lung cavities after their initial infection with Valley Fever. These cavities occur most often in older adults and about 50 percent of them disappear within two years. Only 1 percent–2 percent of those exposed to Valley Fever who seek medical attention would develop a disease that disseminates (spreads) to other parts of the body other than the lungs. Valley Fever is not contagious. (Valley Fever Center for Excellence, 2010c). Accordingly, the County finds there is no credible evidence that Valley Fever is a significant impact in the vicinity of the project, the EIR properly focuses on analyzing and mitigating impacts that are significant, and even if there were a potentially

spores.[128] The DEIR's omission of any discussion of this significant air quality and health impact is inexcusable.[129]

O5-48 Cont.

The California Department of Health reports that San Diego County has had up to 150 reported cases of Valley Fever per year from 2011 to 2013.[130] Local San Diego newspapers are also reporting increases in reported incidents of Valley Fever.[131] These statistics cannot be ignored, particularly when Valley Fever can be prevented.

O5-49

In 2013, the California Department of Public Health recognized Valley Fever as a "serious concern in California" and recommended that specific on-site mitigation measures be adopted at construction sites to reduce the likelihood of exposure to Valley Fever.[132] SWAPE similarly concludes that, without adequate mitigation, Valley Fever is likely to be a significant impact of Project construction.[133] SWAPE explains that standard dust control measures designed to reduce particulate matter ("PM") pollution are insufficient to protect against Valley Fever.[134] Rather, specific mitigations focused on preventing exposure to Valley Fever spores, as recommended by the Department of Public Health, must be adopted in order to reduce impacts to less than significant. These mitigation measures include, at a minimum:

1. Determine if the worksite is in an area where Valley Fever is consistently present. Check with your local health department to determine whether cases have been known to occur in the proximity of your work area.

2. Encourage workers to report respiratory symptoms that last more than a week to a crew leader, foreman, or supervisor.

O5-50

[128] See Exhibit A, pp. 14-16.
[129] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[130] See Exhibit J.
[131] See Exhibit K, http://www.eastcountymagazine.org/cost-valley-fever-human-and-economic; http://www.cdph.ca.gov/healthinfo/discond/Pages/Coccidioidomycosis.aspx; http://www.cdph.ca.gov/programs/sss/Documents/CocciEpiSummary09-12.pdf; http://www.eastcountymagazine.org/experts-share-latest-research-valley-fever.
[132] See Exhibit D (June 2013 CDH report).
[133] Exhibit A, SWAPE Comments, pp. 17-19.
[134] *Id.* at p. 17.
3144-009cv

significant impact, mitigation measures related to dust control and regulatory structures to protect worker safety are already required. There is substantial evidence demonstrating the Project does not present a significant air quality impact as it relates to Valley Fever.

O5-49 Comment noted. Please see response O5-48 above.

O5-50 Comment noted. Please see response O5-48 above. Because there is no significant impact, no mitigation is required such that the County does not need to analyze the feasibility of the commenter's proposed mitigation. Nevertheless, (1) when the County checked with the proposed local health department, it discovered there were no confirmed cases of Valley Fever in the vicinity of the project; and (2) reporting systems for worker health impacts are already required by law and no further mitigation measures would be needed.

O5-51 Comment noted. Please see response O5-48 and 05-50 above. Because there is no significant impact, no mitigation is required and the County does not need to analyze the feasibility of the commenter's proposed mitigation. Nevertheless, (1) when the County checked with the proposed local health department, it discovered there were no confirmed cases of Valley Fever in the vicinity of the project; and (2) reporting systems for worker health impacts are already required by law and

3. Suspend work during heavy wind or dust storms and minimize amount of soil disturbed.

4. Make sure workers keep the windows closed in heavy construction equipment and equip with high efficiency particulate air (HEPA) filters. Two-way radios can be used for communication so that the windows can remain closed but allow communication with other workers.

5. When digging a trench or fire line or performing other soil-disturbing tasks, position workers upwind when possible.

6. Place sleeping quarters and dining halls, away from sources of dust such as roadways.

7. Provide NIOSH-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or HEPA. Household materials such as washcloths, bandanas, and handkerchiefs do not protect workers from breathing in dust and spores. Respirators for employees must be used within a Cal/OSHA compliant respiratory protection program that covers all respirator wearers and includes medical clearance to wear a respirator, fit testing, training, and procedures for cleaning and maintaining respirators. Different classes of respirators provide different levels of protection according to their Assigned Protection Factor (see table below). Powered air-purifying respirators have a battery-powered blower that pulls air in through filters to clean it before delivering it to the wearer's breathing zone. PAPRs will provide a high level of worker protection, with an APF of 25 or 1000 depending on the model. When PAPRs are not available, provide a well-fitted NIOSH-approved full-face or half-mask respirator with particulate filters.

   Fit-tested half-mask or filtering face-piece respirators are expected to reduce exposure by 90% while still allowing about 10% face-seal leakage which can result in an unacceptable risk of infection when digging where Valley Fever spores are present.[135]

O5-50 Cont.

[135] Exhibit A, SWAPE Comments, pp. 19-20; Exhibit D.

no further mitigation measures would be needed.

O5-52 Comment noted. The comment refers to the DEIR NO_x emissions estimates and cites the CalEEMod User Guide. This comment is an introduction to more detailed comments that occur later in the comment letter. As such, this comment is noted and detailed responses to the issues mentioned in this comment are provided below in Responses to Comments O5-53 through O5-54.

O5-53 Regarding CalEEMod value categories, the differences in land use setting of urban vs. rural do not affect modeling performed for construction of the Proposed Project because any default values utilized for construction of the Proposed Project are the same for both urban and rural land uses settings. Accordingly, the County properly exercised its judgement to use the urban setting. However, in response to this comment model settings were updated to reflect the rural land use.

Operational emissions generated as part of the Proposed Project would be miniscule; therefore, the County properly exercised its judgement to use a more conservative operation year. However, in response to this comment, operational emissions have been updated to reflect a 2016 calendar year.

Regarding imported material, the Proposed Project is intended to be a balanced site; therefore, the

June 1, 2015
Page 27

SWAPE concludes that these Valley Fever mitigation measures would be both feasible and effective to reduce human exposure and the likelihood of individuals contracting Valley Fever on or off the Project site during construction.[136] The DEIR must be revised to analyze Valley Fever and incorporate these, or other equally effective, mitigation measures. O5-51

2. *The DEIR's Air Quality Analysis is Flawed Because Construction Emissions are Underestimated*

The DEIR significantly underestimated the Project's NOx emissions from construction and, as a result, inaccurately concluded that emissions from Project construction and operational activities do not exceed the SDAPCD Air Quality Significance Thresholds. As explained by SWAPE, the Air Quality Report relies on the California Emissions Estimator Model Version CalEEMod.2013.2.2 ("CalEEMod") to calculate the Project's emissions.[137] CalEEMod provides recommended default values based on site specific information, such as land use type, meteorological data, total lot acreage, Project type, and typical equipment associated with phases of construction. If more specific project information is known, CalEEMod allows the user to change the default values and input project-specific values, but cautions users that "site specific data" must be "supported by substantial evidence" if it is to be used.[138] O5-52

The DEIR's Air Quality analysis changed several of these default values in the CalEEMod model to new values that were purported to relate to the Project, but which are either inaccurate when compared to the DEIR's description of Project components, or are simply unsupported. These value categories included:

- Land Use Setting: The DEIR's Air Quality analysis used an "Urban" setting rather than the "Rural" setting that applies to the Project site;
- Operational Year: The Air Quality analysis used 2014 instead of 2016, which is the year the Project is expected to become operational;
- Imported Material: The Air Quality analysis failed to factor into its analysis 6,300 cubic yards of imported material that will be brought to the Project site during the "Grading" construction phase; and

O5-53

[136] Exhibit A, SWAPE Comments, pp. 19-22.
[137] *Id.* at p. 4.
[138] *Id.*; Exhibit L, CalEEMod User Guide, pp. 2, 9, *available at:* http://www.caleemod.com/.
3144-009cv

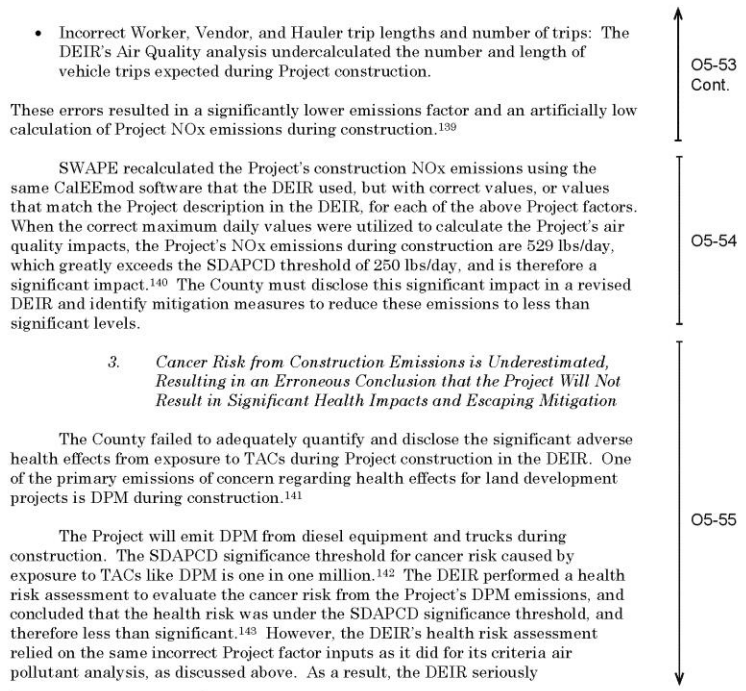
County properly exercised its judgement that the import or export of material would not be required. However, for the purposes of responding to this comment and providing even more conservative emissions estimates, emissions estimates have been updated to reflect 6,300 cubic yards of imported material during grading activities.

The County properly exercised its judgement with regard to its traffic assumptions. However, for purposes of responding to this comment, construction traffic assumptions have been updated in the final Air Quality and GHG Technical Report (Appendix 3.1.1 to the EIR) per the comment to reflect even more conservative worker, vendor and haul truck assumptions. See Table 1 for updated emissions estimates during Proposed Project construction.

Table 1
Estimated Daily Maximum Construction Emissions (pounds per day)

	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2016	18.10	246.4	150.52	0.42	28.48	15.55
Pollutant Threshold	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Sources: CalEEMod Version 2013.2.2. See Attachment 9.1-7 for complete results.
Notes: VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = suspended particulate matter; $PM_{2.5}$ = fine particulate matter



June 1, 2015
Page 28

- Incorrect Worker, Vendor, and Hauler trip lengths and number of trips: The DEIR's Air Quality analysis undercalculated the number and length of vehicle trips expected during Project construction.

O5-53 Cont.

These errors resulted in a significantly lower emissions factor and an artificially low calculation of Project NOx emissions during construction.[139]

SWAPE recalculated the Project's construction NOx emissions using the same CalEEmod software that the DEIR used, but with correct values, or values that match the Project description in the DEIR, for each of the above Project factors. When the correct maximum daily values were utilized to calculate the Project's air quality impacts, the Project's NOx emissions during construction are 529 lbs/day, which greatly exceeds the SDAPCD threshold of 250 lbs/day, and is therefore a significant impact.[140] The County must disclose this significant impact in a revised DEIR and identify mitigation measures to reduce these emissions to less than significant levels.

O5-54

3. *Cancer Risk from Construction Emissions is Underestimated, Resulting in an Erroneous Conclusion that the Project Will Not Result in Significant Health Impacts and Escaping Mitigation*

The County failed to adequately quantify and disclose the significant adverse health effects from exposure to TACs during Project construction in the DEIR. One of the primary emissions of concern regarding health effects for land development projects is DPM during construction.[141]

The Project will emit DPM from diesel equipment and trucks during construction. The SDAPCD significance threshold for cancer risk caused by exposure to TACs like DPM is one in one million.[142] The DEIR performed a health risk assessment to evaluate the cancer risk from the Project's DPM emissions, and concluded that the health risk was under the SDAPCD significance threshold, and therefore less than significant.[143] However, the DEIR's health risk assessment relied on the same incorrect Project factor inputs as it did for its criteria air pollutant analysis, as discussed above. As a result, the DEIR seriously

O5-55

[139] See Exhibit A, SWAPE Comments, pp. 2-11.
[140] *Id.* at p. 10.
[141] DEIR AQ Appendix, p. 52.
[142] DEIR, p. 3.1.1-11.
[143] DEIR, pp. 3.1.1-17, 3.1.1-22.
3144-009cv

Values shown reflect the highest of summer or winter emissions.

As shown in Table 1, maximum daily emissions during construction as updated per comment O5-53 would not exceed SDAPCD thresholds. Even with commenter's more conservative assumptions, impacts would remain less than significant during construction as originally stated in the DEIR and no mitigation is required.

O5-54 Calculations as provided by SWAPE are incorrect and substantially overestimated. Specifically, the number of haul trips were not calculated correctly and were likely double-counted. As shown in Table 1 of response O5-53, updated emissions estimates per comment O5-53 would not exceed SDAPCD daily thresholds during construction. Emissions presented in Table 1 include the most conservative assumptions available regarding equipment fleet, construction worker trips, vendor trips, and haul truck trips. See Attachment 9.1-7 for complete results. Commenter has failed to disclose its CalEEMod and AERSCREEN input and output files in commenter's Exhibit A that would enable a more detailed response. Nevertheless, the County is entitled to rely on its experts' opinions backed by the substantial evidence in the air quality study and response O5-53.

O5-55 Construction for the Proposed Project would only occur for a short-term, temporary duration of several months, after which time all construction-related emissions

	would cease. Additionally, no high-emitting stationary sources would be associated with project construction – all pollutant sources related to Proposed Project construction would result from off-road equipment and mobile vehicles. The nearest sensitive receptor to the project site is located approximately 3,500 feet from the project site boundaries. CARB guidance provides examples of when a health risk related to mobile sources is greatest, including when sensitive receptors would be located 500 feet or less from a high-volume roadway (CARB 2012). Because the nearest sensitive receptor is located approximately 3,500 feet from the project site and the construction site is not considered a high-emission source or a stationary source of emissions, a health risk assessment is not warranted. Health risk assessments are typically conducted for long-term exposure of 9 years, 30 years or 70 years; however, a construction-specific screening health risk assessment was conducted for the purposes of a conservative analysis (See Appendix B to the Air Quality and GHG Technical Report provided as Appendix 3.1.1-1 of the FEIR). Although the County exercised reasonable judgement in its assumptions, for purposes of responding to this comment, the screening health risk assessment has been updated per construction assumptions suggested in comment O5-53. The dispersion modeling conducted for this updated assessment was performed using the U.S.

	Environmental Protection Agency (EPA)-approved dispersion model, American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and the calculations incorporate all the requirements provided by the Office of Environmental Health Hazard Assessment (OEHHA) as outlined in the *Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). The commenter used the AERSCREEN model to perform a screening health risk calculation for construction activities; however, unlike AERSCREEN, AERMOD estimates the air quality impacts of single or multiple sources using actual meteorological conditions and therefore, provides more precise results than AERSCREEN. Additionally, it appears that the commenter applied total PM_{10} emissions to the calculation of diesel particulate matter when calculating the annualized 1-hour emission rate of grams per second of diesel particulate matter. For the purposes of accurately calculating diesel particulate matter, only *on-site exhaust* PM_{10} as part of the CalEEMod output files should be used, because all other sources of PM_{10} would be related to fugitive dust, which are not considered exhaust-related diesel particulate matter. The original analysis provided in the DEIR estimated a cancer risk of 0.036 in one million; however, a revised health risk analysis was conducted to account for the most recent guidance provided by OEHHA (OEHHA 2015) and

underestimated the cancer risk posed to nearby residents and children from TACs. The DEIR's conclusion that the Project will not have significant health impacts from DPM emissions is therefore not supported by substantial evidence.

O5-55 Cont.

SWAPE performed the same health risk assessment using the correct Project input value factors, namely those that match the DEIR's description of the Project, and found that unmitigated DPM emissions released during Project construction would result in a cancer risk of 1.8 per million for adults, 10.4 per million for children, and 34.6 per million for infants.[144] This risk is well above the SDAPCD significance threshold for cancer of (one in one million), and is therefore a significant impact requiring mitigation.[145]

O5-56

This significance determination also makes the Project subject to SDAPCD's New Source Review rule, which requires any new, relocated, or modified emission unit which may increase emissions of one or more TACs over the significance threshold to obtain an Authority to Construct or Permit to Operate, and to implement best available control technology for toxics ("T-BACT").[146] Rule 1200 establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1200, permits to operate may not be issued when emissions of TACs result in an incremental cancer risk greater than 1 in 1 million without application of T-BACT, or an incremental cancer risk greater than 10 in 1 million with application of T-BACT, or a health hazard index (chronic and acute) greater than one (SDAPCD 1996).[147] Since the Project will result in DPM emissions that create a health risk over the Rule 1200 threshold, T-BACT is required, and must be installed to reduce the Project's construction emissions.

O5-57

[144] See Exhibit A, Soil, Water, Air Protection Enterprise, Comments on the Jacumba Solar Energy Project, Jacumba, California (May 29, 2015) ("SWAPE Comments"), p. 15.
[145] See DEIR, p. 3.1.1-11 (requiring implementation of Toxics Best Available Control Technology ("T-BACT") for projects whose emissions of TACs result in an incremental cancer risk greater than 1 in 1 million); *Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (EIR must disclose an impact as significant when it exceeds a duly adopted CEQA significance threshold).
[146] SDAPCD Rule 1200: Toxic Air Contaminants; DEIR, p. 3.1.1-11.
[147] DEIR, p. 3.1.1-11.
3144-009cv

updated modeling assumptions as suggested in comment O5-53. The updated results of the construction-related health risk assessment estimated a cancer risk of 0.321 in one million (an increase of 0.285 from the original DEIR analysis). The cancer risk calculations were performed using the HARP2 model, Risk Assessment Standalone Tool version 15076 for 0.5 years of exposure and a 3rd trimester start date as recommended under the Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015). Therefore, impacts would remain less than significant as originally stated in the DEIR. See Attachment 9.1-7 for complete results.

O5-56 The County disagrees that the cancer risk based on updated construction assumptions exceeds SDAPCD's significance threshold. Updated results per suggestions provided in comment O5-53 and O5-55 are provided. See response O5-55. As explained in Response to Comment O5-55, SWAPE's analysis is flawed and inaccurate. Impacts related to short-term construction diesel particulate matter would remain less than significant as originally stated in the DEIR. See Attachment 9.1-7 for complete results. To the extent commenter and its consultant have come to a different conclusion, they represent an expert disagreement on the methodology for modelling. The County is entitled to rely on its experts' opinion, which is backed by substantial evidence in the modeling tool used, even if commenter prefers the County

June 1, 2015
Page 30

IX. THE DEIR FAILS TO ADEQUATELY ANALYZE, QUANTIFY, AND MITIGATE SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES

A. The DEIR Fails to Adequately Analyze and Mitigate for Bird Collisions Caused by Lake Effect and Power Line Electrocutions

The DEIR states that there is little scientific information available regarding the "lake effect," and a detailed discussion of the potential impacts "would be speculative."[148] This conclusion is incorrect and reflects a lack of analysis and investigation by the County. As explained by Ms. Owens, there is currently sufficient evidence in the biological community to identify "lake effect" as a significant risk to birds. The "lake effect" occurs when birds and their insect prey mistake a reflective solar facility for a water body, or spot water ponds at the site, then hone in on them, colliding directly with the solar panels.[149] O5-58

Ms. Owens concludes that the DEIR makes erroneous assumptions regarding the insignificance of the Project's significant impacts on avian species from lake effect which run counter to recent guidance from regulatory agencies, like USFWS.[150] As explained by Ms. Owens, USFWS recently commented on the Program EIR for the Soitec Project, located approximately 8 miles from the Project, concluding that there is significant potential for birds to be attracted to southeastern San Diego County solar project sites. USFWS concluded that the risk of collision and other project-related mortality and injury to birds is a potentially significant impact that must be carefully assessed as part of mitigation protocols for such solar projects.[151] O5-59

Additionally, the Project site is located within the Pacific Flyway, a known migratory bird flyway and an area that is also rich in resident bird diversity. Ms. Owens explains that migrating birds with the potential to incur injury or death from collision with the Project components, throughout the life of the Project, include all birds known to occur moving through the area, including rare, threatened, or endangered species.[152] For these reasons, Ms. Owens similarly O5-60

[148] DEIR Bio Appendix, p. 76.
[149] Exhibit B, Owens Comments, pp. 9-12.
[150] Exhibit B, p. 14.
[151] Exhibit B, p. 14.
[152] Exhibit B, p. 14.
3144-009cv

to use a different model that commenter claims shows a different result.

O5-57 For the reasons provided in Response to Comment O5-53, 55 and 56, the County disagrees with SWAPE's assessment, which is flawed and unreliable. The Project does not exceed SDAPCD significance thresholds and therefore is not required to obtain an Authority to Construct or Permit to Operate or to implement T-BACT.

The commenter's claim that the project would be subject to SDAPCD Rule 1200 is invalid. SDAPCD Rule 1200 only applies to permitted stationary sources over which the SDAPCD has permitting authority and would not apply to short-term construction activities. The project would not include a stationary source of emissions subject to permitting, and construction activity, which is comprised entirely of mobile sources, would not be subject to Rule 1200 because as stated in Rule 11, mobile source emissions are exempt from permitting requirements (SDAPCD 2012). Additionally, the Proposed Project's construction activities would not exceed a cancer risk of one in one million; therefore, best available control technologies for toxics (T-BACT) would not be required.

O5-58–61 These comments summarize the comments provided by Ms. Owens as an exhibit to this letter and responded to herein. Responses are provided to Ms.

concludes that an analysis of the impacts of "lake effect" is critical to a meaningful evaluation of the Project's impacts on avian species.[153]

O5-60 Cont.

Rather than conduct an impact assessment, the DEIR simply concludes that insufficient evidence exists to analyze the impacts of "lake effect" caused by the Project.[154] This conclusion is wholly contrary to current evidence on "lake effect" and contrary to USFWS recommendations in this same locale. The County cannot turn a blind eye to a known significant impact, then conclude that the impact is less than significant. The County must revise and recirculate the DEIR to include an analysis of this impact, and feasible mitigations to reduce the impact to less than significant levels.

O5-61

B. The DEIR Fails to Adequately Analyze the Project's Impacts on Special Status Species, Resulting in Inadequate or No Mitigation for Significant Impacts

The DEIR performed inadequate surveys and investigation for numerous species. As discussed above, the DEIR relies upon out-of-date surveys performed for other projects to establish baseline data for golden eagles, which are likely to forage or nest on the Project site.[155] As a result, the DEIR did not find a significant impact to golden eagles from Project construction and operation, and did not provide mitigation for impacts to eagles or other raptors.[156]

O5-62

The DEIR also includes flawed assumptions for what species must be mitigated because the DEIR failed to document all special-status species that are reported by the California Natural Diversity Database ("CNDDB") as occurring on or near the Project site. In particular, the DEIR failed to adequately document migrating tricolored blackbirds and Southern Grasshopper Mouse foraging habitat – all of which are documented on the CNDDB, which the DEIR claims to have consulted.[157]

O5-63

Ms. Owens explains that the DEIR includes inadequate surveys for the federally endangered Quino checkerspot butterfly. As with golden eagles, the data on Quino conditions that is included in the DEIR is both outdated and flawed in its

O5-64

[153] Exhibit B, p. 13.
[154] DEIR Bio Appendix, p. 76.
[155] DEIR, p. 2.2-54.
[156] Exhibit B, pp. 5-9.
[157] Exhibit B, pp. 14-15, 16-17.
3144-009cv

Owens comments O5-144 through O5-175, and specifically regarding pseudo lake effect in Common Response BIO1 and Response to Comment O5-151. Please also refer to Responses to Comments O3-6 and O3-7.

O5-62 Please also refer to Response to Comment O5-17. Loss of foraging habitat for golden eagles and other raptor species was found potentially significant absent mitigation, but with implementation of mitigation measure M-BI-4, the impacts will be less than significant.

The County disagrees with the commenter's assertion that the DEIR fails to adequately establish baseline conditions for golden eagle. See Response to Comment O3-16 and O5-17.

O5-63 Please refer to response to comment O5-18.

O5-64 Please also refer to Response to Comment O3-8. Response to Ms. Owens' comments can be found in O5-144 through O5-175. The DEIR discusses impacts to QCB in Section 2.2. Due to the lack of adult nectar plants and negative survey results, the DEIR concluded that QCB was not likely to be present at the site. Due to drought conditions, the DEIR evaluated impacts to special status plants using a habitat suitability model. See response to comment O5-15.

reporting protocol.[158] The DEIR acknowledges that critical habitat for the Quino occurs less than 3 miles away from the Project site.[159] Without adequate analysis, the impact to the Quino from the Projet cannot be adequately evaluated. Finally, the DEIR failed to conduct any surveys for rare plants.

O5-64 Cont.

These are egregious violations of CEQA's requirement to analyze the extent of impacts posed by a Project. The DEIR must be revised and recirculated to remedy these informational deficiencies.

O5-65

X. THE DEIR FAILS TO ADEQUATELY ANALYZE, QUANTIFY, AND MITIGATE POTENTIALLY SIGNIFICANT IMPACTS TO WATER RESOURCES

The County failed to adequately analyze the Project's significant impacts on existing water resources, both on the site and on the larger "navigable waters" to which they connect.

As explained above, the Project site is in an area that is hydrologically connected to the Salton Sea and contains approximately 10 separate basins which contain an active water flow during and immediately after significant rain events.[160] The DEIR concludes that, in total, there are at least 3.3 acres (24,361 linear feet) of potential jurisdictional waters of the United States/state identified within the solar site.[161] The DEIR clearly explains the connection between these Project waters and larger, Federally regulated "waters of the United States":

O5-66

> Flows within these drainages are directed northwest from the site and into a tributary to Carrizo Creek, which flows into Carrizo Creek, turns into Carrizo Wash, and connects San Felipe Wash and eventually the Salton Sea (USGS 2014) (see Figure 2.2-2 and Figure 2.2-4, Hydrologic Setting) and therefore form a significant nexus to a traditional navigable water of the United States.[162]

[158] Exhibit B, pp. 23-24.
[159] See DEIR Bio report, Figure 5, USFWS Critical Habitat.
[160] DEIR, p. 3.1.4-3.
[161] DEIR, p. 2.2-32.
[162] DEIR, p. 2.2-32.
3144-009cv

O5-65 Comment noted. The County disagrees that recirculation is required because the DEIR adequately analyzes impacts to sensitive species as set forth in Responses to Comments O5-58 through O5-64.

This comment does not address the adequacy of the DEIR; therefore no further response is required. The County has made revisions to the DEIR in response to public review comments to clarify, amplify, or make insignificant modifications to the EIR. However, the County disagrees with the commenter's assertion that the Jacumba Solar Project DEIR must be recirculated as none of the criteria identified in CEQA Guidelines Section 15088.5, requiring recirculation are met.

O5-66 See response to comments O5-22 through O5-24.

O5-67 Impacts and significance determinations to waters on site are provided in Section 2.2.3.3, Riparian Habitat or Sensitive Natural Community, on page 2.2-60. Mitigation measure MM-BI-14 requires obtaining agency permits per Sections 401 and 404 of the Clean Water Act and Section 1602 of California Fish and Game Code for impacts to jurisdictional resources. Also, see response to comments O5-22 through O5-24.

O5-68 Comment noted. This comment does not address the adequacy of the DEIR, therefore no further response is required.

June 1, 2015
Page 33

These facts trigger CEQA's requirement to assess the Project's potentially significant impacts on numerous waterways and the Salton Sea. Yet, the DEIR contains no analysis of these potential impacts. O5-67

The Salton Sea is California's largest lake. It supports a multitude of recreational uses and a National Wildlife Refuge and is a critical stop on the Pacific Flyway for migrating birds, including several state- and federal-listed endangered and threatened species. Approximately 75 percent of the freshwater inflow to the Sea is agricultural drain water from Imperial Valley. Since the Sea has no outlets, salts concentrate in it and thus the sea is dependent on the continued inflow of freshwater to support it. Currently, the Sea is 25 percent saltier than the ocean, with salinity increasing at approximately 1 percent per year. O5-68

The Project would affect waters flowing to the Salton Sea. Since the Salton Sea watershed is impaired and the Salton Sea ecosystem is imperiled, any reduction in water as a result of the Project may result in a potentially significant impact to the sea and its biological resources. According to the Salton Sea Authority, reduction in freshwater to the sea may result in significant impacts from rising salinity. O5-69

The issue of salinity has become a major focus because it is reaching a level where it is likely to interfere with fish reproduction and, ultimately, survival. Loss of fish would greatly impact the Sea's productive sport fishery, and the food source of fish-eating birds that flock to the Sea. O5-70

Current inflows to the Sea are equal to the amount of water lost in evaporation and Sea levels are stable. But each year roughly 5 million tons of new salt are added to the Sea in those inflows. To stabilize salinity levels in the Sea, at least an amount equal to the new salt must be removed so that salinity levels don't go higher. If relatively freshwater now flowing to the Sea is conserved and transferred elsewhere, significantly more salt will have to be removed to lower the concentration of salt in the remaining water in the Sea. O5-71

Similarly, if the Project impedes freshwater from reaching the Salton Sea, significant impacts from increased salinity may occur. Thus, the Project's impacts on ephemeral streams which discharge into the Salton Sea is a potentially significant impact. O5-72

3144-009cv

O5-69 Comment noted. This comment does not address the adequacy of the DEIR; therefore no further response is required. Precipitation falling on the site would still have the potential to discharge into the Salton Sea. No reduction in volume is anticipated. Please also see response to comment O5-72. The commenters other observations are noted.

O5-70 Comment noted. This comment does not address the adequacy of the DEIR; therefore no further response is required.

O5-71 Comment noted. This comment does not address the adequacy of the DEIR; therefore no further response is required.

O5-72 Comment noted. Commenter appears to infer that the project would impede flows of freshwater to the Salton Sea. The project was designed to maintain flow connectivity to downstream areas. Specifically, drainage channels are proposed along the eastern edge of project site to capture sheet flow which is conveyed into east-west drainage channels that the Project's impacts to ephemeral streams may result in increased salinity in discharge flow into existing downstream channels which flow into Carrizo Creek and into the Salton Sea. The Project will not impede flows into the Salton Sea, as all precipitation that falls on the site will still be conveyed to the Salton Sea watershed (see Figure 1-5).

Reduction in flows to the Sea may also result in potentially significant impacts on air quality. According to the Salton Sea Authority, as inflows are reduced, the Sea's elevation drops and sediments become exposed. Because the Sea is shallow (comparable to a forty foot puddle 1/8 of an inch deep), it doesn't take much drop in elevation to expose a large amount of sediments. Since the Project would impede water flow to the Salton Sea without replacing inflows, the Sea will drop in elevation and expose more sediments to the air. O5-73

Thus, the Project's proposal to develop in ephemeral streams which discharge into the Salton Sea may result in potentially significant air quality impacts that must be analyzed in a revised DEIR. The Salton Sea National Wildlife Refuge was established in 1930 to preserve wintering habitat for waterfowl and other migratory birds. The Project's resulting reduction in the flow of water to the Salton Sea may potentially increase the salinity in the sea, resulting in significant impacts to beneficial uses of the sea, potentially significant impacts to wildlife and/or take of state- and federally-protected species. These potentially significant impacts must also be analyzed in revised DEIR. O5-74

In sum, substantial evidence shows that the Project may result in significant unmitigated and unanalyzed impacts to water resources, air quality and biological resources from its development within ephemeral streams. The Project will develop in ephemeral streams which will reduce the freshwater flow into the Salton Sea. This may result in potentially significant impacts to the streams, the Salton Sea and its surrounding wetlands, biological resources, and air quality. O5-75

XI. THE DEIR FAILS TO REQUIRE SUFFICIENT AND FEASIBLE MITIGATION MEASURES TO REDUCE SIGNIFICANT IMPACTS O5-76

A. The DEIR Contains Inadequate Mitigation for the Project's Impacts on Migrating Wildlife and Rare Plants

The DEIR proposes to set aside 180.4 acres of native open space on the Project site.[163] It is unclear from the DEIR whether the purpose of the preserve is to enable wildlife access across the private lands to adjoining federal lands" (DEIR, p. 1-2), or to mitigate for the loss of special-status plant communities.[164] However,

[163] DEIR, pp. 1-2, S-15.
[164] DEIR, p. S-15.
3144-009cv

Refer to Section 3.1.4.3.1, Hydrology and Drainage Patterns, of the DEIR for more information.

O5-73 Comment noted. See Response to Comment O5-72. Because the Project will not impede flows into the Salton Sea, the Project will not cause air quality impacts resulting from increased exposure of sediment due to falling levels of the Salton Sea.

O5-74 See response to comments O5-72 and O5-73.

O5-75 See response to comments O5-72 and O5-73. Summary comment noted. Specific comments are addressed in Responses to Comments O5-66 through O5-74.

O5-76 The County disagrees with the commenter's statement that there are impacts to 194.3 acres listed on Table 4. There will be direct impacts to a total of 108.1 acres of vegetation communities on the solar site, which includes permanent direct impacts to 99.9 acres of special-status upland vegetation communities. The mitigation is consistent with the County's required mitigation ratios described in the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources.* The Open Space Preserve provides mitigation for impacts to special status species and connectivity for migrating wildlife species. These two functions are not mutually exclusive. Contrary to the commenter's assertion,

even if 100% of the preserve is intended to mitigate for loss of special-status vegetation, 180.4 acres is inadequate mitigation for the loss.

Based on the DEIR's Bio Appendix, the Project development footprint will impact a total of 194.3 acres of special status plant species.[165] Even if all 180.4 acres of native land is dedicated to mitigating this impact, that would still result in less than 2:1 mitigation. The courts have held that a mitigation ratio of at least 2:1 is required to be considered adequate mitigation under CEQA for loss of special status species or wildlife habitat.[166]

O5-76 Cont.

The proposed Open Space Preserve of 180.4 acres would provide less than a 1:1 replacement for lost vegetation (92%), and is therefore inadequate mitigation under CEQA. The Applicant must procure additional acreage to set aside so that the mitigation ratios are at least 2:1.

B. The DEIR Contains Vague, Infeasible, or Unenforceable Mitigation Measures

CEQA requires the lead agency to adopt feasible mitigation measures that will substantially lessen or avoid a project's potentially significant environmental impacts.[167] A public agency may not rely on mitigation measures of uncertain efficacy or feasibility.[168] "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.[169] Mitigation measures must be fully enforceable through permit conditions, agreements or other legally binding instruments.[170]

O5-77

Failure to include enforceable mitigation measures is considered a failure to proceed in the manner required by CEQA that is evaluated de novo by the courts.[171]

O5-78

[165] DEIR Bio Appendix, pp. 82-83, Table 4.
[166] *Banning Ranch Conservancy v. City of Newport Beach* (2012) 211 Cal. App. 4th 1209 (upholding two-to-one mitigation for loss of critical habitat for coastal California gnatcatcher as compliant with PRC 21081 mitigation requirements).
[167] CEQA §§ 21002, 21081(a)) and describe those mitigation measures in the EIR. (CEQA § 21100(b)(3); CEQA Guidelines section 15126.4
[168] *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727 (finding groundwater purchase agreement inadequate mitigation measure because no record evidence existed that replacement water was available).
[169] 14 CCR § 15364.
[170] Id. at §15126.4(a)(2).
[171] *San Joaquin Raptor Rescue Ctr. v. County of Merced* (2007) 149 Cal.App.4th 645, 672.
3144-009cv

neither CEQA nor relevant case law requires a specific mitigation ratio, much less mitigation at a 2:1 ratio. The case cited by the commenter concerns designated critical habitat for a federally listed bird. None of the sensitive plant species potentially impacted by the Project are listed under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). The County believes the conservation and management of the Open Space Preserve mitigates for the potential loss of sensitive plants.

O5-77 Comment noted. This comment does not address the adequacy of the DEIR; therefore no further response is required.

O5-78 Comment noted. This comment does not address the adequacy of the DEIR; therefore no further response is required.

O5-79 The County disagrees that M-BI-1 lacks sufficient specificity to ensure adequate protection of plant species during construction. A "County-approved biologist" must have an educational background in biology and knowledge of flora and fauna in San Diego County. Mitigation measure M-BI-1 has been revised to clearly spell out the required qualifications for the Project Biologist, as follows:

"The Project Biologist shall have the following

The court of appeal recently clarified that, to meet this requirement, mitigation measures must be incorporated directly into the MMRP to be enforceable.[172]

O5-78 Cont.

1. Mitigation Measure M-BI-1

Mitigation Measure M-BI-1 is the DEIR's principal mitigation measure to protect special status plant and animal species during construction. However, M-BI-1 lacks sufficient specificity in several of its terms to ensure adequate protection for these species during construction. The measure requires "a County-approved biologist" to perform on-site monitoring during construction pursuant to "the most current version of the County's "Biological Report Format and Requirement Guidelines" and the Project permit.[173]

There are several problems with this mitigation measure. First, it does not ensure that an appropriately qualified biologist will be retained to perform on-site monitoring, as required by CEQA.[174] Second, the Biological Report Format document on which the measure relied is not available for public review. Therefore, there is no evidence available to the public to support the County's determination that this measure will be effective. Finally, monitoring must follow applicable regulatory agency guidelines, including those of CDFW and USFWS, not just County guidelines.

O5-79

2. Mitigation Measure M-BI-2

Mitigation Measure M-BI-2, which requires dust control measures to be implemented to reduce biological impacts during Project construction, provides simply that the location and details for dust-control fencing "will be provided."[175] Without specific information about the nature of dust control measures to be taken, this mitigation measure is vague and unenforceable.

O5-80

[172] *Lotus v. Dept of Forestry* (2014) 223 Cal. App. 4th 645, 651-52.
[173] DEIR, p. S-11.
[174] *See Citizen Action To Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748; *Citizens' Committee to Save Our Village v. City of Claremont* (1995) 37 Cal.App.4th 1157; compare to DEIR, p. S-34 (mitigation measure for paleontological resources requires a paleontologist with a Phd or paleontology degree to monitor Project construction).
[175] DEIR, p. S-13.
3144-009ev

minimum qualifications:

a. Have a bachelor's degree in biological sciences, zoology, botany, ecology or a closely related field and at least 2 years of experience in biological compliance for construction projects; and

b. Have at least 1 year of field experience with biological resources found in the geographic region of the Project."

The County disagrees that the County-approved biological monitor would not be qualified for on-site monitoring. Mitigation measure M-BI-1 specifically includes language per the County's Conditions of Approval Manual which includes requirement of a memorandum of understanding (MOU) between the County and the consulting firm. The purpose of the MOU allows the County to ensure the qualifications of the biological monitor.

The County's Biological Report Format and Content Requirements, along with all County EIR guidelines, are publically available on the County's website: http://www.sandiegocounty.gov/pds/procguid.html. These guidelines are informed by CDFW and USFWS, but the County disagrees that monitoring must follow regulatory agency guidelines where, as here, none of the species impacted are federally or state listed.

3. Mitigation Measure M-BI-6

Mitigation Measure M-BI-6 provides specific measures to halt Project construction in the event the nest of a special-status avian species is disrupted during project construction.[176] However, the measure does not describe any mitigation for impacts to nests "that are started on construction equipment or panels or supporting structures."[177] Some of these nests could belong to special-status species. Mitigation must be incorporated to address impacts to nests on Project components and construction equipment.

O5-81

4. Mitigation Measure M-BI-15

Mitigation Measure M-BI-15 is impermissibly vague as to the means of recording bird deaths. The measure provides that on-site construction workers will monitor and record bird deaths, and make a determination as to the cause of death and whether the dead bird was a special-status species.[178] However, there is nothing in the measure that requires the reporting construction worker to have any specialized expertise in identifying avian species. It appears that a bird handbook is to be provided on-site. But that alone is insufficient to ensure accurate recording of bird deaths. The County must revise the measure to require a biologist to identify dead birds. Additionally, in the event a construction worker is the only individual on hand to identify a bird at the time it is found, the measure should require that photos be taken of all bird deaths, and that the worker retain the carcass(es) on-site until a qualified biologist is able to both view and confirm the species and cause of death.

O5-82

C. **The DEIR Improperly Defers Mitigation of Significant Impacts**

It is generally improper to defer the formulation of mitigation measures.[179] An exception to this general rule applies when the agency has committed itself to specific performance criteria for evaluating the efficacy of the measures to be implemented in the future, and the future mitigation measures are formulated and operational before the project activity that they regulate begins.[180] As the courts have explained, deferral of mitigation may be permitted only where the lead agency:

O5-83

[176] DEIR, p. S-17.
[177] DEIR, p. S-17.
[178] DEIR, pp. S-21 to S-22.
[179] 14 CCR § 15126.4(a)(1)(B); *POET v. CARB*, 218 Cal.App.4th at 735.
[180] *POET*, 218 Cal.App.4th at 738.
3144-009cv

O5-80 The SWPPP and related BMPs are implemented to control construction-related erosion and sedimentation, not dust control as the commenter asserts. Fencing or flagging will be located to avoid impacts to special status species and vegetation communities and jurisdictional waters. Specific locations will be determined by the Project biologist when detailed construction plans are prepared. The reference to the dust-control fencing is only one part of longer list of measures and restrictions of M-BI-2. As indicated in the measure, the dust-control fencing would only be required if it is determined to be needed as part of the SWPPP. Dust control and SWPPP approvals are required as part of the grading and building permit approval process by the County. The other measures and restrictions are specifically described would adequately reduce the potential direct and indirect impacts.

O5-81 Construction equipment and PV panels are not suitable locations for nesting. With construction-related activity occurring in the vicinity, it is unlikely that nesting will occur in these areas and these impacts will be less than significant. Any birds attempting to build nests in construction equipment or PV panels and support structures would likely relocate to other adjacent open space areas. The mitigation measure M-BI-6 has been revised and covers impacts to all species covered under the Migratory Bird Treaty Act (MBTA), which includes all special-status birds.

	O5-82	Please also refer to Response to Comment F1-2 and S2-2. The comment expresses a concern as to whether or not a biologist is involved in identifying bird deaths and that untrained workers can accurately record such deaths. The County notes that mitigation measure M-BI-15 requires that a Project Biologist will be on retainer to assist. Accordingly a complete reading of the mitigation measure demonstrates that it is not impermissibly vague. Nevertheless, measure M-BI-15 has been revised to make it more clear the Project Biologists' role in data collection, identification and assessing the causation of injury or death, and implementing the Worker Response Reporting System (WRRS). The measure M-BI-15 is a public benefit providing resource agencies with data and is not required by CEQA as no significant impacts are identified for bird collisions on panel arrays (CEQA Guidelines section 15126.4(a)(3)). Furthermore mitigation measure M-BI-13 already reduces potential impacts to bird collisions from the gen-tie line to below a level of significance and is not impermissibly vague. The County disagrees with the recommendation that workers retain carcasses on-site as that would require appropriate permits from agencies.
	O5-83	Comment noted. This comment is introductory and to more specific comments and responses are provided below to the more specific comments. Therefore no further response is required.

(1) undertakes a complete analysis of the significance of the environmental impact; (2) proposes potential mitigation measures early in the planning process; and (3) articulates specific performance criteria that would ensure that adequate mitigation measures were eventually implemented.[181]

O5-83 Cont.

The mitigation measures discussed below are examples of impermissibly deferred mitigation. The County must revise these measures to correct their deficiencies and include specific and measureable performance standards, and the County must recirculate the DEIR for public review.

1. Mitigation Measure M-AE-3: Decommissioning Plan

As discussed above, the DEIR fails to describe the decommissioning phase of the Project. Instead, the DEIR includes the creation of a Decommissioning Plan in a mitigation measure and defers creation of the Plan to post-Project approval.[182] The only performance standard provided for the Plan is that it comply with Section 6952.b.3 (d) of the County of San Diego Zoning Ordinance (County of San Diego 2012) by providing a financial surety for removal.[183] Mitigation Measure M-AE-3, visual character, adds some detail as to what would be required in the Decommissioning Plan, such as identifying removal of above-grade structures from the site and any non-shared transmission facilities, associated decompaction activities, recontouring, application of hydroseeding, and, "if necessary," installation of permanent best management practices.[184] The measure also states that the Decommissioning Plan will be required to comply with regional Water Board requirements for Notice of Termination filings.[185] However, the DEIR contains no analysis of the environmental impacts of all of those decommissioning activities, and no requirement that the Decommissioning Plan require compliance with applicable air quality or biological resource requirements from applicable resource agencies. Thus, despite substantial evidence that the decommissioning phase of the Project would cause significant impacts similar to those during construction, the DEIR contains no measurable performance standards to ensure that

O5-84

[181] *Comtys. for a Better Env't v. City of Richmond* (2010) 184 Cal.App.4th 70, 95; *Cal. Native Plant Socy' v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 621.
[182] DEIR, p. 1-14 (final decommissioning plan would be provided within one year of issuance of the building permits for the Project).
[183] DEIR, p. 1-14.
[184] DEIR, p. S-10.
[185] *Id.*
3144-009cv

O5-84 Please see Responses to Comments O5-14 and O5-15 above. The secondary impacts of implementing the mitigation measure M-AE-3 would not result in impacts that are different or more severe than those identified for construction activities throughout the DEIR; supplemental, clarifying technical memorandums are provided as Appendices 9.1-1 through 9.1-7 to the FEIR. Commenter acknowledges that the impacts are similar to construction. Accordingly, the County has clarified that construction related mitigation measures also apply to the decommissioning work performed pursuant to M-AE-3. Just as the construction related mitigation measures reduced construction impacts to below a level of significance, they will also reduce any potentially significant secondary impacts from decommissioning to below a level of significance. It should also be noted that M-AE-3 includes timing for the development of a Decommissioning Plan and submittal to the County.

decommissioning activities will not have significant, unmitigated impacts on air quality and biological resources.

Evidence in the DEIR suggests that decommissioning will have significant impacts similar to the construction phase of the Project. Decommissioning will require extensive physical activity at the Project site, just like the construction phase of the Project. Decommissioning activities will include disassembly of the solar facilities and substantive restoration of the site.[186] This will entail removal of both ground-level and underground components, thus involving soil disturbing activities.[187] Recycling and disposal of Project components will necessarily require numerous truck trips to and from recycling facilities and construction and demolition debris disposal facilities.[188] Site restoration will involve removal of all ground-level components, preparing the site with a soil stabilization agent, and reseeding native plants.[189]

All of these activities involve intense physical disturbance at the Project site. There can be no reasonable question that, if construction activities will result in significant impacts to air quality and biological resources, then surely decommissioning activities will as well. These impacts should have been analyzed in the EIR. Once analyzed, creation of the decommissioning phase of the Project is, at most, 30 years away.[190] The Decommissioning Plan may only be permissibly deferred if the Mitigation Monitoring and Reporting Plan ("MMRP") contains specific performance standards to ensure that every potentially significant environmental impact is adequately mitigated. The County failed to set forth this analysis and mitigation in the DEIR for the decommissioning phase of the Project.

2. Mitigation Measure M-BI-2: Water Quality

Mitigation Measure M-BI-2 provides that construction activity "will not be permitted in jurisdictional waters of the United States/state except as authorized by applicable law and permits.[191] However, the measure defers a determination of whether the Project site contains waters that are subject to regulation by the U.S. Army Corps of Engineers ("USACE"), CDFW, or the Regional Water Quality Control

[186] DEIR, p. S-13.
[187] DEIR, p. S-14.
[188] See DEIR, p. S-14.
[189] DEIR, p. S-14.
[190] DEIR, p. S-1.
[191] DEIR, p. S-13.
3144-009cv

O5-84 Cont.

O5-85

O5-86

O5-87

O5-85 Comment noted. Please see Responses to Comments O5-14, O5-15, and O5-84 above.

O5-86 Please also refer to Responses to Comments O5-14, O5-15, and O5-84 above. The County notes that the Decommissioning Plan's timing is appropriate because more details about the project materials will be known at that time. In addition, CEQA only requires the County to mitigate for significant impacts that are foreseeable. The Decommissioning Plan will address any foreseeable aesthetic impacts and secondary impacts using the performance standards noted in Response to Comments O5-14 and O5-15.

O5-87 Please refer to response to comments O5-22 through O5-24. Additionally, the County understands that the final determinations of jurisdictional waters are legal determinations by the state and federal agencies with jurisdiction. They are responsible agencies, not the Lead Agency. Therefore, their final determinations on jurisdictional waters logically come after the County certifies an EIR that evaluates the Proposed Project or a Project alternative. Their determinations are completed during their individual responsible agency permitting process. Nevertheless, the public and County decision-makers can adequately assess the impact because the DEIR assumes these waters are jurisdictional under the ACOE, CDFW, and RWQCB

Board ("RWQCB") until after Project approval. This determination must be made now, and incorporated into the DEIR in order to effectively evaluate whether, and to what extent, the siting of Project components may significantly impact these waters.

O5-87 Cont.

3. Mitigation Measure M-CR-1: Research Design and Data Recovery Program

Mitigation Measure M-CR-1 is intended to mitigate significant impacts to cultural resources that are disturbed during Project construction. However, the measure improperly defers creation of a Research Design and Data Recovery Program, which is "required to mitigate impacts to identified significant cultural resources" to post-Project approval. Measure M-CR-1 states that the Program "shall be carried out using professional archeological methods," but fails to provide any specific detail, discussion, or regulatory standards about which "archeological methods" the Program is expected to comply. As such, Measure M-CR-1 is vague and fails to include comprehensible performance standards. The measure must be revised.

O5-88

XII. MISSING DOCUMENTS REFERENCED IN THE DEIR

The DEIR references numerous outside studies and reports, which the County failed to make available to the public, as required by CEQA. Several of these documents are listed in the "References" chapter of the DEIR without accessible weblinks, and have not otherwise been made available to the public during the DEIR comment period. The County's failure to make these documents available violates CEQA's requirement that "all documents referenced in the environmental impact report" be available for review and "readily accessible" during the entire public comment period on an EIR.[192] The courts have held that the failure to provide even a few pages of a CEQA documents for a portion of the CEQA review period invalidates the entire CEQA process.[193]

Missing documents include, but are not limited to:

O5-89

[192] PRC 21092(b)(1); 14 CCR 15087(c)(5).
[193] *Ultramar v. South Coast Air Quality Man. Dist.* (1993)17 Cal.App.4th 689.
3144-009cv

and states that impacts to these features are significant and provides measures to reduce the impacts to less than significant. The County accepts the mitigation measures and project restrictions set forth by these agencies during the permitting process.

O5-88 This refers to the mitigation measure for CULT#GR-2(b) at DEIR, pp. 2.3.24-25 which says "The Research Design and Data Recovery Program (Program) shall be prepared by the Project Archaeologist in consultation with the Native American monitor. The County Archaeologist shall review and approve the Program, which shall be carried out using professional archaeological methods." There is no improper deferral of mitigation because the performance standards are all the professional archeological methods identified in the mitigation measure in the sentence that follows the one commenter quotes, each of which would adequately reduce the impact to below a level of significance. The public and decision-makers are not left without adequate information to evaluate the effectiveness of the mitigation measure because that sentence states, "The Program shall include (1) avoidance of Traditional Cultural Properties, (2) reasonable efforts to preserve (avoidance) "unique" cultural resources pursuant to CEQA Section 21083.2(g) or Sacred Sites, (3) the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap,

June 1, 2015
Page 41

- The County's "Biological Report Format and Requirement Guidelines," referenced in Mit Measure M-BI-2.[194] The Biological Guidelines are listed in the References chapter, but no weblink or other information about the location of the document is provided.[195] These guidelines form the basis for mitigation proposed under Measure M-BI-2 to mitigate impacts to special status species. Without having access to the guidelines, commenters and other members of the public are unable to evaluate the efficacy of this mitigation measure.

- San Diego County Recommended Approach for Addressing Climate Change ("County GHG Guidelines").[196] The County GHG Guidelines form the basis for the DEIR's analysis of the applicable GHG significance threshold, and for the DEIR's conclusion that the Project's construction GHG emissions are insignificant because the Guidelines permit them to be amortized over the life of the Project.[197] The References chapter of the DEIR lists the County GHG Guidelines among the Greenhouse Gas references, but no weblink or other information about the location of the document is provided. Without having access to the County GHG Guidelines, commenters and other members of the public are unable to evaluate the accuracy of the DEIR's GHG analysis.

O5-89 Cont.

We submitted a request for immediate access to all referenced documents in the DEIR on May 19, 2015. As of the date of this writing, we have not yet been provided with access to the requested documents. The County's failure to provide the referenced documents violates CEQA's basic requirement that all documents referenced in an EIR must be available for public review during the entire comment period. PRC s 21092(b)(1) 14 CCR s 15087(c)(5). Once the referenced documents are made available to the public, the County must either extend the comment period on the DEIR by an additional 45 days, or the DEIR must be recirculated for a new 45-day public review period.

[194] DEIR, p. S-11.
[195] DEIR, p. 5.
[196] DEIR AQ Appendix, p. 75; DEIR, p. 5-18.
[197] DEIR AQ Appendix, pp. 75, 78, 79.
3144-009cv

if avoidance is infeasible, and (4) data recovery for non-unique cultural resources. The preferred option is preservation (avoidance)."

O5-89 See Response to Comment O1 and O2. As noted in prior responses to comments, there is no obligation under CEQA to provide weblinks for the documents "referenced" in the EIR, though most are easy to locate through the search function on the County's website or a broader internet search. In any event, the documents requested have been made available to the commenter pursuant to the California Public Records Act made by the commenter's law firm. The Notice of Availability included the physical address and a web link to where the DEIR and Appendices were available.

June 1, 2015
Page 42

XIII. CONCLUSION

The County failed to comply with CEQA. The DEIR is inadequate as an environmental document because it fails to include a complete and accurate Project description, fails to set forth the existing environmental setting, fails to include an adequate alternatives and cumulative impacts analysis, and fails to identify and mitigate the Project's potentially significant impacts on air quality and sensitive species. In particular, the DEIR lacks substantial evidence for its significance conclusions regarding the Project's air quality impacts and cancer risk from construction. Due to these significant deficiencies in the DEIR, the County cannot conclude that the Project's potentially significant impacts have been mitigated to a less-than-significant level.

We urge the County to fulfill its responsibilities under CEQA by revising and recirculating a legally adequate Draft EIR that addresses the issues raised in this comment letter. In this way, the County and the public can ensure that the Project's significant environmental impacts are adequately disclosed, and adequately mitigated to a less-than-significant level.

O5-90

Thank you for your attention to these comments. Please include the in the record of proceedings for the Jacumba Project.

Sincerely,

Christina Caro

CMC:clv

Attachments

O5-91

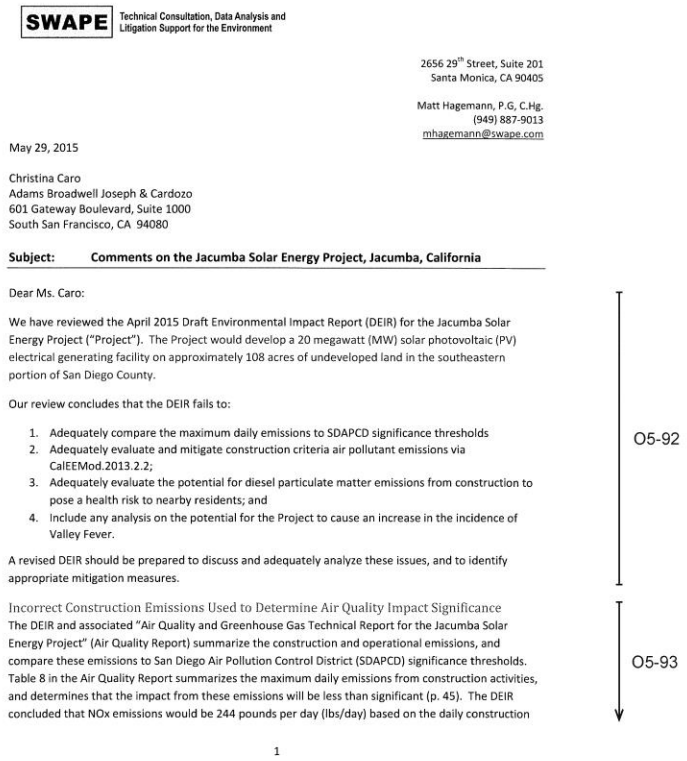
3144-009cv

O5-90 Comment noted. This comment concludes the letter and no further response is required. Please refer to Response to Comment 05-6 regarding recirculation.

O5-91 Detailed responses to the letter provided by Matt Hagemann and Jessie Jaeger (Exhibit A of the comment letter) and the letter provided by Renee Owens (Exhibit B of the comment letter) are provided as requested by the commenter.

All other attachments (including attachments to Exhibits A and B) were determined to be references in support of the comment letter. All attachments are noted and do not address the adequacy of the DEIR, therefore no further response is required.

EXHIBIT A



SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G, C.Hg.
(949) 887-9013
mhagemann@swape.com

May 29, 2015

Christina Caro
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: Comments on the Jacumba Solar Energy Project, Jacumba, California

Dear Ms. Caro:

We have reviewed the April 2015 Draft Environmental Impact Report (DEIR) for the Jacumba Solar Energy Project ("Project"). The Project would develop a 20 megawatt (MW) solar photovoltaic (PV) electrical generating facility on approximately 108 acres of undeveloped land in the southeastern portion of San Diego County.

Our review concludes that the DEIR fails to:

1. Adequately compare the maximum daily emissions to SDAPCD significance thresholds
2. Adequately evaluate and mitigate construction criteria air pollutant emissions via CalEEMod.2013.2.2;
3. Adequately evaluate the potential for diesel particulate matter emissions from construction to pose a health risk to nearby residents; and
4. Include any analysis on the potential for the Project to cause an increase in the incidence of Valley Fever.

A revised DEIR should be prepared to discuss and adequately analyze these issues, and to identify appropriate mitigation measures.

O5-92

Incorrect Construction Emissions Used to Determine Air Quality Impact Significance

The DEIR and associated "Air Quality and Greenhouse Gas Technical Report for the Jacumba Solar Energy Project" (Air Quality Report) summarize the construction and operational emissions, and compare these emissions to San Diego Air Pollution Control District (SDAPCD) significance thresholds. Table 8 in the Air Quality Report summarizes the maximum daily emissions from construction activities, and determines that the impact from these emissions will be less than significant (p. 45). The DEIR concluded that NOx emissions would be 244 pounds per day (lbs/day) based on the daily construction

O5-93

1

O5-92 Comment noted. This comment introduces the commenter's conclusions, which are discussed in more detail in the remainder of the memo. No further response is required at this time and responses are provided where the detailed comments are made in 05-93 through 05-128.

O5-93 The comment reiterates comments presented in O5-53 and O5-54. Please see responses to comments O5-53 and O5-54.

emissions summarized in Table 8. However, Table 8 does not represent an accurate summary of maximum daily construction emissions for the Project. As explained in detail below, if maximum daily construction emissions are properly calculated, actual NOx emissions from Project construction will be 350 lbs/day. When compared to the SDAPCD thresholds, the NOx emissions, after mitigation,[1] would exceed the 250 lb/day threshold by approximately 100 lbs/day. This is a significant impact. As a result, the DEIR's conclusion that the Project's air quality impacts would be less than significant is incorrect and unsupported. Our analysis demonstrates that, when properly calculated, the air quality impacts from the Project's construction NOx emissions would be significant. Adequate mitigation measures must be adopted to address this significant impact.

The DEIR Did Not Use the Maximum Emissions Rate Included in the DEIR to Calculate Emissions from Project Construction

The Air Quality Technical Report and the DEIR conclude that the Project's maximum daily NOx emissions for construction activities are less than significant based on the values in the table below (Table 8, p. 45).

Table 8
Estimated Daily Maximum Construction Emissions (pounds per day)

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
2016	20.58	244.14	177.62	0.31	29.92	18.30
Pollutant Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: See Appendix A for complete results.

However, a comparison of Table 8 to the 2016 emissions used in the CalEEMod output files, which are included in Appendix A of the DEIR's Air Quality Report demonstrates that the values in Table 8 do not accurately represent the Project's maximum construction emissions.

CalEEMod calculates three different emissions scenarios: (1) Annual Emissions in tons per year; (2) Maximum Daily Emissions during the Summer Season in pounds per day; and (3) Maximum Daily Emissions during the Winter Season in pounds per day. Depending on the intensity of the construction activities, the daily emissions may be higher during the winter season or the summer season. Therefore, under the CalEEMod model, the season with the highest emissions estimates represents the maximum daily emissions that could occur at the Project site. The DEIR relied on an inaccurately low daily emissions rate because it used an estimate for the summer construction season, which had lower projected emissions than the winter season, to calculate maximum daily emissions. By relying on an

[1] On p. 33 of the Air Quality Report, they state: "To account for dust control measures in the calculations, it was assumed that the active sites would be watered at least three times daily to comply with SDAPCD Rule 55, resulting in an approximately 61% reduction of particulate matter. A soil binding agent would be applied to the Project site, resulting in an additional 10% reduction in particulate matter." They also apply these mitigation measures to the CalEEMod model, and utilize the mitigated emissions to determine significance.

2

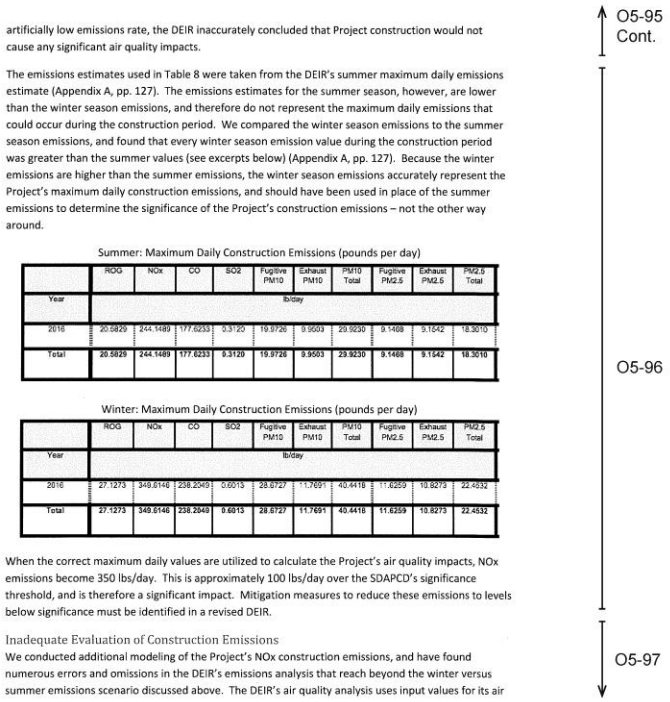
O5-93 Cont.

O5-94

O5-95

O5-94 The comment reiterates comments presented in O5-53 and O5-54. Please see responses to comments O5-53 through O5-54.

O5-95 See response O5-53 and O5-54. Construction of the Proposed Project would occur entirely within the summer months (May through September) as indicated in the construction schedule provided by the project applicant; therefore, summer emissions were properly reported. Construction modeling assumptions, including construction-related traffic assumptions, have been updated per the comment to reflect the most conservative worker, vendor and haul truck assumptions applicable to the Proposed Project. See Table 1 as delineated in response O5-53 for updated emissions estimates per commenter recommendations, which reflects the maximum daily emissions from summer and winter seasons. As shown in Table 1, maximum daily emissions during construction as updated per comment O5-53 would not exceed SDAPCD thresholds. Impacts would remain less than significant during construction as originally stated in the DEIR and no mitigation is required. See Attachment 9.1-7 for completed results.



artificially low emissions rate, the DEIR inaccurately concluded that Project construction would not cause any significant air quality impacts.

The emissions estimates used in Table 8 were taken from the DEIR's summer maximum daily emissions estimate (Appendix A, pp. 127). The emissions estimates for the summer season, however, are lower than the winter season emissions, and therefore do not represent the maximum daily emissions that could occur during the construction period. We compared the winter season emissions to the summer season emissions, and found that every winter season emission value during the construction period was greater than the summer values (see excerpts below) (Appendix A, pp. 127). Because the winter emissions are higher than the summer emissions, the winter season emissions accurately represent the Project's maximum daily construction emissions, and should have been used in place of the summer emissions to determine the significance of the Project's construction emissions – not the other way around.

Summer: Maximum Daily Construction Emissions (pounds per day)

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Year	lb/day									
2016	20.5829	244.1489	177.6233	0.3120	19.9726	0.9503	29.9230	9.1468	9.1542	18.3010
Total	**20.5829**	**244.1489**	**177.6233**	**0.3120**	**19.9726**	**0.9503**	**29.9230**	**9.1468**	**9.1542**	**18.3010**

Winter: Maximum Daily Construction Emissions (pounds per day)

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Year	lb/day									
2016	27.1273	349.6146	238.2049	0.6013	28.6727	11.7691	40.4418	11.6259	10.8273	22.4532
Total	**27.1273**	**349.6146**	**238.2049**	**0.6013**	**28.6727**	**11.7691**	**40.4418**	**11.6259**	**10.8273**	**22.4532**

When the correct maximum daily values are utilized to calculate the Project's air quality impacts, NOx emissions become 350 lbs/day. This is approximately 100 lbs/day over the SDAPCD's significance threshold, and is therefore a significant impact. Mitigation measures to reduce these emissions to levels below significance must be identified in a revised DEIR.

Inadequate Evaluation of Construction Emissions

We conducted additional modeling of the Project's NOx construction emissions, and have found numerous errors and omissions in the DEIR's emissions analysis that reach beyond the winter versus summer emissions scenario discussed above. The DEIR's air quality analysis uses input values for its air

3

O5-95 Cont.

O5-96

O5-97

O5-96 See response O5-53 and 05-54. Construction of the Proposed Project would occur entirely within the summer months (May through September) as indicated in the construction schedule provided by the project applicant; therefore, summer emissions were properly reported. Construction modeling assumptions, including construction-related traffic assumptions, have been updated per the comment to reflect the most conservative worker, vendor and haul truck assumptions applicable to the Proposed Project. See Table 1 as delineated in response O5-53 for updated emissions estimates per commenter recommendations, which reflects the maximum daily emissions from summer and winter seasons. As shown in Table 1, maximum daily emissions during construction as updated per comment O5-53 would not exceed SDAPCD thresholds. Impacts would remain less than significant during construction as originally stated in the DEIR and no mitigation is required. See Attachment 9.1-7 for completed results.

O5-97 Construction of the Proposed Project would occur entirely within the summer months (May through September) as indicated in the construction schedule provided by the project applicant; therefore, summer emissions were properly reported. However,

quality modeling which contradict underlying facts included elsewhere the DEIR in five separate categories. These input values resulted in an artificially low estimate of construction emissions.

As explained below, we have determined that the Project's construction NOx emissions are far greater than those estimated in the DEIR, even when adjusted for an accurate winter emission scenario. A revised DEIR should be prepared to use corrected input values and to use the results of the corrected model output to identify mitigation that would reduce NOx emissions below the SDAPCD threshold.

The DEIR and Air Quality Report discuss the various input parameters and assumptions used to estimate the Project's criteria air pollutant (CAP) and greenhouse gas (GHG) emissions from construction and operational activities. The Air Quality Report relies on the California Emissions Estimator Model Version CalEEMod.2013.2.2 ("CalEEMod") to calculate the Project's emissions.[2] CalEEMod provides recommended default values based on site specific information, such as land use type, meteorological data, total lot acreage, Project type, and typical equipment associated with phases of construction. If more specific project information is known, CalEEMod allows the user to change the default values and input project-specific values, but cautions users that "site specific data" must be "supported by substantial evidence" if it is to be used.[3] As explained in the CalEEMod User Guide, "If the user has any site specific information that will replace the default information, this should be entered on the appropriate screens and provide justification for the change in the "Remarks" section at the bottom of each screen before moving on to mitigation and reporting. This justification for the default override will be printed in the report so the user is encouraged to provide a robust reasoning to allow for seamless review of the analysis."[4]

Once all the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. The DEIR's output files, which can be found in "Appendix A: Criteria Pollutant and Greenhouse Gas Emissions Estimates" of the Air Quality Report, disclose what parameters were utilized in calculating estimates of the Project's air pollution emissions, identify which default values were changed, and purport to provide a justification for the values selected.[5]

The DEIR describes the various components of the proposed Project, such as the land use setting, construction and operational years, the amount of material imported during construction, the number of workers, vendors, and hauling trips, etc. Several of the values from these components that were inputted into the CalEEMod model do not correspond with the parameters discussed elsewhere in the DEIR. Furthermore, many assumptions are made in the CalEEMod model which veer from the recommended default values. The DEIR does not provide the requisite explanation, or any substantial evidence, to explain why the default values were changed. As a result, the Project's projected air emissions are inaccurate and unreliable, and should not be used to determine whether Project

O5-97 Cont.

O5-98

O5-99

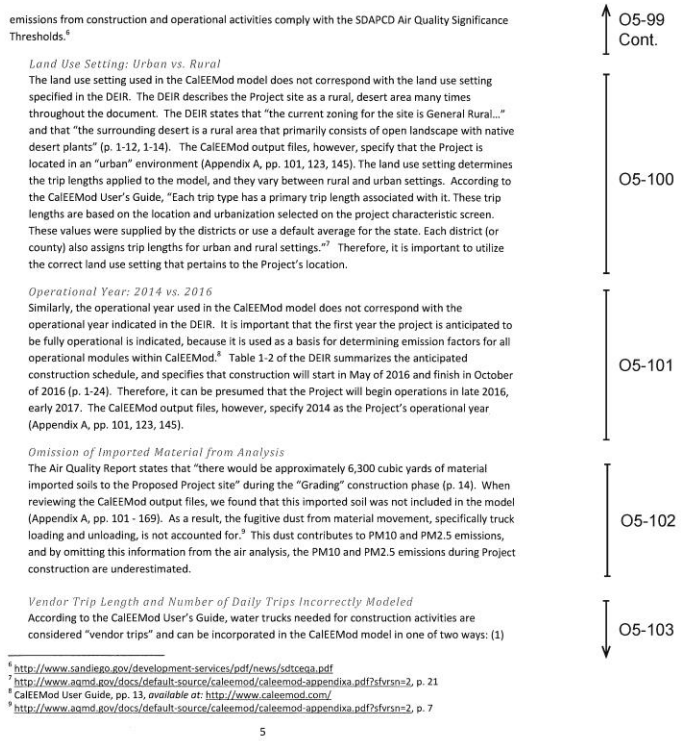
[2] http://www.caleemod.com/
[3] CalEEMod User Guide, pp. 2, 9, *available at:* http://www.caleemod.com/
[4] CalEEMod User Guide, p. 9, *available at:* http://www.caleemod.com/
[5] CalEEMod User Guide, pp. 7, 13, *available at:* http://www.caleemod.com/ (A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.)

4

construction modeling assumptions, including construction-related traffic assumptions, have been updated per the comment to reflect the most conservative worker, vendor and haul truck assumptions applicable to the Proposed Project. The highest resulting values of winter and summer emissions are presented in Table 1 as delineated in response O5-53. As shown in Table 1, maximum daily emissions during construction as updated per comment O5-53 and comment O5-97 would not exceed SDAPCD thresholds. Impacts would remain less than significant during construction as originally stated in the DEIR and no mitigation is required. See Attachment 9.1-7 for completed results.

O5-98 See Response to Comment O5-97 and 05-53.

O5-99 See Response to Comments O5-97 and 05-53.



emissions from construction and operational activities comply with the SDAPCD Air Quality Significance Thresholds.[6]

Land Use Setting: Urban vs. Rural

The land use setting used in the CalEEMod model does not correspond with the land use setting specified in the DEIR. The DEIR describes the Project site as a rural, desert area many times throughout the document. The DEIR states that "the current zoning for the site is General Rural…" and that "the surrounding desert is a rural area that primarily consists of open landscape with native desert plants" (p. 1-12, 1-14). The CalEEMod output files, however, specify that the Project is located in an "urban" environment (Appendix A, pp. 101, 123, 145). The land use setting determines the trip lengths applied to the model, and they vary between rural and urban settings. According to the CalEEMod User's Guide, "Each trip type has a primary trip length associated with it. These trip lengths are based on the location and urbanization selected on the project characteristic screen. These values were supplied by the districts or use a default average for the state. Each district (or county) also assigns trip lengths for urban and rural settings."[7] Therefore, it is important to utilize the correct land use setting that pertains to the Project's location.

Operational Year: 2014 vs. 2016

Similarly, the operational year used in the CalEEMod model does not correspond with the operational year indicated in the DEIR. It is important that the first year the project is anticipated to be fully operational is indicated, because it is used as a basis for determining emission factors for all operational modules within CalEEMod.[8] Table 1-2 of the DEIR summarizes the anticipated construction schedule, and specifies that construction will start in May of 2016 and finish in October of 2016 (p. 1-24). Therefore, it can be presumed that the Project will begin operations in late 2016, early 2017. The CalEEMod output files, however, specify 2014 as the Project's operational year (Appendix A, pp. 101, 123, 145).

Omission of Imported Material from Analysis

The Air Quality Report states that "there would be approximately 6,300 cubic yards of material imported soils to the Proposed Project site" during the "Grading" construction phase (p. 14). When reviewing the CalEEMod output files, we found that this imported soil was not included in the model (Appendix A, pp. 101 - 169). As a result, the fugitive dust from material movement, specifically truck loading and unloading, is not accounted for.[9] This dust contributes to PM10 and PM2.5 emissions, and by omitting this information from the air analysis, the PM10 and PM2.5 emissions during Project construction are underestimated.

Vendor Trip Length and Number of Daily Trips Incorrectly Modeled

According to the CalEEMod User's Guide, water trucks needed for construction activities are considered "vendor trips" and can be incorporated in the CalEEMod model in one of two ways: (1)

[6] http://www.sandiego.gov/development-services/pdf/news/sdtceqa.pdf
[7] http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 21
[8] CalEEMod User Guide, pp. 13, *available at:* http://www.caleemod.com/
[9] http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2, p. 7

5

O5-99 Cont.

O5-100

O5-101

O5-102

O5-103

O5-100 See Response to Comments O5-53. Regarding CalEEMod value categories, the differences in land use setting of urban vs. rural do not affect modeling performed for construction of the Proposed Project because any default values utilized for construction of the Proposed Project are the same for both urban and rural land uses settings; however, per the comment, model settings were updated to reflect the rural land use. See Attachment 9.1-7 for completed results.

O5-101 See response O5-53. Operational emissions generated as part of the Proposed Project would be miniscule; therefore, a more conservative operation year and associated factors were utilized. Per the comment, operational emissions have been updated to reflect a 2016 calendar year. See Attachment 9.1-7 for completed results. It should also be recognized that during operational years, the project will generate renewable energy that helps offset the need to generate energy from fossil fuel based sources that generate higher air and GHG emissions.

O5-102 See Response O5-53. The Proposed Project is intended to be a balanced site; therefore, the import or export of material would not be required. However, for the purposes of providing conservative emissions estimates, emissions estimates have been updated to reflect 6,300 cubic yards of imported material during

	grading activities. See Table 1 for updated emissions estimates during Proposed Project construction. See Attachment 9.1-7 for completed results.
	O5-103 See Response O5-53. Trucks required for water import were accounted for in the "haul truck" category and included in the emissions estimates as presented in the DEIR. Per the commenter's recommendation, water truck trips were updated in the model as vendor trips as part of the construction traffic assumptions. Updated emissions as presented in response O5-53, Table 1, reflect 44 one-way daily vendor trips during site preparation, 104 one-way daily vendor trips during grading activities, and 20 one-way trips during PV racks and solar panel installation, consistent with Section 3.1.7, Traffic and Transportation, of the DEIR. All water truck import trips (vendor trips) reflect an updated distance of 68 miles from Padre Dam. See Attachment 9.1-7 for completed results. Material deliveries were originally assumed to originate from a distance of 75 miles representing an origin from the greater San Diego area, and the model default distance of 7.5 miles was retained for phases where material deliveries did not apply. For the purposes of a more conservative analysis, model inputs have been updated to reflect an 85-mile material delivery distance for all construction phases requiring material delivery trips, as suggested in comment O5-108. Updated emissions as presented in response O5-53, Table 1, of Attachment 9.1-7 reflect this update.

"use the Off-Highway Trucks category" in the Off-Road Equipment screen; or (2) "add these as additional vendor trips in the Trips and VMT screen."[10] The Project's off-road water trucks, which were identified in the DEIR,[11] were inexplicably not included in the CalEEMod equipment list. Similarly, no "Vendor Trips" were included in the "Trips and VMT" section of the DEIR's CalEEMod model either (Appendix A, pp. 108, 130, 152). This is a key omission from the Air Quality Analysis because the DEIR states that grading activities during the site preparation and grading phases of the Project would result in up to 74 round trip truck deliveries per day. As explained in the DEIR, these trips include "Site Preparation" activities, which would require 22 round trip (44 one-way) daily water deliveries, and "Grading" activities, which would require 52 round trip (104 one-way) daily water deliveries (p. 3.1.7-6). The DEIR goes on to state that the later "PV Racks and Solar Panel Installation" construction phase of the Project would result in "approximately 10 water truck deliveries a day" (or 20 one-way trips) (p. 3.1.7-6).

Even though the "Vendor Trips" were not included in the original model, the default values for the "Vendor Trip Lengths" were changed, and some of the lengths used do not reflect the water truck delivery distance specified in the DEIR. Therefore, in an updated CalEEMod model, when the "Vendor Trips" are included in the model, the correct "Vendor Trip Lengths" should also be utilized.

The DEIR's Air Quality Report states that "all water for construction would be imported from off-site sources…Padre Dam was assumed as the water source as it is the greatest distance trucks would travel for water (approximately 64 miles)" (p. 44). When reviewing the "Vendor Trip Length" for each construction phase, two of the phases specify the correct one-way distance of 64 miles, one phase specifies a distance of 75 miles, and the remaining three phases indicate a distance of 7.5 miles (Appendix A, pp. 108, 130, 152). The latter trip lengths of 75 and 7.5 miles are not substantiated by any supporting documentation. An updated CalEEMod model should be ran to include the water delivery trip lengths and daily trips specified in the DEIR and Air Quality Report in an effort to accurately estimate Project emissions during construction activities.

O5-103 Cont.

Worker Trip Length and Number of Daily Trips Incorrectly Modeled

The worker trip lengths included in the CalEEMod model also do not correspond with the information provided in the DEIR. According to the DEIR, "because of the approximately equivalent distances to these population centers" 50% of the worker trips are assumed to come from the greater San Diego area, west of the site, and the other 50% are assumed to come from Imperial Valley, east of the site (p. 3.1.7-8). We mapped the distances from the Project site to both population centers using GoogleEarth, and determined an average one-way worker trip length of 60 miles (see excerpts below).

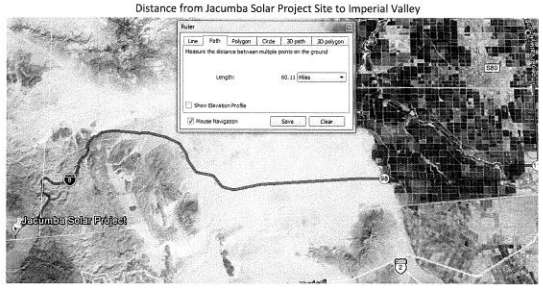
O5-104

[10] http://www.aqmd.gov/docs/default-source/caleemod/usersguide.pdf?sfvrsn=2, p. 26, 27
[11] See DEIR Section 1.0 Project Description, Table 1-3, p. 1-24.

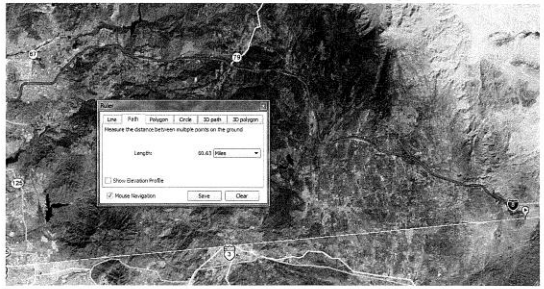
6

O5-104 See Response O5-53. Worker trip distances have been updated to reflect a 60-mile average between workers coming from the greater San Diego area, and workers coming from the Imperial Valley. Updated emissions as presented in response O5-53, Table 1, reflect this updated worker trip distance designation. See Attachment 9.1-7 for completed results.

Distance from Jacumba Solar Project Site to Imperial Valley



Distance from Jacumba Solar Project Site to San Diego



When we compared this 60-mile trip length to the trip lengths used in the CalEEMod model, we found that the CalEEMod model vastly underestimated the distance from the site to these population centers (see excerpt below).

7

O5-104
Cont.

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Site Preparation	8	20.00	0.00	1,228.00	35.00	64.00	20.00
Grading	12	20.00	0.00	4,170.00	35.00	64.00	20.00
Underground Electrical	4	63.00	0.00	0.00	35.00	75.00	20.00
PV Racks and Solar Panel Installation	14	63.00	0.00	192.00	10.80	7.30	20.00
Substation Construction	4	0.00	0.00	0.00	10.80	7.30	20.00
Gen-Tie Construction	14	0.00	0.00	0.00	10.80	7.30	20.00

During the "PV Racks and Solar Panel Installation," "Substation Construction," and "Gen-Tie Construction" phases, the CalEEMod model used a one-way "Worker Trip Length" of 10.8 miles (Appendix A, pp. 108, 130, 152). This trip length not only contradicts the information specified in the DEIR, but it also presents a highly unrealistic scenario, one where it is assumed that all of the workers would be living 10.8 miles away from the site.

Inconsistent Use of One-Way Trip Amounts and Round Trip Amounts

We also found that the CalEEMod model inconsistently uses round trip values for some worker trips, and uses one-way trips for other worker trips. This is a major concern, because the use of round trips or one-way trips affects the trip length for each value. For example, if the total number of one-way worker trips is estimated to be 40 workers (20 worker trips multiplied by two trips each way), then the associated trip length should reflect the trip length one-way. Conversely, if a round trip worker number of 20 workers are used, then the associated trip length should be multiplied by a factor of two to account for the trip length there and back. By using a round trip value for worker trips and then applying a one-way trip length to the number of round trips, the emissions from these worker trips may be underestimated.

Specifically, one-way worker trip amounts are used during the site preparation and construction phases, and round trip worker trip values are used during the rack and panel installation phase. If you look at the CalEEMod inputs for the construction "Trips and VMT," the number of one-way worker trips inputted for the site preparation and grading phases is equal to 40 trips per day, which reflects the estimated number of one-way worker trips. On the contrary, the number of worker trips inputted for the remaining rack and panel installation phase[12] is equal to 126 round trips per day, as opposed to 252 one-way trips per day. As a result, the type of worker trip values used in the varying construction phases are inconsistent with each other and present the use of conflicting calculation methodologies. According to Appendix A of the CalEEMod User's Guide, the vehicle miles traveled (VMT) is estimated from the trip lengths input in the Trips and VMT screen, and the default trip length for workers is based on the one-way trip length from home to work (H-W).[13] Therefore, the "Worker Trip Number" should represent the number of one-way "Worker Trips" that would occur during each phase.

[12] Worker trips are split 50/50 between the "Underground Electrical – Trenching" phase and the "PV Racks and Solar Panel Installation" phase, which have the same duration of 97 days (63 + 63 = 126 round trips per day).
[13] CalEEMod User Guide Appendix A, pp. 17, *available at:* http://www.caleemod.com/

8

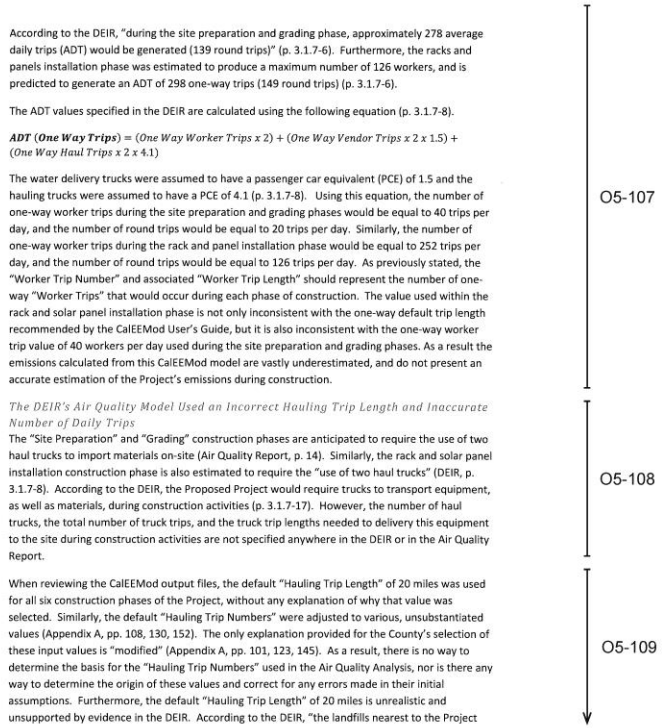
O5-104 Cont.

O5-105

O5-106

O5-105 See Response O5-53. Model input values for worker trips, vendor trips and haul trips have been updated to reflect one-way trip values. Updated emissions as presented in response O5-53, Table 1, reflect this update. See Attachment 9.1-7 for completed results.

O5-106 See Response O5-53. Model input values for worker trips have been updated to reflect one-way trip values. Updated emissions as presented in response O5-53, Table 1, reflect this update. See Attachment 9.1-7 for completed results.



According to the DEIR, "during the site preparation and grading phase, approximately 278 average daily trips (ADT) would be generated (139 round trips)" (p. 3.1.7-6). Furthermore, the racks and panels installation phase was estimated to produce a maximum number of 126 workers, and is predicted to generate an ADT of 298 one-way trips (149 round trips) (p. 3.1.7-6).

The ADT values specified in the DEIR are calculated using the following equation (p. 3.1.7-8).

ADT (One Way Trips) = *(One Way Worker Trips x 2) + (One Way Vendor Trips x 2 x 1.5) + (One Way Haul Trips x 2 x 4.1)*

The water delivery trucks were assumed to have a passenger car equivalent (PCE) of 1.5 and the hauling trucks were assumed to have a PCE of 4.1 (p. 3.1.7-8). Using this equation, the number of one-way worker trips during the site preparation and grading phases would be equal to 40 trips per day, and the number of round trips would be equal to 20 trips per day. Similarly, the number of one-way worker trips during the rack and panel installation phase would be equal to 252 trips per day, and the number of round trips would be equal to 126 trips per day. As previously stated, the "Worker Trip Number" and associated "Worker Trip Length" should represent the number of one-way "Worker Trips" that would occur during each phase of construction. The value used within the rack and solar panel installation phase is not only inconsistent with the one-way default trip length recommended by the CalEEMod User's Guide, but it is also inconsistent with the one-way worker trip value of 40 workers per day used during the site preparation and grading phases. As a result the emissions calculated from this CalEEMod model are vastly underestimated, and do not present an accurate estimation of the Project's emissions during construction.

O5-107

The DEIR's Air Quality Model Used an Incorrect Hauling Trip Length and Inaccurate Number of Daily Trips

The "Site Preparation" and "Grading" construction phases are anticipated to require the use of two haul trucks to import materials on-site (Air Quality Report, p. 14). Similarly, the rack and solar panel installation construction phase is also estimated to require the "use of two haul trucks" (DEIR, p. 3.1.7-8). According to the DEIR, the Proposed Project would require trucks to transport equipment, as well as materials, during construction activities (p. 3.1.7-17). However, the number of haul trucks, the total number of truck trips, and the truck trip lengths needed to delivery this equipment to the site during construction activities are not specified anywhere in the DEIR or in the Air Quality Report.

O5-108

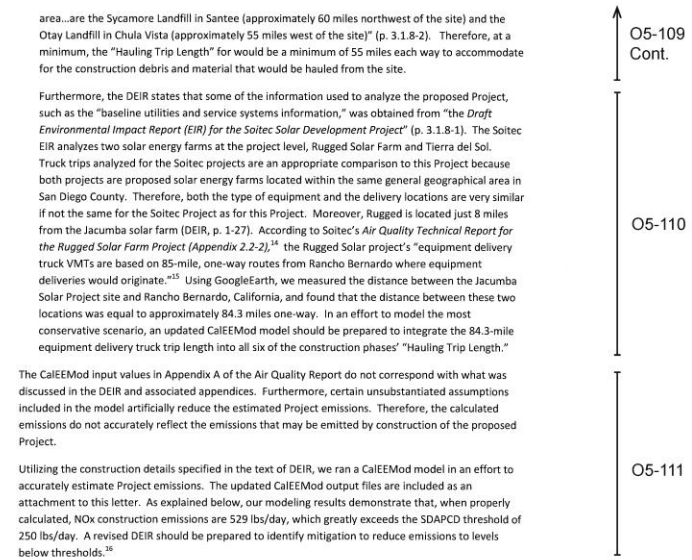
When reviewing the CalEEMod output files, the default "Hauling Trip Length" of 20 miles was used for all six construction phases of the Project, without any explanation of why that value was selected. Similarly, the default "Hauling Trip Numbers" were adjusted to various, unsubstantiated values (Appendix A, pp. 108, 130, 152). The only explanation provided for the County's selection of these input values is "modified" (Appendix A, pp. 101, 123, 145). As a result, there is no way to determine the basis for the "Hauling Trip Numbers" used in the Air Quality Analysis, nor is there any way to determine the origin of these values and correct for any errors made in their initial assumptions. Furthermore, the default "Hauling Trip Length" of 20 miles is unrealistic and unsupported by evidence in the DEIR. According to the DEIR, "the landfills nearest to the Project

O5-109

9

O5-107 See Response O5-53. The calculation of average daily trips (ADT) using the passenger car equivalent factor is applied for traffic purposes only. This calculation does not apply to air quality or greenhouse gas emissions, because specific vehicle types, classes and models must be represented in the air quality analysis to accurately estimate mobile vehicle emissions. Model input values for worker trips, vendor trips and haul trips have been updated to reflect one-way trip values and trip lengths reflect the most conservative values applicable to the Proposed Project. See Attachment 9.1-7 for completed results.

O5-108 See Response O5-53. The location of materials to be delivered to the site is not known at this time; therefore, absent project-specific information, model default values for haul trip lengths were utilized per CalEEMod recommended haul trip lengths. However, model input values for vendor trips and haul trips have been updated to reflect the most conservative values applicable to the Proposed Project. Per Chapter 1, Project Description, it was assumed approximately 6 to 8 daily deliveries would be required to deliver materials to the site. For the purposes of a conservative analysis, it was assumed 8 daily trips (16 one-way trips) would be required for deliveries. Although the location of materials to be delivered to the site is not known at this time, it was conservatively assumed that materials would originate either from the



area...are the Sycamore Landfill in Santee (approximately 60 miles northwest of the site) and the Otay Landfill in Chula Vista (approximately 55 miles west of the site)" (p. 3.1.8-2). Therefore, at a minimum, the "Hauling Trip Length" for would be a minimum of 55 miles each way to accommodate for the construction debris and material that would be hauled from the site.

Furthermore, the DEIR states that some of the information used to analyze the proposed Project, such as the "baseline utilities and service systems information," was obtained from "the *Draft Environmental Impact Report (EIR) for the Soitec Solar Development Project*" (p. 3.1.8-1). The Soitec EIR analyzes two solar energy farms at the project level, Rugged Solar Farm and Tierra del Sol. Truck trips analyzed for the Soitec projects are an appropriate comparison to this Project because both projects are proposed solar energy farms located within the same general geographical area in San Diego County. Therefore, both the type of equipment and the delivery locations are very similar if not the same for the Soitec Project as for this Project. Moreover, Rugged is located just 8 miles from the Jacumba solar farm (DEIR, p. 1-27). According to Soitec's *Air Quality Technical Report for the Rugged Solar Farm Project (Appendix 2.2-2),*[14] the Rugged Solar project's "equipment delivery truck VMTs are based on 85-mile, one-way routes from Rancho Bernardo where equipment deliveries would originate."[15] Using GoogleEarth, we measured the distance between the Jacumba Solar Project site and Rancho Bernardo, California, and found that the distance between these two locations was equal to approximately 84.3 miles one-way. In an effort to model the most conservative scenario, an updated CalEEMod model should be prepared to integrate the 84.3-mile equipment delivery truck trip length into all six of the construction phases' "Hauling Trip Length."

The CalEEMod input values in Appendix A of the Air Quality Report do not correspond with what was discussed in the DEIR and associated appendices. Furthermore, certain unsubstantiated assumptions included in the model artificially reduce the estimated Project emissions. Therefore, the calculated emissions do not accurately reflect the emissions that may be emitted by construction of the proposed Project.

Utilizing the construction details specified in the text of DEIR, we ran a CalEEMod model in an effort to accurately estimate Project emissions. The updated CalEEMod output files are included as an attachment to this letter. As explained below, our modeling results demonstrate that, when properly calculated, NOx construction emissions are 529 lbs/day, which greatly exceeds the SDAPCD threshold of 250 lbs/day. A revised DEIR should be prepared to identify mitigation to reduce emissions to levels below thresholds.[16]

[14] http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/Appendix_2.2-2_AirQualityTechnicalReport_Rugged.pdf
[15] http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/Appendix_2.2-2_AirQualityTechnicalReport_Rugged.pdf, p. 36
[16] Some parameters in the CalEEMod model that we ran do not deviate from the information discussed in the DEIR. This is because we were not certain on a correct value to replace the original value with, and the DEIR did not present a clear substitution. Therefore, our CalEEMod model may still be an underrepresentation of the true emissions of the proposed Project.

10

O5-109 Cont.

O5-110

O5-111

Port of San Diego or the northern San Diego area, approximately 85 miles one-way. Updated emissions as presented in response O5-53, Table 1, reflect this update. See Attachment 9.1-7 for completed results.

O5-109 See Response O5-53. Export or off-site hauling of materials would not be required because demolition or construction waste would not be generated during project construction activities. Additionally, the Proposed Project is intended to be a balanced site; therefore, the import or export of material would not be required. However, for the purposes of providing conservative emissions estimates, emissions estimates have been updated to reflect 6,300 cubic yards of imported material during grading activities. Per the commenter's suggestion, soil import haul length has been updated to 55 miles. For decommissioning the number of haul trips and distance assessed in construction activities would be commensurate with, or greater than, the number of trips necessary to remove facility components. See Table 1 for updated emissions estimates during Proposed Project construction. See Attachment 9.1-78 for completed results.

O5-110 See Response O5-53. Deliveries for the Soitec solar facility were known at the time of preparation of the EIR for that project, and the origin of materials for the Soitec solar project would come from a Soitec-specific

In re-calculating the Project's NOx emissions, we made the following adjustments to the model presented in the DEIR:

- Land Use Setting was adjusted from Urban to Rural;
- Operational Year was changed from 2014 to 2016;
- Included 6,300 cubic yards of imported material during "Grading" construction phase; and
- Adjusted Worker, Vendor, and Hauler trip lengths and number of trips to reflect information specified in the DEIR (see table below).

The following table provides a summary of the updated worker, vendor, hauling truck trips and daily trip rates identified in the DEIR, which values were used in our updated CalEEMod model. These values more accurately reflect the information specified in the DEIR and therefore present a more accurate representation of the proposed Project emissions. The trip lengths and number of trips were all assumed to be one-way, as opposed to round trip, in an effort to comply with the recommended methodology specified in the CalEEMod User's Guide.[17]

Phase Number	Construction Phase	# of Worker Trips per Day	Worker Trip Length	# of Vendor Trips per Day	Vendor Trip Length	Total # of Hauling Trips	Hauling Trip Length
1	Site Preparation	20	60	44	64	1,228	84.3
2	Grading	20	60	104	64	4,170	84.3
3	Underground Electrical - Trenching	126	60	10	64	0	84.3
4	PV Racks and Solar Panel Installation	126	60	10	64	192	84.3
5	Substation Construction	0	60	0	64	0	84.3
6	Gen-Tie Construction	0	60	0	64	0	84.3

Using the new model parameters, it is apparent that the maximum daily NOx emission level of 529 pounds per day (after mitigation measures were implemented) greatly exceeds the SDAPCD significance threshold of 250 lbs/day for NOx construction emissions (see table below).[18]

Mitigated Maximum Daily Construction Emissions (pounds per day)						
2016	ROG	NOx	CO	SO2	PM10	PM2.5
Original Model	27	350	238	0.6	30	18
Updated SWAPE Model	35	529	287	1.1	40	22
SDAPCD Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceed?	*No*	***Yes***	*No*	*No*	*No*	*No*

[17] It should be noted that we did not change the "Total Number of Hauling Trips" in our updated emissions model, as there was not enough information to do so.
[18] http://www.sandiego.gov/development-services/pdf/news/sdtceqa.pdf

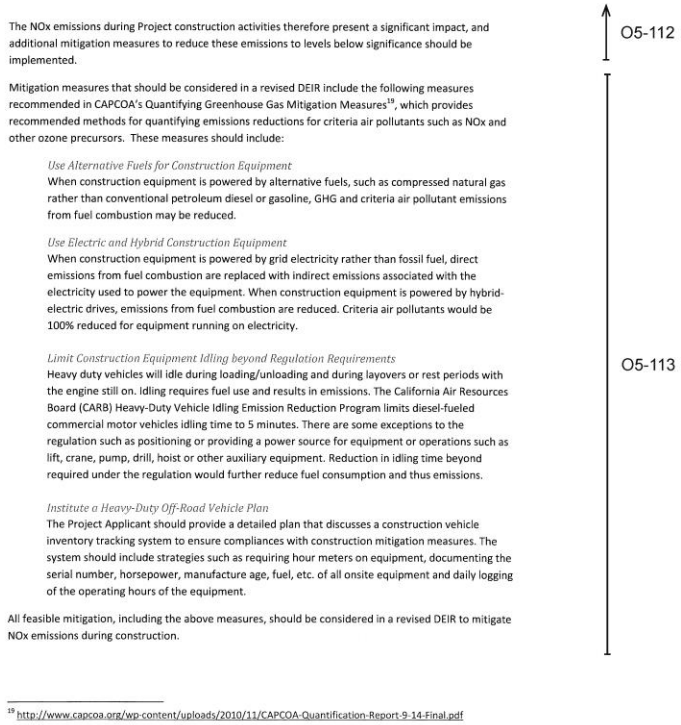
11

O5-112

facility and manufacturer. As such, it is not reasonable to assume the materials to be provided for the Proposed Project would be derived from the same location. However, for the purposes of a conservative analysis, modeling inputs were updated to reflect a material delivery truck trip length of 85 miles for all construction phases requiring material delivery trips. See Table 1 for updated emissions estimates during Proposed Project construction. See Attachment 9.1-7 for completed results.

O5-111 Calculations as provided by SWAPE are incorrect and substantially overestimated. Specifically, the number of haul trips were not calculated correctly and were likely double-counted. As shown in Table 1 of response O5-53, updated emissions estimates per comment O5-53 and O5-111 would not exceed SDAPCD daily thresholds during construction. Emissions presented in Table 1 include the most conservative assumptions available regarding equipment fleet, construction worker trips, vendor trips, and haul truck trips. See Attachment 9.1-7 for complete results

O5-112 Calculations as provided by SWAPE are incorrect and substantially overestimated. Specifically, the number of haul trips were not calculated correctly and identify a total of 5,398 hauling trips for the 6,300 cubic yards of modelled imported material (though the site is to be



The NOx emissions during Project construction activities therefore present a significant impact, and additional mitigation measures to reduce these emissions to levels below significance should be implemented.

Mitigation measures that should be considered in a revised DEIR include the following measures recommended in CAPCOA's Quantifying Greenhouse Gas Mitigation Measures[19], which provides recommended methods for quantifying emissions reductions for criteria air pollutants such as NOx and other ozone precursors. These measures should include:

Use Alternative Fuels for Construction Equipment
When construction equipment is powered by alternative fuels, such as compressed natural gas rather than conventional petroleum diesel or gasoline, GHG and criteria air pollutant emissions from fuel combustion may be reduced.

Use Electric and Hybrid Construction Equipment
When construction equipment is powered by grid electricity rather than fossil fuel, direct emissions from fuel combustion are replaced with indirect emissions associated with the electricity used to power the equipment. When construction equipment is powered by hybrid-electric drives, emissions from fuel combustion are reduced. Criteria air pollutants would be 100% reduced for equipment running on electricity.

Limit Construction Equipment Idling beyond Regulation Requirements
Heavy duty vehicles will idle during loading/unloading and during layovers or rest periods with the engine still on. Idling requires fuel use and results in emissions. The California Air Resources Board (CARB) Heavy-Duty Vehicle Idling Emission Reduction Program limits diesel-fueled commercial motor vehicles idling time to 5 minutes. There are some exceptions to the regulation such as positioning or providing a power source for equipment or operations such as lift, crane, pump, drill, hoist or other auxiliary equipment. Reduction in idling time beyond required under the regulation would further reduce fuel consumption and thus emissions.

Institute a Heavy-Duty Off-Road Vehicle Plan
The Project Applicant should provide a detailed plan that discusses a construction vehicle inventory tracking system to ensure compliances with construction mitigation measures. The system should include strategies such as requiring hour meters on equipment, documenting the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment and daily logging of the operating hours of the equipment.

All feasible mitigation, including the above measures, should be considered in a revised DEIR to mitigate NOx emissions during construction.

[19] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

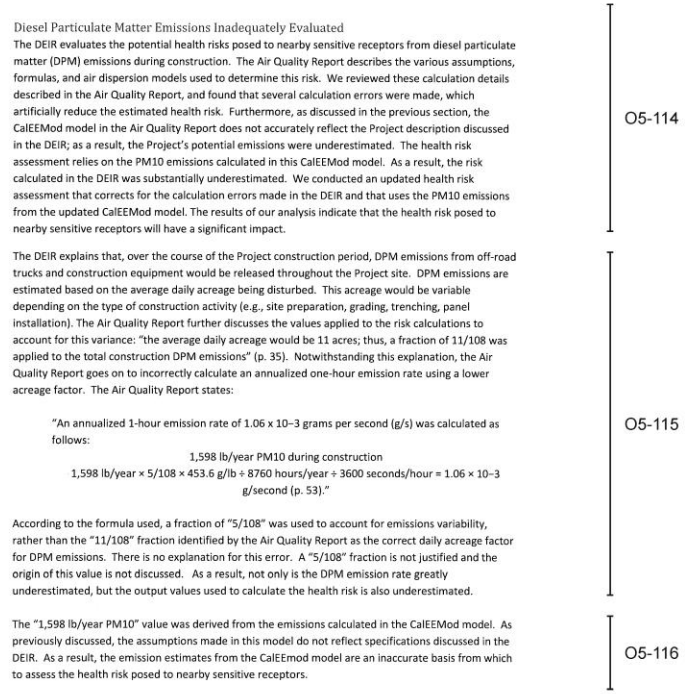
12

O5-112

O5-113

balanced, thus not requiring imported material), approximately 450 trips would deliver 6,300 cubic yards of materials (assuming standard 14 cubic yards capacity trucks) . As shown in Table 1 of response O5-53, updated emissions estimates per comment O5-53 and O5-112 would not exceed SDAPCD daily thresholds during construction. Emissions presented in Table 1 include the most conservative assumptions available regarding equipment fleet, construction worker trips, vendor trips, and haul truck trips. See Attachment 9.1-7 for complete results.

O5-113 The California Air Pollution Control Officers Association (CAPCOA) document, Quantifying Greenhouse Gas Mitigation Measures, specifically applies to GHG emissions, not criteria pollutant emissions. Although measures identified in the CAPCOA document may, in turn, reduce criteria pollutant emissions, updated emissions as shown in response O5-53, Table 1, are less than the SDAPCD daily thresholds for criteria air pollutants. Because emissions would below the thresholds, mitigation is not required. CEQA Guidelines 15126.4(a)(3). .



Diesel Particulate Matter Emissions Inadequately Evaluated

The DEIR evaluates the potential health risks posed to nearby sensitive receptors from diesel particulate matter (DPM) emissions during construction. The Air Quality Report describes the various assumptions, formulas, and air dispersion models used to determine this risk. We reviewed these calculation details described in the Air Quality Report, and found that several calculation errors were made, which artificially reduce the estimated health risk. Furthermore, as discussed in the previous section, the CalEEMod model in the Air Quality Report does not accurately reflect the Project description discussed in the DEIR; as a result, the Project's potential emissions were underestimated. The health risk assessment relies on the PM10 emissions calculated in this CalEEMod model. As a result, the risk calculated in the DEIR was substantially underestimated. We conducted an updated health risk assessment that corrects for the calculation errors made in the DEIR and that uses the PM10 emissions from the updated CalEEMod model. The results of our analysis indicate that the health risk posed to nearby sensitive receptors will have a significant impact.

O5-114

The DEIR explains that, over the course of the Project construction period, DPM emissions from off-road trucks and construction equipment would be released throughout the Project site. DPM emissions are estimated based on the average daily acreage being disturbed. This acreage would be variable depending on the type of construction activity (e.g., site preparation, grading, trenching, panel installation). The Air Quality Report further discusses the values applied to the risk calculations to account for this variance: "the average daily acreage would be 11 acres; thus, a fraction of 11/108 was applied to the total construction DPM emissions" (p. 35). Notwithstanding this explanation, the Air Quality Report goes on to incorrectly calculate an annualized one-hour emission rate using a lower acreage factor. The Air Quality Report states:

> "An annualized 1-hour emission rate of 1.06 x 10−3 grams per second (g/s) was calculated as follows:
>
> 1,598 lb/year PM10 during construction
>
> 1,598 lb/year × 5/108 × 453.6 g/lb ÷ 8760 hours/year ÷ 3600 seconds/hour = 1.06 × 10−3 g/second (p. 53)."

O5-115

According to the formula used, a fraction of "5/108" was used to account for emissions variability, rather than the "11/108" fraction identified by the Air Quality Report as the correct daily acreage factor for DPM emissions. There is no explanation for this error. A "5/108" fraction is not justified and the origin of this value is not discussed. As a result, not only is the DPM emission rate greatly underestimated, but the output values used to calculate the health risk is also underestimated.

The "1,598 lb/year PM10" value was derived from the emissions calculated in the CalEEMod model. As previously discussed, the assumptions made in this model do not reflect specifications discussed in the DEIR. As a result, the emission estimates from the CalEEmod model are an inaccurate basis from which to assess the health risk posed to nearby sensitive receptors.

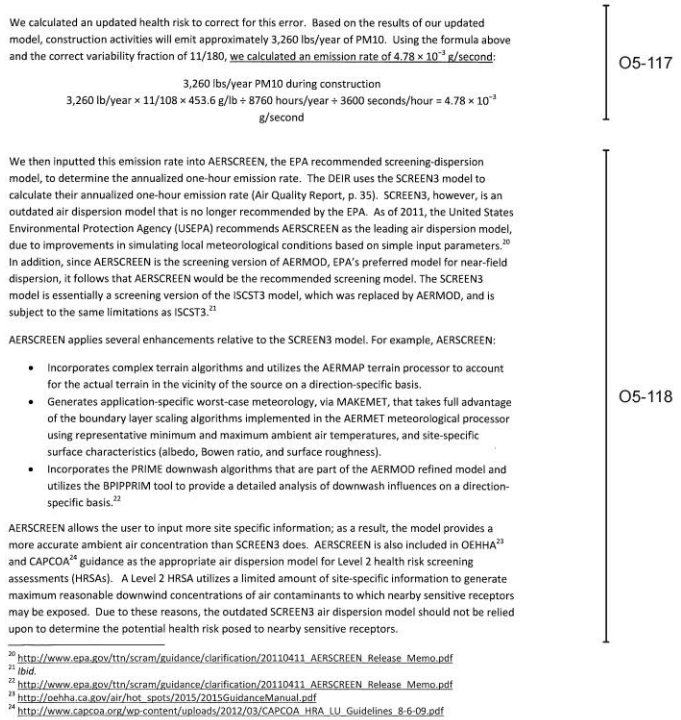
O5-116

13

O5-114 The health risk analysis associated with DPM and associated health risk calculations have been updated consistent with the updated emissions estimates and modeling represented by emissions provided in response O5-53, Table 1. It should be noted that for the purposes of calculating diesel particulate matter, only *on-site exhaust* PM_{10} as part of the CalEEMod output files should be used, because all other sources of PM_{10} would be related to fugitive dust, which are not considered exhaust-related diesel particulate matter. For the purposes of a conservative analysis, the updated health risk calculations include both on-site and off-site sources of DPM. The commenter's apparent use of *total* PM_{10} emissions (exhaust + fugitive dust) to calculate impacts related to diesel particulate matter is invalid because it includes fugitive dust emissions, which are not considered DPM. The health risk assessment has been updated per construction assumptions suggested in comment O5-53. The dispersion modeling conducted for this updated assessment was performed using the U.S. Environmental Protection Agency (EPA)-approved dispersion model, American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and the calculations incorporate all the requirements provided by the Office of Environmental Health Hazard Assessment (OEHHA) as outlined in the *Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance*

		Manual for Preparation of Health Risk Assessments (OEHHA 2015). The commenter used the AERSCREEN model to perform a screening health risk calculation for construction activities; however, unlike AERSCREEN, AERMOD estimates the air quality impacts of single or multiple sources using actual meteorological conditions and therefore, provides more precise results than AERSCREEN. See responses O5-55 and 05-56 which includes results of the updated construction health risk assessment. Detailed results are provided in Attachment 9.1-7.
	O5-115	See response O5-55 and O5-56. Construction for the Proposed Project would only occur for a short-term, temporary duration of several months, after which time all construction-related emissions would cease. Additionally, no high-emitting stationary sources would be associated with project construction – all pollutant sources related to Proposed Project construction would result from off-road equipment and mobile vehicles. The nearest sensitive receptor to the project site is located approximately 3,500 feet from the project site boundaries. CARB guidance provides examples of when a health risk related to mobile sources is greatest, including when sensitive receptors would be located 500 feet or less from a high-volume roadway (CARB 2012). Because the nearest sensitive receptor is located approximately 3,500 feet from the project site, and the construction

		site is not considered a high-emission source or a stationary source of emissions, a health risk assessment is not warranted. Health risk assessments are typically conducted for long-term exposure of 9 years, 30 years or 70 years; however, a construction-specific screening health risk assessment was conducted for the purposes of a conservative analysis. Grading for the Proposed Project would be approximately 40 days. It is unlikely that the entire Proposed Project site would be mass graded because the majority of grading would be required for access road construction. However, for the purposes of a conservative analysis it was assumed the entire 108 acre site would be mass graded. This comes to an average of 2.7 acres per day graded (108/40); therefore, daily graded acreage was rounded up to 5 acres per day to be conservative. Assumptions reflected in the equation calculated for annualized 1-hr emission rate is correct. Text in the EIR p 3.1.1-18 has been updated to reflect a 5 acre per day graded assumption.
	O5-116	The health risk analysis associated with DPM and associated health risk and associated calculations have been updated consistent with the updated emissions estimates and modeling represented by emissions provided in response O5-53, Table 1 of Appendix 9.1-7. It should be noted that for the purposes of calculating diesel particulate matter, only on-site



We calculated an updated health risk to correct for this error. Based on the results of our updated model, construction activities will emit approximately 3,260 lbs/year of PM10. Using the formula above and the correct variability fraction of 11/180, we calculated an emission rate of 4.78×10^{-3} g/second:

3,260 lbs/year PM10 during construction
3,260 lb/year × 11/108 × 453.6 g/lb ÷ 8760 hours/year ÷ 3600 seconds/hour = 4.78×10^{-3} g/second

O5-117

We then inputted this emission rate into AERSCREEN, the EPA recommended screening-dispersion model, to determine the annualized one-hour emission rate. The DEIR uses the SCREEN3 model to calculate their annualized one-hour emission rate (Air Quality Report, p. 35). SCREEN3, however, is an outdated air dispersion model that is no longer recommended by the EPA. As of 2011, the United States Environmental Protection Agency (USEPA) recommends AERSCREEN as the leading air dispersion model, due to improvements in simulating local meteorological conditions based on simple input parameters.[20] In addition, since AERSCREEN is the screening version of AERMOD, EPA's preferred model for near-field dispersion, it follows that AERSCREEN would be the recommended screening model. The SCREEN3 model is essentially a screening version of the ISCST3 model, which was replaced by AERMOD, and is subject to the same limitations as ISCST3.[21]

AERSCREEN applies several enhancements relative to the SCREEN3 model. For example, AERSCREEN:

- Incorporates complex terrain algorithms and utilizes the AERMAP terrain processor to account for the actual terrain in the vicinity of the source on a direction-specific basis.
- Generates application-specific worst-case meteorology, via MAKEMET, that takes full advantage of the boundary layer scaling algorithms implemented in the AERMET meteorological processor using representative minimum and maximum ambient air temperatures, and site-specific surface characteristics (albedo, Bowen ratio, and surface roughness).
- Incorporates the PRIME downwash algorithms that are part of the AERMOD refined model and utilizes the BPIPPRIM tool to provide a detailed analysis of downwash influences on a direction-specific basis.[22]

O5-118

AERSCREEN allows the user to input more site specific information; as a result, the model provides a more accurate ambient air concentration than SCREEN3 does. AERSCREEN is also included in OEHHA[23] and CAPCOA[24] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments (HRSAs). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. Due to these reasons, the outdated SCREEN3 air dispersion model should not be relied upon to determine the potential health risk posed to nearby sensitive receptors.

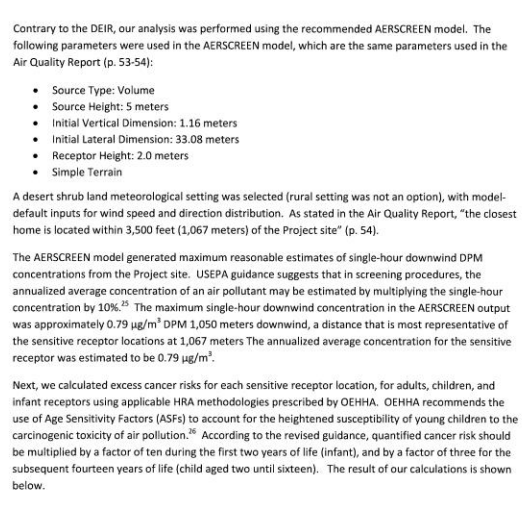
[20] http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[21] *Ibid.*
[22] http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[23] http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
[24] http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf

14

exhaust PM_{10} as part of the CalEEMod output files should be used, because all other sources of PM_{10} would be related to fugitive dust, which are not considered exhaust-related diesel particulate matter. For the purposes of a conservative analysis, the updated health risk calculations include both on-site and off-site sources of DPM. Therefore, the commenter's apparent use of *total* PM_{10} emissions (exhaust + fugitive dust) to calculate impacts related to diesel particulate matter is invalid.

O5-117 Please see response O5-55, and O5-114 through O5-116. The health risk analysis has been updated consistent with the updated emissions estimates and modeling represented by emissions provided in response O5-53; Table 1 of Appendix 9.1-7; and the updated OEHHA guidance (OEHHA 2015). It should be noted that for the purposes of calculating diesel particulate matter, only on-site exhaust PM_{10} as part of the CalEEMod output files should be used, because all other sources of PM_{10} would be related to fugitive dust, which are not considered exhaust-related diesel particulate matter. Therefore, the commenter's use of total PM_{10} emissions to calculate impacts related to diesel particulate matter is invalid. See responses O5-55 which includes results of the updated construction health risk assessment. Detailed results are provided in Attachment 9.1-7.

	O5-118	The health risk assessment has been updated per construction assumptions suggested in comment O5-53. The dispersion modeling conducted for this updated assessment was performed using the U.S. Environmental Protection Agency (EPA)-approved dispersion model, American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and the calculations incorporate all the requirements provided by the Office of Environmental Health Hazard Assessment (OEHHA) as outlined in the *Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). The commenter used the AERSCREEN model to perform a screening health risk calculation for construction activities; however, unlike AERSCREEN, AERMOD estimates the air quality impacts of single or multiple sources using actual meteorological conditions and therefore, provides more precise results than AERSCREEN. The original analysis provided in the DEIR estimated a cancer risk of 0.036 in one million; however, a revised health risk analysis was conducted to account for the most recent guidance provided by OEHHA (OEHHA 2015) and updated modeling assumptions as suggested in comment O5-53. The updated results of the construction-related health risk assessment estimated a cancer risk of 0.321 in one million (an increase of 0.285 from the original DEIR analysis). The cancer



Contrary to the DEIR, our analysis was performed using the recommended AERSCREEN model. The following parameters were used in the AERSCREEN model, which are the same parameters used in the Air Quality Report (p. 53-54):

- Source Type: Volume
- Source Height: 5 meters
- Initial Vertical Dimension: 1.16 meters
- Initial Lateral Dimension: 33.08 meters
- Receptor Height: 2.0 meters
- Simple Terrain

A desert shrub land meteorological setting was selected (rural setting was not an option), with model-default inputs for wind speed and direction distribution. As stated in the Air Quality Report, "the closest home is located within 3,500 feet (1,067 meters) of the Project site" (p. 54).

The AERSCREEN model generated maximum reasonable estimates of single-hour downwind DPM concentrations from the Project site. USEPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant may be estimated by multiplying the single-hour concentration by 10%.[25] The maximum single-hour downwind concentration in the AERSCREEN output was approximately 0.79 µg/m^3 DPM 1,050 meters downwind, a distance that is most representative of the sensitive receptor locations at 1,067 meters The annualized average concentration for the sensitive receptor was estimated to be 0.79 µg/m^3.

Next, we calculated excess cancer risks for each sensitive receptor location, for adults, children, and infant receptors using applicable HRA methodologies prescribed by OEHHA. OEHHA recommends the use of Age Sensitivity Factors (ASFs) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.[26] According to the revised guidance, quantified cancer risk should be multiplied by a factor of ten during the first two years of life (infant), and by a factor of three for the subsequent fourteen years of life (child aged two until sixteen). The result of our calculations is shown below.

[25] http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf
[26] http://oehha.ca.gov/air/hot_spots/pdf/2012tsd/Chapter11_2012.pdf

15

O5-119

risk calculations were performed using the HARP2 model, Risk Assessment Standalone Tool version 15076 for 0.5 years of exposure and a 3rd trimester start date as recommended under the *Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). Therefore, impacts would remain less than significant as originally stated in the DEIR. See Attachment 9.1-7 for complete results.

O5-119 As stated previously, the dispersion modeling conducted for this updated assessment was performed using the U.S. Environmental Protection Agency (EPA)-approved dispersion model, American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and the calculations incorporate all the requirements provided by the Office of Environmental Health Hazard Assessment (OEHHA) as outlined in the *Air Toxics Hot Spot Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015). The revised analysis used a single area source rather than a volume source which does not require the designation of daily acreage graded – this information was provided in the original analysis for volume source parameters to better cater to the limitations of the SCREEN3 model, which can only output maximum 1-hour concentrations. AERMOD

Parameter	Description	Units	Adult Exposure	Child	Infant
Cair	Concentration	ug/m3	0.79	0.79	0.79
DBR	Daily breathing rate	L/kg-day	302	581	581
EF	Exposure Frequency	days/year	350	350	350
ED	Exposure Duration	years	0.5	0.5	0.5
AT	Averaging Time	days	25550	25550	25550
	Inhaled Dose	(mg/kg-day)	1.6E-06	3.1E-06	3.1E-06
CPF	Cancer Potency Factor	1/(mg/kg-day)	1.1	1.1	1.1
ASF	Age Sensitivity Factor	-	1	3	10
	Cancer Risk		**1.80E-06**	**1.04E-05**	**3.46E-05**

Using the recommended modeling techniques, we calculated the excess cancer risk to adults, children, and infants[27] posed by Project construction for the sensitive receptor 1,067 meters away are 1.8, 10.4, and 34.6 in one million, respectively. All three categories of exposure exceed the SDAPCD threshold of 1 in one million, as specified in the DEIR and Air Quality Report (Air Quality Report, p. 55).

This demonstrates that the Project poses a significant health risk due to DPM emissions. A refined health risk assessment should be prepared to examine air quality impacts generated by Project construction using site-specific meteorology and specific equipment usage schedules.

This cancer risk posed by the Project also requires implementation of Toxics Best Available Control Technology pursuant to SDAPCD Rule 1200, New Source Review.[28] An updated DEIR should also include adequate T-BACT mitigation measures to reduce the Project's cancer risk to less than significant levels.

Valley Fever Potential was not Evaluated

The DEIR failed to include any analysis of the Project's impact on the incidence of Valley Fever, a disease that can be contracted by inhaling the spores of a soil-dwelling fungus. The California Department of Public Health has reported, based on data from 2008 to 2012, that San Diego County is located in an area of California that has an elevated incidence of Valley Fever as shown below.[29]

O5-119 Cont.

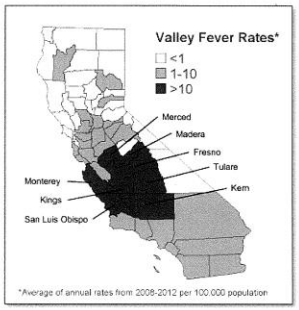
O5-120

[27] Consistent with OEHHA guidance, exposure was assumed to begin in the infantile stage of life to provide the most conservative estimate of air quality hazards.
[28] See DEIR, p. 3.1.1-11; http://www.sdapcd.org/rules/Reg12pdf/R1200.pdf
[29] http://www.cdph.ca.gov/Healthinfo/discond/Documents/EnglishValleyFeverBrochure.pdf

16

has the capability to output annual concentrations, which is the value required for this type of analysis. A source height of 5 meters and a vertical dimension of 1.16 meters was applied consistent with the original analysis. Cancer risk was calculated with HARP2, Risk Assessment Standalone Tool v. 15076 at a 0.5 years exposure period and a 3rd trimester start date to determine worst-case impacts. The original analysis provided in the DEIR estimated a cancer risk of 0.036 in one million; however, a revised health risk analysis was conducted to account for the most recent guidance provided by OEHHA (OEHHA 2015) and updated modeling assumptions as suggested in comment O5-53. The updated construction health risk assessment assessed exposure of a woman in her third trimester at the start of construction, the most sensitive receptor possible, as recommended under the OEHHA manual for health risk assessments prepared under the Air Toxics Hot Spots program (OEHHA 2015). The updated results of the construction-related health risk assessment estimated a cancer risk of 0.321 in one million (an increase of 0.285 from the original DEIR analysis).

O5-120 Please see response O5-48.



O5-120
Cont.

The rate of Valley Fever in San Diego County, based on rates of incidence from 2011 to 2013, was 2.3 cases per 100,000 people.[30]

Valley Fever is caused by inhaling the spores of a soil-dwelling fungus, *Coccidioides immitis*.[31] The spores become airborne when infected soils are disturbed during construction activities, agricultural operations, dust storms, or during earthquakes. On October 19, 2012, an article was published that documented that between 1990 and 2008, more than 3,000 people died in the United States from Valley Fever with about half in California.[32] In recent years, reported Valley Fever cases in southwestern Unites States have increased dramatically.[33]

No known cure exists for the disease and there is no vaccine.[34] Common symptoms of Valley Fever include fatigue, fever, cough, headaches, breathing difficulties, rash, muscle aches, and joint pain.

[30] http://www.cdph.ca.gov/data/statistics/Documents/YearlySummaryReportsofSelectedGeneralCommDiseasesinCA2011-2013.pdf, p. 28
[31] http://www.cdc.gov/fungal/diseases/coccidioidomycosis/definition.html
[32] Jennifer Y. Huang, Benjamin Bristow, Shira Shafir, and Frank Sorvillo, Coccidioidomycosis-associated Deaths, United States, 1990–2008; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3559166/
[33] Center for Disease Control; Fungal Pneumonia: A Silent Epidemic, Coccidioidomycosis (Valley Fever); http://www.cdc.gov/fungal/pdf/cocci-fact-sheet-sw-us-508c.pdf
[34] http://www.cdc.gov/fungal/diseases/coccidioidomycosis/risk-prevention.html.

17

Advanced symptoms are marked by chronic pneumonia, meningitis, skin lesions and bone or joint infections. Pneumonia stemming from Valley Fever becomes evident 13 weeks after infection.[35]

Project construction will generate dust which is one of the primary routes of exposure for contracting Valley Fever.[36] The nearest residential land use is located 3,500 feet from the Project boundary (p. 3.1.1-21).

Construction workers are one of the most at-risk populations.[37] An article on occupational exposures to Valley Fever notes that "[l]abor groups where occupation involves close contact with the soil are at greater risk, especially if the work involves dusty digging operations."[38] One study reported that at study sites, "generally 50% of the individuals who were exposed to the dust or were excavating dirt at the sites were infected."[39]

The disease is debilitating and prevents those who have contracted Valley Fever from working.[40] The longest period of disability from occupational exposure in California is to construction workers, with 62% of the reported cases resulting in over 60 days of lost work.[41] Another study estimated the average hospital stay for each (non-construction work) case of coccidioidomycosis at 35 days.[42]

The potentially exposed population is much larger than construction workers on or adjacent to the Project site because dust generated during Project construction will carry the very small spores –

O5-120 Cont.

O5-121

[35] *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.
[36] Rafael Laniado-Laborin, Expanding Understanding of Epidemiology of Coccidioidomycosis in the Western Hemisphere, Ann. N.Y. Acad. Sci., v. 111, 2007, pp. 20-22; Frederick S. Fisher, Mark W. Bultman, Suzanne M. Johnson, Demosthenes Pappagianis, and Erik Zaborsky, Coccidioides Niches and Habitat Parameters in the Southwestern United States, a Matter of Scale, Ann. N.Y. Acad. Sci., No. 1111, 2007, pp. 47-72 ("All of the examined soil locations are noteworthy as generally 50% of the individuals who were exposed to the dust or were excavating dirt at the sites were infected."); http://www.researchgate.net/publication/6461426_Coccidioides_niches_and_habitat_parameters_in_the_south western_United_States_a_matter_of_scale/file/72e7e51c9b9f058a45.pdf?origin=publication_detail.
[37] Lawrence L. Schmelzer and R. Tabershaw, Exposure Factors in Occupational Coccidioidomycosis, Am. J. Public Health Nations Health, v. 58, no. 1, 1968, pp. 107-113, Table 3; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1228046/?page=1
[38] *Ibid*, p. 110.
[39] Frederick S. Fisher, Mark W. Bultman, Suzanne M. Johnson, Demosthenes Pappagianis, and Erik Zaborsky, Coccidioides Niches and Habitat Parameters in the Southwestern United States, a Matter of Scale, Ann. N.Y. Acad. Sci., No. 1111, 2007, pp. 47-72; http://www.researchgate.net/publication/6461426_Coccidioides_niches_and_habitat_parameters_in_the_south western_United_States_a_matter_of_scale/file/72e7e51c9b9f058a45.pdf?origin=publication_detail.
[40] Frank E. Swatek, Ecology of *Coccidioides Immitis*, Mycopathologia et Mycologia Applicata, V. 40, Nos. 1-2, pp. 3-12, 1970.
[41] Schmelzer and Tabershaw, 1968, Table 4.
[42] Demosthenes Pappagianis and Hans Einstein, Tempest from Tehachapi Takes Toll or Coccidioides Conveyed Aloft and Afar, West J. Med., v. 129, Dec. 1978, pp. 527-530; http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1238466/pdf/westjmed00256-0079.pdf.

18

O5-121 Please see response O5-48. Additionally, the studies referenced by the commenter are not site-specific, and do not reference data for Valley Fever relevant to the Proposed Project area. Moreover, several of the studies referenced are from 1968 and 1978; therefore, referenced studies are out-of-date.

0.002-0.005 millimeters in diameter – into other areas, potentially exposing large non-Project-related populations.[43,44]

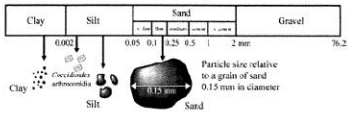


Figure 4: Size of cocci spores compared to soil particles (in mm)
(from: Fisher et al., 2007, Fig. 3)

O5-121 Cont.

Valley Fever spores have been documented to travel as much as 500 miles[45] and, thus, dust raised during construction could potentially expose a large number of people hundreds of miles away.

In the past few years, several incidences of severe dust storms and reported cases of Valley Fever occurred during construction of solar projects. The construction of the First Solar Antelope Valley Solar Ranch One in Kern County was halted in April 2013 due to the company's failure to bring the facility in compliance with ambient air quality standards.[46] Dust from the project, in general, has led to complaints of respiratory distress by local residents and a concern of Valley Fever, as well as increased reports of Dry Land Distemper in horses.[47]

At two photovoltaic solar energy projects in San Luis Obispo County, Topaz Solar Farm and California Valley Solar Ranch, 28 construction workers contracted Valley Fever.[48] One worker digging into the soil inhaled dust and subsequently became ill. A blood sample obtained from the worker confirmed Valley Fever.[49]

O5-122

[43] Schmelzer and Tabershaw, 1968, p. 110; Pappagianis and Einstein, 1978.
[44] Pappagianis and Einstein, 1978, p. 527 ("The northern areas were not directly affected by the ground level windstorm that had struck Kern County but the dust was lifted to several thousand feet elevation and, borne on high currents, the soil and arthrospores along with some moisture were gently deposited on sidewalks and automobiles as "a mud storm" that vexed the residents of much of California." The storm originating in Kern County, for example, had major impacts in the San Francisco Bay Area and Sacramento).
[45] David Filip and Sharon Filip, Valley Fever Epidemic, Golden Phoenix Books, 2008, p. 24.
[46] Herman K. Trabish, GreenTech Media, Construction Halted at First Solar's 230 MW Antelope Valley Site, April 22, 2013; http://www.greentechmedia.com/articles/read/Construction-Halted-At-First-Solars-230-MW-Antelope-Valley-Site.
[47] *Ibid.*
[48] Julie Cart, Los Angeles Times, 28 Solar Workers Sickened by Valley Fever in San Luis Obispo County May 01, 2013; available at http://articles.latimes.com/2013/may/01/local/la-me-ln-valley-fever-solar-sites-20130501.
[49] *Ibid.*

19

O5-122 Please see Response O5-48. Additionally, the studies referenced by the commenter are not site-specific, and do not reference data for Valley Fever relevant to the Proposed Project area.

The California Department of Public Health has advised that Valley Fever fungal spores are too small to be seen by the naked eye, and there is no reliable way to test the soil for spores before working in a particular place.[50] Therefore, the Department recommends that construction projects which involve soil-disturbance adopt preventative mitigation measures in their project-specific health and safety plans.[51]

The current drought conditions in California, declared a State of Emergency by Governor Brown on January 17, 2013,[52] may increase the occurrence of Valley Fever cases in San Diego County and throughout the state[53]. During drought years, the number of organisms competing with *Coccidioides ssp.* is thought to decrease while the fungus remains alive but dormant. When rain does occur, the spores germinate and multiply because of a decreased number of competing organisms.

The DEIR makes no mention of Valley Fever and no attempt to analyze its impacts. Although the DEIR includes some dust mitigation measures (adherence to County Code Section 87.428, Dust Control Measures, and SDAPCD Rule 55), these measures are not designed to address Valley Fever impacts, and are ineffective in reducing the incidences of Project-related Valley Fever in any case. In particular, the cited dust abatement measures do not consider suppression methods that would be effective for controlling and minimizing exposure to Valley Fever spores.

Conventional dust control measures that target PM10 and visible dust are not generally effective at controlling Valley Fever.[54] Valley Fever spores are 1 to 3 microns in diameter[55], and can be far smaller than particles of dust, which measure 2.5 to 100 microns in diameter. A particle 50 microns in diameter is considered to be the smallest particle visible to the eye. Therefore, because *Coccidioides ssp.* spores are generally smaller than dust, they have the potential to spread much farther in air than dust, without detection by human eyesight. The spores, whose size is well below what is detectable by human vision, may be present in air that appears clear and dust free.

Airborne spores with low settling rates can remain aloft for long periods and be carried hundreds of miles from their point of origin. Even if dust control were proposed by the DEIR as mitigation for Valley Fever, which it is not, implementation of standard dust control measures would not provide sufficient protection for both site workers and the general public. The DEIR fails to require any mitigation measures directed at Valley Fever, or that would effectively reduce the potential for contracting Valley Fever from spores released from the Project site.

O5-122 Cont.

O5-123

O5-124

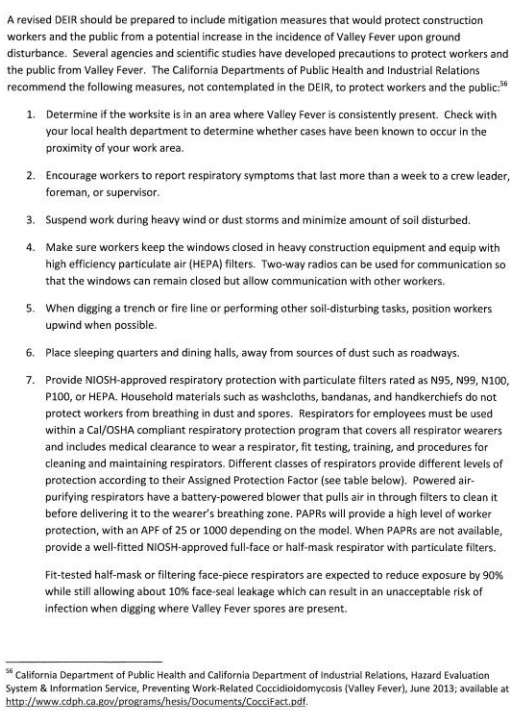
O5-125

[50] http://www.cdph.ca.gov/programs/hesis/documents/coccifact.pdf
[51] *Ibid.*
[52] State of California, Office of Governor Edmund G. Brown, Governor Brown Declares Drought State of Emergency, January 17, 2014; http://gov.ca.gov/news.php?id=18368 .
[53] Gosia Wozniacka, Associated Press, Fever Hits Thousands in Parched West Farm Region, May 5, 2013, citing Prof. John Galgiani, Director of the Valley Fever Center for Excellence at the University of Arizona; http://abcnews.go.com/m/story?id=19113795.
[54] *See, e.g.*, Cummings and others, 2010, p. 509; Schneider et al., 1997, p. 908 ("Primary prevention strategies (*e.g.*, dust-control measures) for coccidioidomycosis in endemic areas have limited effectiveness.").
[55] http://www.engr.psu.edu/iec/abe/database/fCoccil.htm

20

O5-123 Please see Response O5-48. CEQA Guidelines require the County to focus its analysis on significant impacts on the environment. Response O5-48 explains that Valley Fever is not a significant impact in the vicinity of the Project. The County finds there is no credible evidence that Valley Fever is a significant impact in the vicinity of the project, the EIR properly focuses on analyzing and mitigating impacts that are significant, and even if there were a potentially significant impact, mitigation measures related to dust control and regulatory structures to protect worker safety are already required. There is substantial evidence demonstrating the Project does not present a significant air quality impact as it relates to Valley Fever. Mitigation measures are not required where impacts are not significant. CEQA Guidelines 15216.4(a)(3). Accordingly, it is not relevant whether or not commenter believes dust suppression is effective in controlling the spread of airborne diseases.

O5-124 Please see Response O5-48. CEQA Guidelines require the County to focus its analysis on significant impacts on the environment. Response 05-48 explains when Valley Fever is not a significant impact in the vicinity of the Project. Mitigation Measures are not required where impacts are not significant. CEQA Guidelines 15216.4(a)(3). Accordingly, it is not relevant whether or not commenter believes dust suppression is effective in controlling the spread of airborne diseases.



A revised DEIR should be prepared to include mitigation measures that would protect construction workers and the public from a potential increase in the incidence of Valley Fever upon ground disturbance. Several agencies and scientific studies have developed precautions to protect workers and the public from Valley Fever. The California Departments of Public Health and Industrial Relations recommend the following measures, not contemplated in the DEIR, to protect workers and the public:[56]

1. Determine if the worksite is in an area where Valley Fever is consistently present. Check with your local health department to determine whether cases have been known to occur in the proximity of your work area.
2. Encourage workers to report respiratory symptoms that last more than a week to a crew leader, foreman, or supervisor.
3. Suspend work during heavy wind or dust storms and minimize amount of soil disturbed.
4. Make sure workers keep the windows closed in heavy construction equipment and equip with high efficiency particulate air (HEPA) filters. Two-way radios can be used for communication so that the windows can remain closed but allow communication with other workers.
5. When digging a trench or fire line or performing other soil-disturbing tasks, position workers upwind when possible.
6. Place sleeping quarters and dining halls, away from sources of dust such as roadways.
7. Provide NIOSH-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or HEPA. Household materials such as washcloths, bandanas, and handkerchiefs do not protect workers from breathing in dust and spores. Respirators for employees must be used within a Cal/OSHA compliant respiratory protection program that covers all respirator wearers and includes medical clearance to wear a respirator, fit testing, training, and procedures for cleaning and maintaining respirators. Different classes of respirators provide different levels of protection according to their Assigned Protection Factor (see table below). Powered air-purifying respirators have a battery-powered blower that pulls air in through filters to clean it before delivering it to the wearer's breathing zone. PAPRs will provide a high level of worker protection, with an APF of 25 or 1000 depending on the model. When PAPRs are not available, provide a well-fitted NIOSH-approved full-face or half-mask respirator with particulate filters.

   Fit-tested half-mask or filtering face-piece respirators are expected to reduce exposure by 90% while still allowing about 10% face-seal leakage which can result in an unacceptable risk of infection when digging where Valley Fever spores are present.

[56] California Department of Public Health and California Department of Industrial Relations, Hazard Evaluation System & Information Service, Preventing Work-Related Coccidioidomycosis (Valley Fever), June 2013; available at http://www.cdph.ca.gov/programs/hesis/Documents/CocciFact.pdf.

21

O5-126

O5-125 Please see Response O5-48. CEQA Guidelines require the County to focus its analysis on significant impacts on the environment. Response 05-48 explains that Valley Fever is not a significant impact in the vicinity of the Project. The County finds there is no credible evidence that Valley Fever is a significant impact in the vicinity of the project, the EIR properly focuses on analyzing and mitigating impacts that are significant, and even if there were a potentially significant impact, mitigation measures related to dust control and regulatory structures to protect worker safety are already required. There is substantial evidence demonstrating the Project does not present a significant air quality impact as it relates to Valley Fever. Mitigation measures are not required where impacts are not significant. CEQA Guidelines 15216.4(a)(3). Accordingly, it is not relevant whether or not commenter believes dust suppression is effective in controlling the spread of airborne diseases.

O5-126 Please see Response O5-48. CEQA Guidelines require the County to focus its analysis on significant impacts on the environment. Response O5-48 explains that Valley Fever is not a significant impact in the vicinity of the Project. Mitigation measures are not required where impacts are not significant. CEQA Guidelines 15216.4(a)(3). Accordingly, it is not relevant whether or not commenter believes the County should impose mitigation measures recommended by any source.

Respiratory Protection for Reducing Dust and Spore Exposure

	Respirator Type (worn with particulate filters)	Assigned Protection Factor (APF)	Expected Reduction of Exposure to Dust and Spores (%)
	No respirator	None	0
Increasing Protection ↓	Half-mask respirator (elastomeric or filtering facepiece)	10	90
	Powered air-purifying respirator with loose-fitting face covering	25	96
	Full-face respirator	50	98
	Some powered air-purifying respirators are designed to offer higher protection (check with manufacturer)	1000	99.9

Other studies have developed additional 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.[57] An occupational study of Valley Fever in California workers also developed recommendations to protect those working and living in endemic areas.[58] These two sources identified the following measures that should be incorporated into mitigation measures in a revised DEIR:

1. Pretest soils to determine if each work location is within an endemic area.
2. Implement a vigorous program of medical surveillance.
3. Implement aggressive enforcement of respiratory use where exposures from manual digging are involved.
4. Test all potential employees for previous infection to identify the immune population and assign immune workers to operations involving known heavy exposures.
5. Hire resident labor whenever available, particularly for heavy dust exposure work.
6. 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.
7. Establish a medical program, including skin tests on all new employees, retesting of susceptible employees, prompt treatment of respiratory illness in susceptible employees; periodic medical examination or interview to discover a history of low grade or subclinical infection, including repeated skin testing of susceptible employees.

[57] Fisher et al. 2000.

[58] Schmelzer and Tabershaw, 1968, pp. 111 - 113.

22

O5-127

Finally, as explained in Response O5-48, worker safety protections are already required by law and applicable to Project.

O5-127 Please see response O5-48 and O5-128. There is no evidence the project is located in an endemic area.

These mitigation measures, which are implementable and which would substantially reduce significant public health impacts, should be included in a revised DEIR.

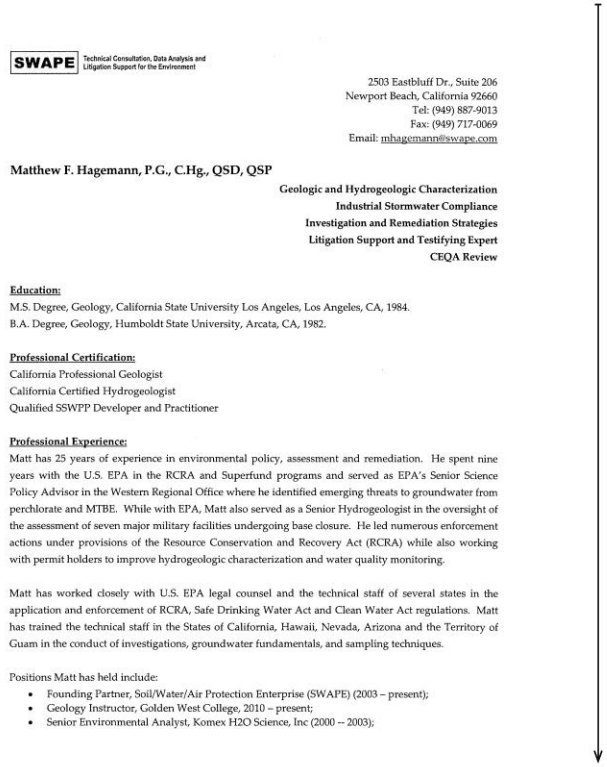
O5-127 Cont.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Jessie Jaeger

23



SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2503 Eastbluff Dr., Suite 206
Newport Beach, California 92660
Tel: (949) 887-9013
Fax: (949) 717-0069
Email: mhagemann@swape.com

Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review

Education:
M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certification:
California Professional Geologist
California Certified Hydrogeologist
Qualified SSWPP Developer and Practitioner

Professional Experience:
Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – present;
- Senior Environmental Analyst, Komex H2O Science, Inc (2000 – 2003);

O5-128

O5-128 Comment noted. This comment is a resume attachment and does not require a response.

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a comunity adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

O5-128
Cont.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the dischrge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

3

O5-128
Cont.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

4

O5-128
Cont.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt currently teaches Physical Geology (lecture and lab) to students at Golden West College in Huntington Beach, California.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

5

O5-128
Cont.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

O5-128
Cont.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

O5-128
Cont.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:
Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

O5-128
Cont.

JESSIE MARIE JAEGER

11815 Mayfield Ave
Los Angeles CA, 90049

530-867-6202
jaegerjessie600@gmail.com

SUMMARY

Innovative, energetic, driven, and a results oriented leader, with proven success producing quality results in research, student government, and academia. A recipient of the UCLA Bruin Advantage Scholarship, Dean's List honoree, and a leader amongst peers, who uses ambition and passion to effectively develop the skills needed to assess and solve major environmental and conservation issues.

Skills include:

- Execution of Laboratory Techniques (DNA extraction, Tissue Cataloging etc.)
- Understanding of Statistical Models used in Ecology and Conservation Biology
- Experience with programs such as Excel, Microsoft Access, QuickBooks, ArcGIS, AERMOD, CalEEMod, AERSCREEN, and ENVI
- Knowledge of California policies and municipal codes
- Experience in Field Work, including capture of Amphibian species and water sampling within Ballona Watershed
- Steering Committee Coordination and Working Group Management
- Organizational Skills
- Effective Communication Abilities
- Customer Service Experience

PROFESSIONAL EXPERIENCE

SOIL WATER AIR PROTECTION ENTERPRISE, SANTA MONICA, CA **2014 – Present**
SWAPE Technical Consultation, Data Analysis, and Litigation Support

Project Analyst
http://www.swape.com/staff/jessie-jaeger/

Maintain and update national public water system database through use of Microsoft Excel and Access. Other responsibilities include cancer risk assessment calculations, in depth research of environmental issues such as fracking, Leaking Underground Storage Tanks (LUST) and their associated funding programs, groundwater contamination, Proposition 65 formaldehyde test methods, polychlorinated biphenyl (PCB) contamination within schools, and environmental modeling using AERMOD, CalEEMod, AERSCREEN, and ArcGIS.

- Expert understanding of Microsoft Excel and Access, with the ability to manipulate, analyze, and manage large sets of data. Expertise include the creation of queries via Access, utilization of Pivot Tables and statistical functions within Excel, and proficiency in formatting large datasets for use in final reports.
- Mastery of modeling programs such as CalEEMod, AERSCREEN, ArcGIS, as well as the ability to prepare datasets for use within these programs. For example, the conversion of addresses into geographical coordinates through the utilization of Geocode programs.
- Experience in the composition and compilation of final analytical reports and presentations, with proficiency in technical writing, organization of data, and creation of compelling graphics.
- Knowledge of federal and California EPA policies, such as CEQA, accepted methods, and reporting limits, as well as experience with city and county personnel and municipal codes.

O5-128
Cont.

UCLA H. BRADLEY SHAFFER LAB, LOS ANGELES, CA **2012 – 2014**

Undergraduate Research Assistant
Responsible for phylogenetic prioritization within the Turtles of the World project (TOTW). Methods include obtaining 2-3 tissue samples of every species of turtle on earth, and sequencing them for ~20 independent genes. The results of the TOTW project are being used to create a phylogenetic tree of as many currently existing turtle species as possible. This will allow evolutionary biologists and herpetologists to better understand how turtle taxa are interrelated, and will aid in efforts to conserve threatened turtle species.

- Expert understanding of laboratory techniques, including the amplification of DNA through the method of polymerase chain reactions (PCR), extraction of DNA from tissue, cataloging of tissue samples etc.
- Proficiency in programs such as Excel, Google Earth, and Specify.
- Mastery of laboratory equipment usage, including but not limited to, Thermocyclers, Centrifuges, Nanodrop Machines, Autoclave Devices, and Vortexes.
- Experience in fieldwork, including capture of salamander, turtle, and newt specimens to add to the Shaffer Lab tissue database.

LOS ANGELES REGIONAL COLLABORATIVE, LOS ANGELES, CA **2011-2012**
Climate Action and Sustainability, Institute of the Environment, UCLA

Work Group and Event Manager
Responsibility for organization of steering committee meetings, as well as for the organization of the working groups within the collaborative. Maintaining and updating the website, as well as sending out weekly newsletters on behalf of the Collaborative to its members.

- Organized the first Solar Planning working group within the steering committee, which consisted of representatives from universities, government agencies, and private sectors within LA County.
- Coordinated monthly steering committee meetings as well as assisted in the organization of Quarterly Meetings and Sustainability Forums.
- Managed membership, weekly newsletters, website updates, general assistance, and clerical duties.

UNDERGRADUATE STUDENTS ASSOCIATION COUNCIL, UCLA **2012-2013**

Academic Wellness Director, Academic Affairs Commissioner (2013)
Student Groups Support Committee Member, Internal Vice President (2012)
USAC's programs offer an invaluable service to the campus and surrounding communities by providing an opportunity for thousands of students to participate in and benefit from these services. Two to three thousand undergraduates participate annually in the more than 20 outreach programs.

- Directed the organization of academic campus programs that provide tools and resources to manage the academic rigors experienced by university students.
- Oversight control of and responsibility for the Academic Wellness committee and all its members.
- Created a Universal Funding application for student groups that facilitates the process of requesting funds to support philanthropic activities.

EDUCATION

Bachelor of Science, Environmental Science
Minor in Conservation Biology
Senior Project, Ballona Watershed Phytoplankton and Water Quality Assessment
University of California Los Angeles, Los Angeles, CA

High School Diploma
Valedictorian, June 2010
Pioneer High School, Woodland, CA

ACCOMPLISHMENTS

Recipient, Bruins Advantage Scholarship, 2010-2014
Academic Honoree, Dean's List, 2013-2014
Life Member, National Honor Society & California Scholarship Federation, 2006-2010
Valedictorian, Pioneer High School, 2010

O5-128
Cont.

EXHIBIT B

June 1, 2015

Christina Caro
Adams Broadwell Joseph & Cardozo
601 Gateway Blvd., Suite 1000
South San Francisco, CA 94080

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

Dear Ms. Caro:

This letter contains my comments on the Draft Environmental Impact Report (DEIR) for the Jacumba Solar Development Project (Project) prepared by San Diego County (County) under the California Environmental Quality Act (CEQA).

This letter contains my comments on the Draft Environmental Impact Report (DEIR) for the Jacumba Solar Development Project (Project) prepared by San Diego County (County) under the California Environmental Quality Act (CEQA).

The Applicant, Jacumba Solar, is a subsidiary of NextEra Energy (NEE). According to NextEra's company website[1], they are an energy company with revenues of approximately $17.0 billion, and their primary subsidiaries are Florida Power and Light Company (the 3rd largest electric utility in the U.S.) and Hawaiian Electric Industries.

O5-129

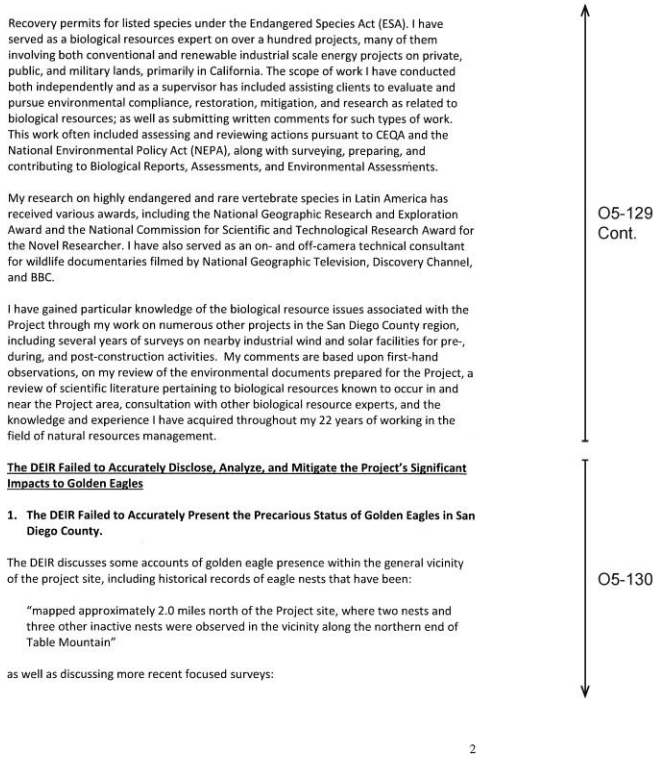
The Applicant proposes to construct and operate an industrial solar energy facility located in southeastern San Diego County, covering a total of approximately 304 acres of primarily undisturbed land. The proposal involves the development of the Jacumba Solar Energy site and construction of a new, approximately 1,500-foot-long 138-kilovolt (kV) generation-tie transmission line required to connect the energy system to the existing San Diego Gas & Electric East County Substation. The Proposed Project property encompasses land in unincorporated San Diego County approximately 3 miles to the east of the community of Jacumba Hot Springs.

I am a conservation biologist with professional experience in wildlife ecology and natural resource management, and since 1994 have maintained U.S. Fish and Wildlife (USFWS)

[1] NextEra Energy Inc. (n.d.) Retrieved May 25, 2015 from http://www.nexteraenergy.com/company/our_company.shtml

1

O5-129 Comment noted. This comment is introductory in nature and does not require a response.



Recovery permits for listed species under the Endangered Species Act (ESA). I have served as a biological resources expert on over a hundred projects, many of them involving both conventional and renewable industrial scale energy projects on private, public, and military lands, primarily in California. The scope of work I have conducted both independently and as a supervisor has included assisting clients to evaluate and pursue environmental compliance, restoration, mitigation, and research as related to biological resources; as well as submitting written comments for such types of work. This work often included assessing and reviewing actions pursuant to CEQA and the National Environmental Policy Act (NEPA), along with surveying, preparing, and contributing to Biological Reports, Assessments, and Environmental Assessments.

My research on highly endangered and rare vertebrate species in Latin America has received various awards, including the National Geographic Research and Exploration Award and the National Commission for Scientific and Technological Research Award for the Novel Researcher. I have also served as an on- and off-camera technical consultant for wildlife documentaries filmed by National Geographic Television, Discovery Channel, and BBC.

I have gained particular knowledge of the biological resource issues associated with the Project through my work on numerous other projects in the San Diego County region, including several years of surveys on nearby industrial wind and solar facilities for pre-, during, and post-construction activities. My comments are based upon first-hand observations, on my review of the environmental documents prepared for the Project, a review of scientific literature pertaining to biological resources known to occur in and near the Project area, consultation with other biological resource experts, and the knowledge and experience I have acquired throughout my 22 years of working in the field of natural resources management.

The DEIR Failed to Accurately Disclose, Analyze, and Mitigate the Project's Significant Impacts to Golden Eagles

1. **The DEIR Failed to Accurately Present the Precarious Status of Golden Eagles in San Diego County.**

The DEIR discusses some accounts of golden eagle presence within the general vicinity of the project site, including historical records of eagle nests that have been:

> "mapped approximately 2.0 miles north of the Project site, where two nests and three other inactive nests were observed in the vicinity along the northern end of Table Mountain"

as well as discussing more recent focused surveys:

2

O5-129 Cont.

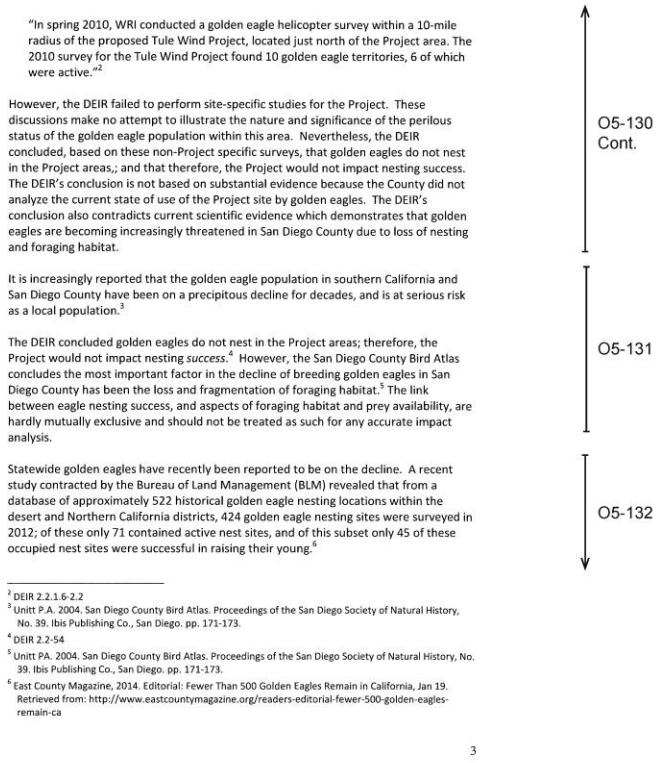
O5-130

O5-130 Please refer to response to comments FI-3, O3-16, and O5-17. The County disagrees that it did not analyze the current state of use of the Project site by golden eagles. To the contrary, the DEIR details golden eagle observations in the vicinity of the Project site, and it analyzes the use of the Project site by golden eagles. The DEIR concludes that there is no nesting habitat for golden eagle on the project site and no active golden eagle nests within 4,000 feet, but it also acknowledges that the site is likely used for foraging by golden eagles.

The County further disagrees that surveys for golden eagle were inadequate. Winter and breeding season foraging surveys were conducted on site as discussed in RTC O3-16 and surveys completed by WRI have been acknowledged by the USFWS as being valuable (Heather Beeler, USFWS pers com 2015). That data is relevant with regard to the locations of nests in the vicinity.

The comments about the status of the golden eagle population in San Diego County are noted. As described above, the DEIR properly acknowledges the status of golden eagle. Because golden eagles have larger territories and nest fidelity, it is not inappropriate to use data from nearby projects because they provide data for golden eagle nests and territories that may overlap with the project site. Additionally,

	the golden eagle data described in the DEIR is based on data collected by WRI that document golden eagle nest use over decades of studies and therefore can be used in planning purposes for other projects in the region. The DEIR's impact analysis for golden eagle is consistent with the County's EIR Format and General Content Requirements for Biological Resources, dated September 15, 2010, including describing the guideline for determining significance pursuant to the Guidelines for Determining Significance, Guideline 4.1 (E) (County of San Diego 2010a), which states "any alteration of habitat within 4,000 feet of an active golden eagle nest could only be considered less than significant if a biologically-based determination can be made that the project would not have a substantially adverse effect on the long-term survival of the identified pair of golden eagles". As stated in the DEIR, there are no active golden eagle nests within 4,000 feet of the Proposed Project; therefore, the Proposed Project does not meet the significance threshold for this guideline. However, impacts to functional foraging habitat for raptors, including foraging habitat for golden eagle, were quantified, is considered a potentially significant impact from the Proposed Project, and is mitigated through habitat preservation. Suitable habitat for the golden eagle is outlined on page 2.2-20 of the DEIR. These habitat types and their existing acreages on the Proposed Project site (i.e., vegetation communities)



"In spring 2010, WRI conducted a golden eagle helicopter survey within a 10-mile radius of the proposed Tule Wind Project, located just north of the Project area. The 2010 survey for the Tule Wind Project found 10 golden eagle territories, 6 of which were active."[2]

However, the DEIR failed to perform site-specific studies for the Project. These discussions make no attempt to illustrate the nature and significance of the perilous status of the golden eagle population within this area. Nevertheless, the DEIR concluded, based on these non-Project specific surveys, that golden eagles do not nest in the Project areas,; and that therefore, the Project would not impact nesting success. The DEIR's conclusion is not based on substantial evidence because the County did not analyze the current state of use of the Project site by golden eagles. The DEIR's conclusion also contradicts current scientific evidence which demonstrates that golden eagles are becoming increasingly threatened in San Diego County due to loss of nesting and foraging habitat.

It is increasingly reported that the golden eagle population in southern California and San Diego County have been on a precipitous decline for decades, and is at serious risk as a local population.[3]

The DEIR concluded golden eagles do not nest in the Project areas; therefore, the Project would not impact nesting *success*.[4] However, the San Diego County Bird Atlas concludes the most important factor in the decline of breeding golden eagles in San Diego County has been the loss and fragmentation of foraging habitat.[5] The link between eagle nesting success, and aspects of foraging habitat and prey availability, are hardly mutually exclusive and should not be treated as such for any accurate impact analysis.

Statewide golden eagles have recently been reported to be on the decline. A recent study contracted by the Bureau of Land Management (BLM) revealed that from a database of approximately 522 historical golden eagle nesting locations within the desert and Northern California districts, 424 golden eagle nesting sites were surveyed in 2012; of these only 71 contained active nest sites, and of this subset only 45 of these occupied nest sites were successful in raising their young.[6]

[2] DEIR 2.2.1.6-2.2
[3] Unitt P.A. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History, No. 39. Ibis Publishing Co., San Diego. pp. 171-173.
[4] DEIR 2.2-54
[5] Unitt PA. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History, No. 39. Ibis Publishing Co., San Diego. pp. 171-173.
[6] East County Magazine, 2014. Editorial: Fewer Than 500 Golden Eagles Remain in California, Jan 19. Retrieved from: http://www.eastcountymagazine.org/readers-editorial-fewer-500-golden-eagles-remain-ca

3

O5-130 Cont.

O5-131

O5-132

are included on Table 2.2-7, Summary of Impacts, Mitigation, and Open Space for Vegetation Communities and Jurisdictional Areas of the DEIR.

O5-131 Please refer to response to comments FI-3, O3-16, O5-17, and O5-130. The comment refers to the status of golden eagle described in the San Diego County Bird Atlas (Unitt 2004) and the link between foraging habitat and nesting success. As described above, the DEIR acknowledges the locations of nests known near the project site and the importance of foraging habitat to golden eagle. The DEIR does not minimize the importance of foraging habitat or prey availability related to golden eagle as mentioned by the commenter; it analyzes the project's impacts on raptor foraging habitat and concludes they are potentially significant; and it mitigates this impact through habitat preservation. Further, the DEIR's impact analysis for golden eagle is consistent with the County's EIR Format and General Content Requirements for Biological Resources, dated September 15, 2010, including describing the guideline for determining significance pursuant to the Guidelines for Determining Significance.

O5-132 Comment noted. This comment is informational in nature and does not address the adequacy of the DEIR; therefore no further response is required.

Several studies have recently produced decreasing population estimates for migrant and wintering golden eagles in the western United States. Of the few long-term studies on breeding populations of golden eagles in the continental U.S., there are concerns of population declines.[7] In order to slow these declines, it is first necessary to understand the current migration routes, important stopover areas, winter range movements, and potential hazards within both summer and winter ranges.[8] Movements and important use areas of the non-breeding portion of the population (i.e., sub-adults and floaters) are also critical to the perseverance of this long-lived species through maintained recruitment into the breeding population. To date, this information remains seriously lacking.[9]

In a 2012 report submitted to the BLM titled Golden Eagle Home Range, Habitat Use, Demography and Renewable Energy Development in the California Desert, eagle researchers state that:

> "Golden eagle (*Aquila chrysaetos*) populations in North America are thought to be declining (Hoffman and Smith 2003, Smith et al. 2008; but see McCaffery & McIntyre 2005). This species is enigmatic and indicative of broad conservation value (Sergio et al. 2005), and, for the most part, poorly known."[10]

As reported in the Draft Environmental Impact Statement/Environmental Impact Report for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects:

> "Studies of the breeding population and locations within San Diego County have been conducted over the past 70 years. The population within the county in 1900 was estimated at 108 pairs (Unitt 2004). It remained at approximately this population size for a number of years but has shown a gradual decline since the 1950s and is now estimated at approximately 50 pairs (Unitt 2004; Scott 1985; WEST 2010b). As the population of the species declines within the county, loss of breeding adults becomes of greater concern. Currently only one-third of the nesting territories mapped in 1937 are occupied with the start of the twenty-first century (Unitt 2004). Over the next 30 years, it is estimated that the population may drop to approximately 25 pairs (Unitt 2004)...The population of golden eagles in general is not showing declines throughout its range; however, declines are

O5-132
Cont.

[7] Katzner et. al. 2012a. Status, Biology, and Conservation Priorities for North America's Eastern Golden Eagle (*Aquila chrysaetos*) Population. The Auk 129(1):168-176. Retrieved May 24, 2015 from http://www.dfg.ca.gov/wildlife/nongame/GEWG/

[8] *Ibid.*

[9] Rhett e. et. al. 2004. Population Level Survey of Golden Eagles (*Aquila chrysaetos*) in the Western United States. 2004. Prepared For: U.S. Fish & Wildlife Service.

[10] Katzner et. al. 2012b. Golden Eagle Home Range, Habitat Use, Demography and Renewable Energy Development in the California Desert. Interim Report submitted to the California State Office of the Bureau of Land Management, Dec 4. Retrieved May 24, 2015 from http://www.dfg.ca.gov/wildlife/nongame/GEWG/

4

noted within the western United States and for San Diego County, as previously noted (Kochert et al. 2002)."[11]

O5-132 Cont.

The DEIR failed to disclose the highly sensitive status of San Diego County's golden eagle population. In addition, they failed to disclose information indicating the most important factor in the population's decline has been the fragmentation of foraging habitat.[12] For instance, in the report prepared for the BLM by Katzner et. al. (2012b) the authors state"

> "California's golden eagles face a variety of threats. In particular, development of renewable energy is a rapidly emerging and important concern that has the potential to impact eagles at all stages of their life history…. More recently, growth of the solar energy industry presents additional indirect risk to birds, primarily through habitat conversion and loss (Fernandes et. al. 2010). Both solar and wind industry businesses are submitting large numbers of applications for energy projects on federal lands in California (Fernandes et. al. 2010), thus the environmental impacts of these programs are expected to grow with time."[13]

O5-133

The omission of the precarious status of the local eagle population, and the inevitable discussion of how the breeding failure or loss of just one breeding pair could impact the resident population's viability, precludes the public and decision makers from understanding and assessing the potential severity of the Project on San Diego's remaining golden eagle population.

2. The DEIR Failed to Establish the Importance of the Project Site to Golden Eagles, and Relies on Inadequate Data to Analyze the Significance of Impacts to Nesting and Foraging Eagles.

Referenced Golden Eagle Surveys Conducted in Part Without a Legal Permit

Throughout the discussions regarding golden eagle status in the region and related potential Project impacts, the DEIR references data regarding golden eagle surveys conducted by Dave Bittner on behalf of the Wildlife Research Institute (WRI) numerous times (referenced as WRI 2010).[14] The DEIR relies heavily on such data from a WRI 2010 report to assess the proximity of the Project to nesting eagles, including resultant conclusions that the Project will not impact nesting success of golden eagles due in part to WRI report data on locations of golden eagles within the general Project vicinity.

O5-134

[11] Dudek. 2010. Draft EIS/EIR for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects. p. D.2-178.
[12] Unitt PA. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History, No. 39. pp. 171-173.
[13] Same citation Katzner et. al. Dec 4 2012
[14] DEIR 2.2-19, 20, 21

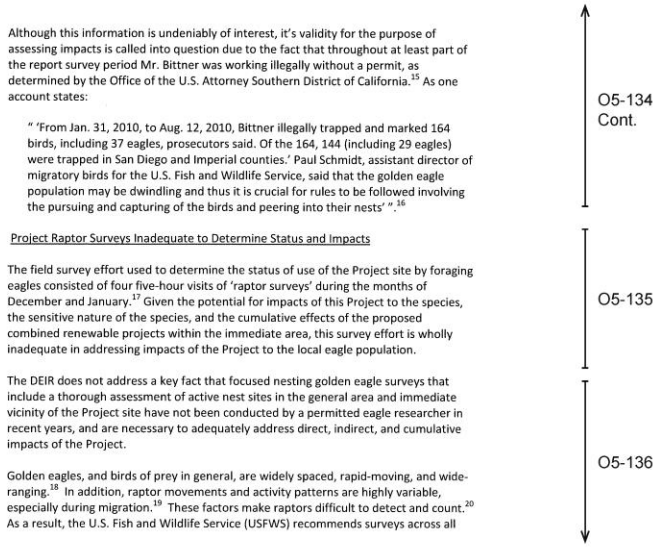
5

O5-133 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-132. The comments on the status of golden eagle in San Diego County are noted. Contrary to the commenter's assertion, the DEIR properly disclosed the sensitive status of golden eagle in San Diego County, and the importance of foraging habitat.

O5-134 The comments question the validity of the golden eagle surveys by WRI's senior biologist, David Bittner, who pleaded guilty for unlawful take of a golden eagle for performing survey work without an active permit.

Mr. Bittner is an experienced wildlife biologist with special expertise in golden eagle and other raptor species. In January 2010, Mr. Bittner's federal permit allowing him to capture, band, and track golden eagles expired. Mr. Bittner attempted to renew his permit, but USFWS denied the renewal, in part because Mr. Bittner had not provided certain golden eagle tracking data from 2007 to 2012. Between January 2010 and August 2010, Mr. Bittner continued his survey work without an active permit, and he subsequently pleaded guilty to unlawful take of golden eagle. Mr. Bittner and WRI have since provided the tracking data to USFWS.

The County considers Mr. Bittner's scientific work to be credible, and WRI's survey results remain valid. The charges against Mr. Bittner had nothing to do with



Although this information is undeniably of interest, it's validity for the purpose of assessing impacts is called into question due to the fact that throughout at least part of the report survey period Mr. Bittner was working illegally without a permit, as determined by the Office of the U.S. Attorney Southern District of California.[15] As one account states:

" 'From Jan. 31, 2010, to Aug. 12, 2010, Bittner illegally trapped and marked 164 birds, including 37 eagles, prosecutors said. Of the 164, 144 (including 29 eagles) were trapped in San Diego and Imperial counties.' Paul Schmidt, assistant director of migratory birds for the U.S. Fish and Wildlife Service, said that the golden eagle population may be dwindling and thus it is crucial for rules to be followed involving the pursuing and capturing of the birds and peering into their nests' ".[16]

Project Raptor Surveys Inadequate to Determine Status and Impacts

The field survey effort used to determine the status of use of the Project site by foraging eagles consisted of four five-hour visits of 'raptor surveys' during the months of December and January.[17] Given the potential for impacts of this Project to the species, the sensitive nature of the species, and the cumulative effects of the proposed combined renewable projects within the immediate area, this survey effort is wholly inadequate in addressing impacts of the Project to the local eagle population.

The DEIR does not address a key fact that focused nesting golden eagle surveys that include a thorough assessment of active nest sites in the general area and immediate vicinity of the Project site have not been conducted by a permitted eagle researcher in recent years, and are necessary to adequately address direct, indirect, and cumulative impacts of the Project.

Golden eagles, and birds of prey in general, are widely spaced, rapid-moving, and wide-ranging.[18] In addition, raptor movements and activity patterns are highly variable, especially during migration.[19] These factors make raptors difficult to detect and count.[20] As a result, the U.S. Fish and Wildlife Service (USFWS) recommends surveys across all

[15] US Attorney Southern District of California Press Release. April 18, 2013. Retrieved May 31, 2015 from http://www.justice.gov/usao/cas/press/2013/cas13-0418-BittnerPR.pdf
[16] Perry, T. Aug 13, 2013. Biologist Sentenced for Ignoring Laws on Golden Eagles. *Los Angeles Times*. Retrieved May 20, 2015 from http://articles.latimes.com/2013/aug/13/local/la-me-ln-biologist-eagles-20130813
[17] Dudek 2015. Biological Resources Report for the Jacumba Solar Energy Project, Table 1
[18] Fuller MR, and JA Mosher. 1981. Methods of Detecting and Counting Raptors. *Studies in Avian Biology* 6:235-246.
[19] *Ibid*.
[20] *Ibid*.

6

O5-134 Cont.

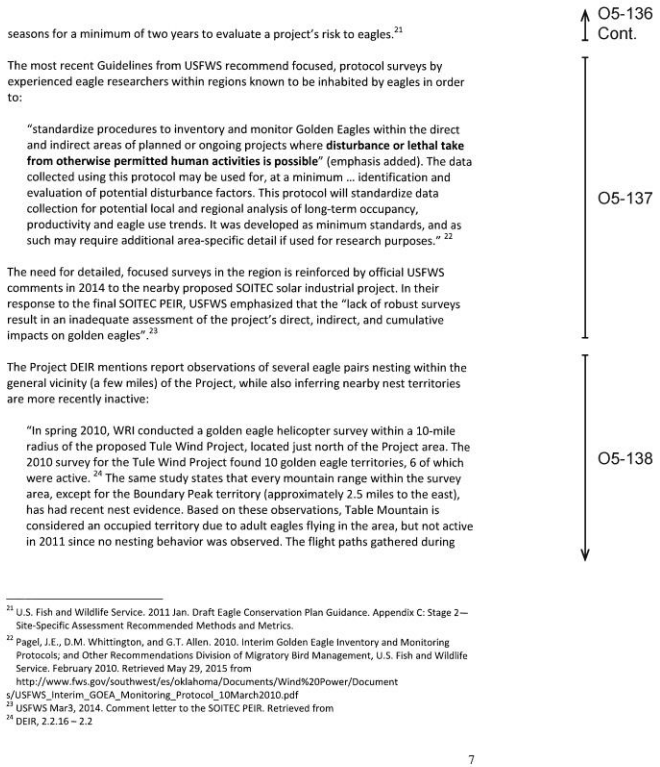
O5-135

O5-136

the substance of his work or the validity of WRI's surveys, but rather with whether Mr. Bittner had an active permit to do the work. The proceedings against Mr. Bittner did not affect or call into question the results of WRI's surveys. In addition, WRI's surveys were conducted not only by Mr. Bittner, but also by other biologists and volunteers.

O5-135 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-134. The survey efforts, including the number, duration, and timing of visits, was adequate because County guidelines and findings of significance do not require additional eagle foraging studies to be conducted. Such studies would be required in order to obtain an eagle take permit or to obtain a Special Purpose Utility (SPUT) permit. The County does not believe that either would be required. Moreover, there are several examples for California that demonstrate that golden eagles can adjust to nesting in relatively close proximity to residential development as long as the eagles have suitable foraging habitat. Even though there are no nests close to the open space preserve, it provides suitable foraging habitat for golden eagles, as the commenter has acknowledged, and the operation of PV panels is likely to cause fewer indirect effects in adjacent areas. The DEIR analyzes the potential impacts to golden eagles using the County of San Diego's guidelines for determining significance, in

	accordance to CEQA guidelines. The EIR identifies that indirect impacts from loss of foraging habitat would result and that direct impacts, such as affecting a nest, would not result.
	O5-136 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-135. The DEIR fully and adequately analyzed the Project's direct, indirect, and cumulative impacts with respect to golden eagle. The fact that one of the surveyors allowed his federal permit to expire does not affect the validity of the survey results. Contrary to the commenter's assertion, the golden eagle surveys and the DEIR's analysis properly accounted for raptor movement and activity patterns because Dudek reviewed survey reports from surrounding projects that included data results collected over many years following the survey guidelines recommended by USFWS. As mentioned in response to comment O5-130, the use of data collected for nearby projects is not inadequate because golden eagles tend to have high nest site fidelity. The project-specific surveys were conducted in order to analyze project impacts in accordance with the County of San Diego's guidelines and adequately documented wildlife use on site and assessed the habitat for use by golden eagles. The biologists who conducted the project-specific raptor surveys are familiar with golden eagle surveys and detection techniques.



seasons for a minimum of two years to evaluate a project's risk to eagles.[21]

The most recent Guidelines from USFWS recommend focused, protocol surveys by experienced eagle researchers within regions known to be inhabited by eagles in order to:

> "standardize procedures to inventory and monitor Golden Eagles within the direct and indirect areas of planned or ongoing projects where **disturbance or lethal take from otherwise permitted human activities is possible**" (emphasis added). The data collected using this protocol may be used for, at a minimum … identification and evaluation of potential disturbance factors. This protocol will standardize data collection for potential local and regional analysis of long-term occupancy, productivity and eagle use trends. It was developed as minimum standards, and as such may require additional area-specific detail if used for research purposes." [22]

The need for detailed, focused surveys in the region is reinforced by official USFWS comments in 2014 to the nearby proposed SOITEC solar industrial project. In their response to the final SOITEC PEIR, USFWS emphasized that the "lack of robust surveys result in an inadequate assessment of the project's direct, indirect, and cumulative impacts on golden eagles".[23]

The Project DEIR mentions report observations of several eagle pairs nesting within the general vicinity (a few miles) of the Project, while also inferring nearby nest territories are more recently inactive:

> "In spring 2010, WRI conducted a golden eagle helicopter survey within a 10-mile radius of the proposed Tule Wind Project, located just north of the Project area. The 2010 survey for the Tule Wind Project found 10 golden eagle territories, 6 of which were active. [24] The same study states that every mountain range within the survey area, except for the Boundary Peak territory (approximately 2.5 miles to the east), has had recent nest evidence. Based on these observations, Table Mountain is considered an occupied territory due to adult eagles flying in the area, but not active in 2011 since no nesting behavior was observed. The flight paths gathered during

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

[22] Pagel, J.E., D.M. Whittington, and G.T. Allen. 2010. Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations Division of Migratory Bird Management, U.S. Fish and Wildlife Service. February 2010. Retrieved May 29, 2015 from http://www.fws.gov/southwest/es/oklahoma/Documents/Wind%20Power/Documents/USFWS_Interim_GOEA_Monitoring_Protocol_10March2010.pdf

[23] USFWS Mar3, 2014. Comment letter to the SOITEC PEIR. Retrieved from

[24] DEIR, 2.2.16 – 2.2

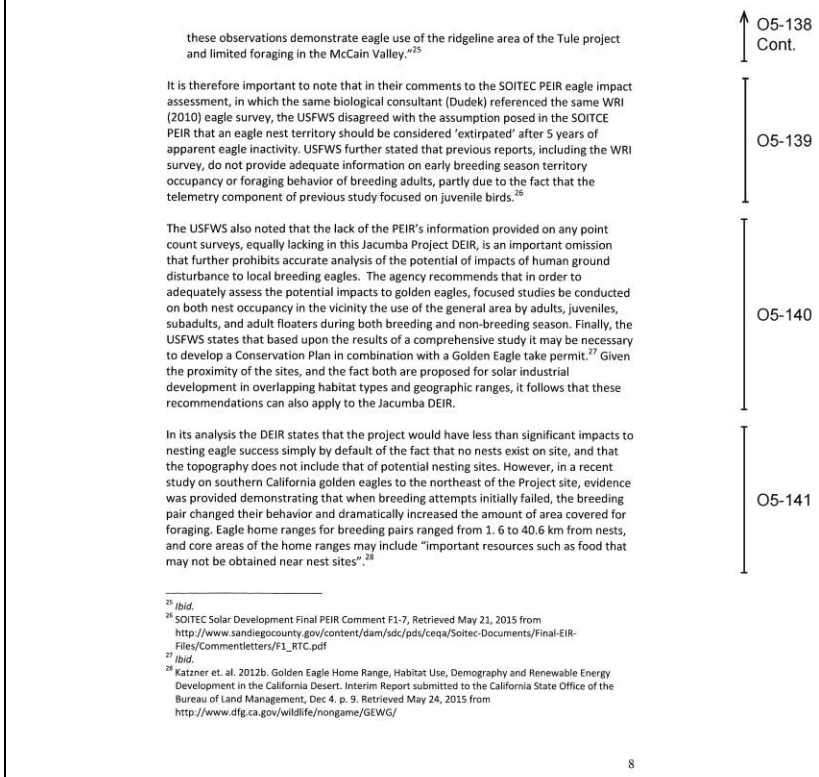
7

O5-136 Cont.

O5-137

O5-138

O5-137 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-136. The County disagrees that focused, protocol surveys under USFWS Guidelines were required for the project because there is no suitable nesting habitat for golden eagles on site and recent golden eagle survey reports were available for nearby projects that were used to assess potential foraging habitat impacts based on nest locations in southeast San Diego County. USFWS's comments on different development projects, including the Soitec Solar Development (Soitec) project, do not necessarily apply to this Project. All of USFWS's comments on this Project are addressed in responses to comments F1-1 through F1-4. Moreover, the Soitec project had different impacts with respect to golden eagles because the Soitec projects sites included very mountainous locations (near the southern portion), while the Propsed Project site is smaller, and strictly situated within a readily observable valley. With regard to foraging potential, the Soitec sites had many very open areas, including open scrub and grasslands/pasturelands, while the Proposed Project site is mostly covered by chaparral or juniper woodlands.. Additionally, no golden eagles have been observed during any of the surveys at the project site, indicating that while there is suitable foraging habitat it does not support golden eagles in high densities. Therefore, a conservation plan and eagle take permit would not be necessary because the Proposed Project is not expected to result in unmitigable significant impacts.



these observations demonstrate eagle use of the ridgeline area of the Tule project and limited foraging in the McCain Valley."[25]

It is therefore important to note that in their comments to the SOITEC PEIR eagle impact assessment, in which the same biological consultant (Dudek) referenced the same WRI (2010) eagle survey, the USFWS disagreed with the assumption posed in the SOITCE PEIR that an eagle nest territory should be considered 'extirpated' after 5 years of apparent eagle inactivity. USFWS further stated that previous reports, including the WRI survey, do not provide adequate information on early breeding season territory occupancy or foraging behavior of breeding adults, partly due to the fact that the telemetry component of previous study focused on juvenile birds.[26]

The USFWS also noted that the lack of the PEIR's information provided on any point count surveys, equally lacking in this Jacumba Project DEIR, is an important omission that further prohibits accurate analysis of the potential of impacts of human ground disturbance to local breeding eagles. The agency recommends that in order to adequately assess the potential impacts to golden eagles, focused studies be conducted on both nest occupancy in the vicinity the use of the general area by adults, juveniles, subadults, and adult floaters during both breeding and non-breeding season. Finally, the USFWS states that based upon the results of a comprehensive study it may be necessary to develop a Conservation Plan in combination with a Golden Eagle take permit.[27] Given the proximity of the sites, and the fact both are proposed for solar industrial development in overlapping habitat types and geographic ranges, it follows that these recommendations can also apply to the Jacumba DEIR.

In its analysis the DEIR states that the project would have less than significant impacts to nesting eagle success simply by default of the fact that no nests exist on site, and that the topography does not include that of potential nesting sites. However, in a recent study on southern California golden eagles to the northeast of the Project site, evidence was provided demonstrating that when breeding attempts initially failed, the breeding pair changed their behavior and dramatically increased the amount of area covered for foraging. Eagle home ranges for breeding pairs ranged from 1. 6 to 40.6 km from nests, and core areas of the home ranges may include "important resources such as food that may not be obtained near nest sites".[28]

[25] *Ibid.*
[26] SOITEC Solar Development Final PEIR Comment F1-7, Retrieved May 21, 2015 from http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/Commentletters/F1_RTC.pdf
[27] *Ibid.*
[28] Katzner et. al. 2012b. Golden Eagle Home Range, Habitat Use, Demography and Renewable Energy Development in the California Desert. Interim Report submitted to the California State Office of the Bureau of Land Management, Dec 4. p. 9. Retrieved May 24, 2015 from http://www.dfg.ca.gov/wildlife/nongame/GEWG/

8

O5-138 Cont.

O5-139

O5-140

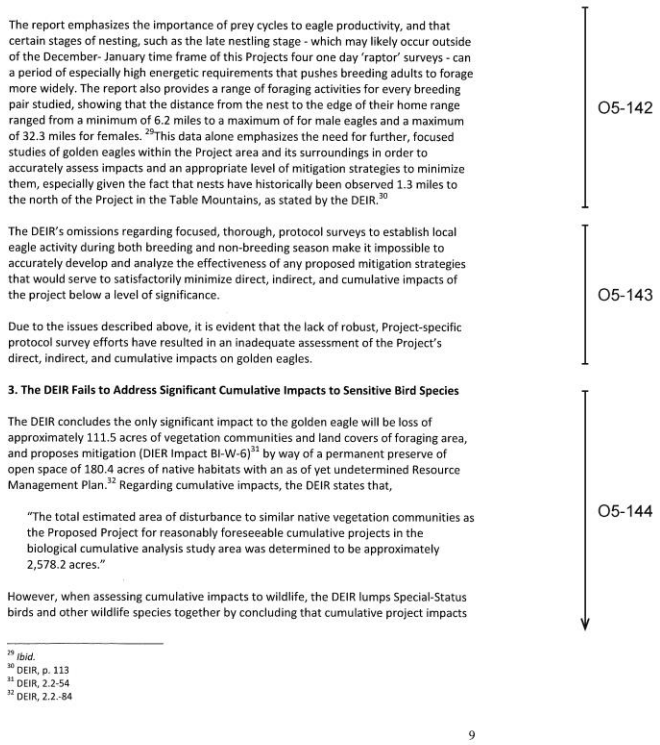
O5-141

O5-138 Comment noted. This comment is informational in nature and does not address the adequacy of the DEIR; therefore no further response is required.

O5-139 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-138. The County disagrees with the assertion that WRI mischaracterized one of the territories as extirpated. The USFWS Protocol states that a "nesting territory or inventoried habitat should be designated as unoccupied by Golden Eagles ONLY after at least 2 complete aerial surveys in a single breeding season". WRI did conduct two aerial surveys (WRI 2010), spaced at least 30 days apart, consistent with the USFWS Protocol. Second, WRI concluded that the territory has been extirpated because of a lack of breeding activity for almost 40 years.

O5-140 Please refer to responses to comments FI-3, O3-16, O5-17, and O5-130 to O5-139. Point count surveys are typically required for projects such as wind energy projects and are not a standard survey requirement for development projects such as solar. As mentioned above, Dudek reviewed survey reports from surrounding projects that included data results collected over many years following the survey guidelines recommended by USFWS. The project-specific surveys were conducted in order to analyze project impacts in accordance with the County of San

	Diego's guidelines and adequately documented wildlife use on site and assessed the habitat for use by golden eagles. Additionally, no golden eagles have been observed during any of the surveys at the project site, indicating that while there is suitable foraging habitat it does not support golden eagles in high densities. Therefore, a conservation plan and eagle take permit would not be necessary because the Proposed Project is not expected to result in take of golden eagles.
	O5-141 Please refer to responses to comments FI-3, O3-16, O5-17, O5-130 to O5-140. The comments regarding eagle home ranges and breeding behavior are noted. Contrary to the comment, the DEIR accurately describes that the Proposed Project would not impact nests because there are no golden eagle nests on site and the habitat does not provide suitable habitat for nests. However, the DEIR states that there is suitable foraging habitat on site and that impacts to foraging habitat is a potentially significant impact, mitigated by habitat preservation. The DEIR's less than significant impact conclusion is appropriate and the DEIR's impact analysis for golden eagle is consistent with the County's EIR Format and General Content Requirements for Biological Resources, dated September 15, 2010, including describing the guideline for determining significance pursuant to the Guidelines for Determining Significance.



The report emphasizes the importance of prey cycles to eagle productivity, and that certain stages of nesting, such as the late nestling stage - which may likely occur outside of the December- January time frame of this Projects four one day 'raptor' surveys - can a period of especially high energetic requirements that pushes breeding adults to forage more widely. The report also provides a range of foraging activities for every breeding pair studied, showing that the distance from the nest to the edge of their home range ranged from a minimum of 6.2 miles to a maximum of for male eagles and a maximum of 32.3 miles for females. [29]This data alone emphasizes the need for further, focused studies of golden eagles within the Project area and its surroundings in order to accurately assess impacts and an appropriate level of mitigation strategies to minimize them, especially given the fact that nests have historically been observed 1.3 miles to the north of the Project in the Table Mountains, as stated by the DEIR.[30]

O5-142

The DEIR's omissions regarding focused, thorough, protocol surveys to establish local eagle activity during both breeding and non-breeding season make it impossible to accurately develop and analyze the effectiveness of any proposed mitigation strategies that would serve to satisfactorily minimize direct, indirect, and cumulative impacts of the project below a level of significance.

O5-143

Due to the issues described above, it is evident that the lack of robust, Project-specific protocol survey efforts have resulted in an inadequate assessment of the Project's direct, indirect, and cumulative impacts on golden eagles.

3. The DEIR Fails to Address Significant Cumulative Impacts to Sensitive Bird Species

The DEIR concludes the only significant impact to the golden eagle will be loss of approximately 111.5 acres of vegetation communities and land covers of foraging area, and proposes mitigation (DIER Impact BI-W-6)[31] by way of a permanent preserve of open space of 180.4 acres of native habitats with an as of yet undetermined Resource Management Plan.[32] Regarding cumulative impacts, the DEIR states that,

> "The total estimated area of disturbance to similar native vegetation communities as the Proposed Project for reasonably foreseeable cumulative projects in the biological cumulative analysis study area was determined to be approximately 2,578.2 acres."

O5-144

However, when assessing cumulative impacts to wildlife, the DEIR lumps Special-Status birds and other wildlife species together by concluding that cumulative project impacts

[29] *ibid.*
[30] DEIR, p. 113
[31] DEIR, 2.2-54
[32] DEIR, 2.2.-84

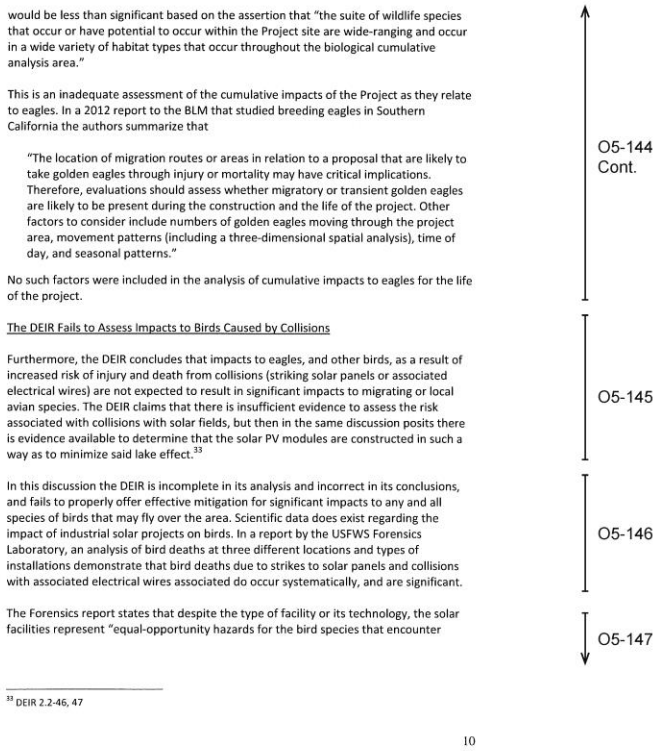
9

O5-142 Please refer to responses to comments FI-3, O3-16, O5-17, O5-130 to O5-141. The comments about golden eagle nesting cycles and foraging activities are noted. The County disagrees that further, focused studies for golden eagle are required because Dudek reviewed survey reports from surrounding projects that included data results collected over many years following the survey guidelines recommended by USFWS. The project-specific surveys were conducted in order to analyze project impacts in accordance with the County of San Diego's guidelines and adequately documented wildlife use on site and assessed the habitat for use by golden eagles. Additionally, no golden eagles have been observed during any of the surveys at the project site, indicating that while there is suitable foraging habitat it does not support golden eagles in high densities. Further, the historic nest site 1.4 miles north of the project is no longer active and has not been since 1977.

O5-143 Please refer to response to comments FI-3, O3-16, O5-17, O5-130 to O5-142.

O5-144 Please refer to response to comments FI-3, O3-16, O5-17, O5-130 to O5-143. Cumulative impacts to golden eagles and suitable foraging habitat are described in Section 2.2.4 of the DEIR, and pages 2.2-76 and 2.2-77 discuss cumulative impacts to special-status wildlife species. A habitat-based approach was used to

	determine the baseline conditions and analyze cumulative impacts to special-status wildlife (including golden eagle), using a biological cumulative analysis study area that includes the extent of the cumulative projects located within the cumulative study area defined in Section 2.2.4. This extent was chosen to evaluate a narrowly defined area that represented the vegetative, elevational, and geographic situation of the Proposed Project while not extending too broadly such that the analysis was diluted. The habitat model is provided as Appendix 2.2-2 to the DEIR, which includes the vegetation communities, elevation ranges, total suitable acreage in the biological cumulative analysis study area, total impacted acreage, and a discussion of the results. The types of analyses described by the commenter are typically conducted for projects that involve wind energy which can have impacts on golden eagles from collisions, and a more detailed analysis of migratory and seasonal patterns are more appropriate. Because no golden eagles have been observed on site despite numerous surveys over several years, and given the small amount of suitable foraging habitat impacted, and the preservation of equal or greater-quality habitat, no further analyses are needed. The level of analysis is consistent with County guidelines.



would be less than significant based on the assertion that "the suite of wildlife species that occur or have potential to occur within the Project site are wide-ranging and occur in a wide variety of habitat types that occur throughout the biological cumulative analysis area."

This is an inadequate assessment of the cumulative impacts of the Project as they relate to eagles. In a 2012 report to the BLM that studied breeding eagles in Southern California the authors summarize that

> "The location of migration routes or areas in relation to a proposal that are likely to take golden eagles through injury or mortality may have critical implications. Therefore, evaluations should assess whether migratory or transient golden eagles are likely to be present during the construction and the life of the project. Other factors to consider include numbers of golden eagles moving through the project area, movement patterns (including a three-dimensional spatial analysis), time of day, and seasonal patterns."

No such factors were included in the analysis of cumulative impacts to eagles for the life of the project.

The DEIR Fails to Assess Impacts to Birds Caused by Collisions

Furthermore, the DEIR concludes that impacts to eagles, and other birds, as a result of increased risk of injury and death from collisions (striking solar panels or associated electrical wires) are not expected to result in significant impacts to migrating or local avian species. The DEIR claims that there is insufficient evidence to assess the risk associated with collisions with solar fields, but then in the same discussion posits there is evidence available to determine that the solar PV modules are constructed in such a way as to minimize said lake effect.[33]

In this discussion the DEIR is incomplete in its analysis and incorrect in its conclusions, and fails to properly offer effective mitigation for significant impacts to any and all species of birds that may fly over the area. Scientific data does exist regarding the impact of industrial solar projects on birds. In a report by the USFWS Forensics Laboratory, an analysis of bird deaths at three different locations and types of installations demonstrate that bird deaths due to strikes to solar panels and collisions with associated electrical wires associated do occur systematically, and are significant.

The Forensics report states that despite the type of facility or its technology, the solar facilities represent "equal-opportunity hazards for the bird species that encounter

[33] DEIR 2.2-46, 47

10

O5-144 Cont.

O5-145

O5-146

O5-147

O5-145 Comment noted. This comment summarizes the DEIR's impacts analysis, is informational in nature, and does not address the adequacy of the DEIR; therefore no further response is required. To clarify, the EIR evaluates the potential for bird collision with the solar facility and the gen-tie facility, including discussion related to the pseudo lake effect. While the pseudo lake effect has not been demonstrated the EIR summarizes the postulated conditions that contribute to such phenomena compared to the project conditions. Potential significant impacts to collisions associated with the gen-tie line are identified and mitigated through mitigation measure M-BI-13. While no significant impact is identified for avian collisions associated with the solar facility the measure M-BI-15 is provided to record and provide data for the County and wildlife agencies as a public benefit.

O5-146 Please refer to responses to comment O3-6 and O3-7, which specifically describe the three types of project installations referenced in this comment, as well as potential effects from solar projects on birds.

O5-147 Please refer to responses to comment O3-6 and O3-7, which describe the analysis of the project site and potential effects from the Proposed Project.

them".[34] Seventy-one species were identified in the mortality report, and were not restricted to water birds by any standard. They were described as representing a broad range of ecological types from strictly aerial feeders (hummingbirds) to ground feeders (roadrunners) to raptors (hawks and owls.) The report points out that some deaths were caused by impact trauma, representing the same risk that the Jacumba Project panels would pose by design, and conclude that the number of dead birds are under-represented, "perhaps vastly so".

Further evidence of bird deaths due to strikes to solar panels or from solar installation related electrocutions has been made available to the California Energy Commission.[35] The data reveal that over the course of one year of monitoring, over 700 bird mortalities were detected, including 16 days where avian mortalities numbered ten or more. Although the Ivanpah facility where this study took place is a solar collector and a different technology than the Proposed Project, the data collected is relevant to the Jacumba site considering that 84 bird mortalities were positively identified as being the result of impacts (strikes or collisions) to the facility panels and wires, and are thus representative of the risks posed by the Jacumba Project PV panel array design.

Recommendations to reduce incidences of bird deaths at solar sites (characteristic of the Jacumba Project design) included retrofitting of solar panels, placement of perch deterrent devices where indicated, a two-year minimum of a well-designed monitoring protocol that includes daily surveys of all birds. A bird and bat monitoring plan is clearly an essential part of any mitigation strategy to enable better assessment of Project mortalities necessary for an appropriate Adaptive Management Plan.[36]

Finally, additional evidence illustrating the reality of the significance of risk of bird strike impacts to solar panels and associated electrical wires has been personally observed by the author of these comments. As a biological consultant I have conducted professional surveys in 2013 and 2014 as part of an ongoing bat mortality program on two solar industrial installations in the desert located approximately 26 miles east of the Proposed Project in Imperial Valley. Throughout these surveys, as part of scientific data collection on behalf of an established Bird and Bat Monitoring Program, I have personally witnessed bird mortalities as a result of direct impacts that occurred due to the presence of PV panels or related infrastructure, including but not limited to species such as the Western grebe, sora, Virginia rail, red-tailed hawk, American kestrel, McGillivray's warbler, American coot, lesser nighthawk, and mourning dove (Figure 1). None of the deaths were a result of a solar flux burns as these are not part of the design of the installations where I conducted the research.

[34] Kagan et. al. 2014 April. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory. Retrieved In May, 2014 from http://alternativeenergy.procon.org/sourcefiles/avian-mortality-solar-energy-ivanpah-apr-2014.pdf
[35] H.T. Harvey and Associates, April 2015. Ivanpah Solar Electric Generating System Avian and Bat Monitoring Plan.
[36] Ibid., Table 10.

11

O5-147 Cont.

O5-148

O5-149

O5-150

O5-148 Comment noted. This comment is largely informational in nature and does not address the adequacy of the DEIR; however, response to comments O3-6 and O3-7 provide information on the solar panel design and how it reduces potential effects to avian species.

O5-149 Comment noted. This comment is largely informational in nature and does not address the adequacy of the DEIR. Please refer to response to comments F1-2 regarding the monitoring plan. The County agrees that a monitoring plan for birds and bats is an essential component of any mitigation strategy for potentially significant impacts to birds and bats. However, potential impacts to birds and bats form the proposed solar facility have been determined to be less than significant and mitigation is not required. Nevertheless at the request of the resource agencies, the Applicant has agreed to collect data through implementation of measure M-BI-15 involving a Worker Response and Reporting System, for the convenience of the County tracking and as a public benefit to provide additional data.

O5-150 Comment noted. This comment is informational in nature and does not address the adequacy of the DEIR; therefore no further response is required. For avian mortality and distinction of the Proposed Project site from those indicated in this and other comments from the commenter please refer to responses to comments O3-7 and O5-151.

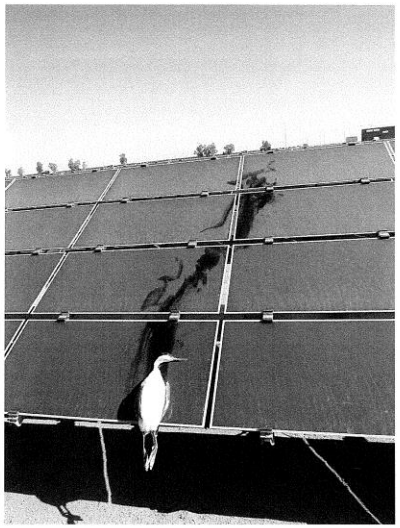
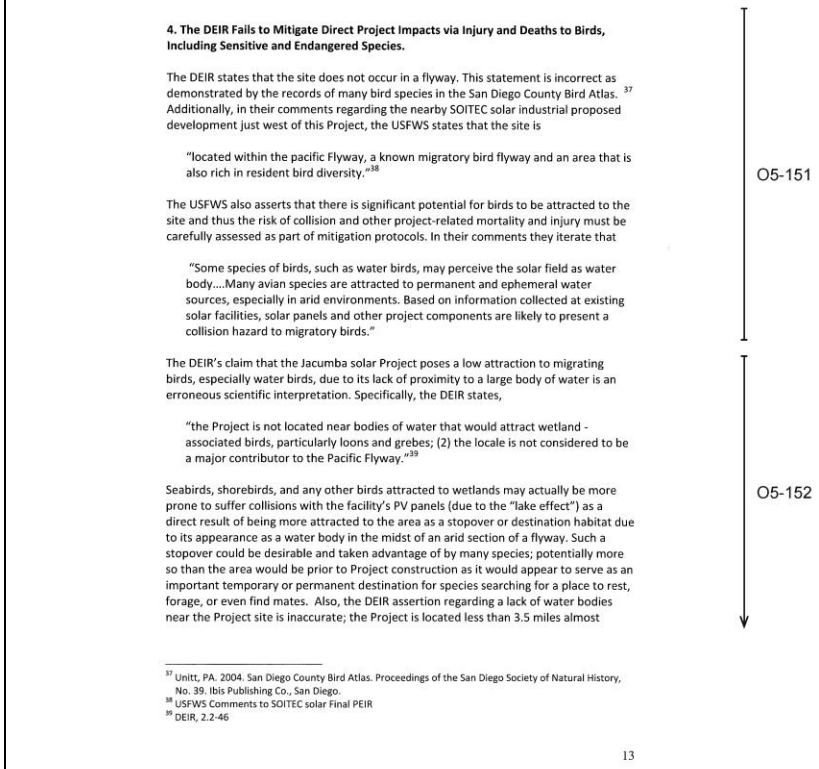


Figure 1. Western Grebe killed by impact to Solar Panels, Imperial County, May 2014.

O5-150
Cont.

12



4. The DEIR Fails to Mitigate Direct Project Impacts via Injury and Deaths to Birds, Including Sensitive and Endangered Species.

The DEIR states that the site does not occur in a flyway. This statement is incorrect as demonstrated by the records of many bird species in the San Diego County Bird Atlas. [37] Additionally, in their comments regarding the nearby SOITEC solar industrial proposed development just west of this Project, the USFWS states that the site is

> "located within the pacific Flyway, a known migratory bird flyway and an area that is also rich in resident bird diversity."[38]

The USFWS also asserts that there is significant potential for birds to be attracted to the site and thus the risk of collision and other project-related mortality and injury must be carefully assessed as part of mitigation protocols. In their comments they iterate that

> "Some species of birds, such as water birds, may perceive the solar field as water body....Many avian species are attracted to permanent and ephemeral water sources, especially in arid environments. Based on information collected at existing solar facilities, solar panels and other project components are likely to present a collision hazard to migratory birds."

The DEIR's claim that the Jacumba solar Project poses a low attraction to migrating birds, especially water birds, due to its lack of proximity to a large body of water is an erroneous scientific interpretation. Specifically, the DEIR states,

> "the Project is not located near bodies of water that would attract wetland - associated birds, particularly loons and grebes; (2) the locale is not considered to be a major contributor to the Pacific Flyway."[39]

Seabirds, shorebirds, and any other birds attracted to wetlands may actually be more prone to suffer collisions with the facility's PV panels (due to the "lake effect") as a direct result of being more attracted to the area as a stopover or destination habitat due to its appearance as a water body in the midst of an arid section of a flyway. Such a stopover could be desirable and taken advantage of by many species; potentially more so than the area would be prior to Project construction as it would appear to serve as an important temporary or permanent destination for species searching for a place to rest, forage, or even find mates. Also, the DEIR assertion regarding a lack of water bodies near the Project site is inaccurate; the Project is located less than 3.5 miles almost

[37] Unitt, PA. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History, No. 39. Ibis Publishing Co., San Diego.
[38] USFWS Comments to SOITEC solar Final PEIR
[39] DEIR, 2.2-46

13

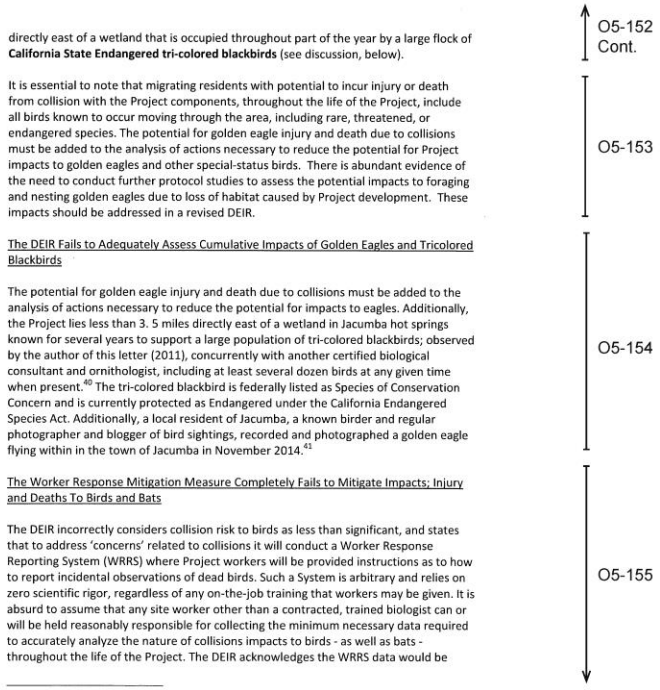
O5-151

O5-152

O5-151 See responses to comments O3-6, O3-7, and O5-149. The commenter refers to information regarding the Soitec project, which is located over 8 miles away and contains different biological resources than the Jacumba project. Additionally, the DEIR states "while birds likely migrate over the site and certain birds may forage on site, the Project site is not considered a stopover for birds migrating to and from the Salton Sea, particularly with the agricultural fields and irrigation resources available in the El Centro and Brawley areas south of the Salton Sea. Additionally, many birds are known to migrate at night (Emlen 1975; Lowery 1951; USGS 2013), which reduces visibility and glare-related impacts to migrants." (page 2.2-34); and that "the Project is not located near bodies of water that would attract wetland-associated birds, particularly loons and grebes and the locale is not considered to be a major contributor to the Pacific Flyway" (page 2.2-47).

The Proposed Project site is located east of the main coastal migration route and west of the primary route between the Gulf of California and the Salton Sea.

It should also be noted that while avian collisions with transmission towers and structures, such as buildings and communication towers, have been well documented, there are few published papers available that study the possibility that large areas of solar PV



directly east of a wetland that is occupied throughout part of the year by a large flock of **California State Endangered tri-colored blackbirds** (see discussion, below).

It is essential to note that migrating residents with potential to incur injury or death from collision with the Project components, throughout the life of the Project, include all birds known to occur moving through the area, including rare, threatened, or endangered species. The potential for golden eagle injury and death due to collisions must be added to the analysis of actions necessary to reduce the potential for Project impacts to golden eagles and other special-status birds. There is abundant evidence of the need to conduct further protocol studies to assess the potential impacts to foraging and nesting golden eagles due to loss of habitat caused by Project development. These impacts should be addressed in a revised DEIR.

The DEIR Fails to Adequately Assess Cumulative Impacts of Golden Eagles and Tricolored Blackbirds

The potential for golden eagle injury and death due to collisions must be added to the analysis of actions necessary to reduce the potential for impacts to eagles. Additionally, the Project lies less than 3. 5 miles directly east of a wetland in Jacumba hot springs known for several years to support a large population of tri-colored blackbirds; observed by the author of this letter (2011), concurrently with another certified biological consultant and ornithologist, including at least several dozen birds at any given time when present.[40] The tri-colored blackbird is federally listed as Species of Conservation Concern and is currently protected as Endangered under the California Endangered Species Act. Additionally, a local resident of Jacumba, a known birder and regular photographer and blogger of bird sightings, recorded and photographed a golden eagle flying within in the town of Jacumba in November 2014.[41]

The Worker Response Mitigation Measure Completely Fails to Mitigate Impacts; Injury and Deaths To Birds and Bats

The DEIR incorrectly considers collision risk to birds as less than significant, and states that to address 'concerns' related to collisions it will conduct a Worker Response Reporting System (WRRS) where Project workers will be provided instructions as to how to report incidental observations of dead birds. Such a System is arbitrary and relies on zero scientific rigor, regardless of any on-the-job training that workers may be given. It is absurd to assume that any site worker other than a contracted, trained biologist can or will be held reasonably responsible for collecting the minimum necessary data required to accurately analyze the nature of collisions impacts to birds - as well as bats - throughout the life of the Project. The DEIR acknowledges the WRRS data would be

[40] Thompson, Joe(personal communication May 22, 2015).
[41] East County Magazine, Nov 11 2014. Retrieved from http://www.eastcountymagazine.org/golden-eagles-spotted-jacumba-near-proposed-energy-sites

14

O5-152 Cont.

O5-153

O5-154

O5-155

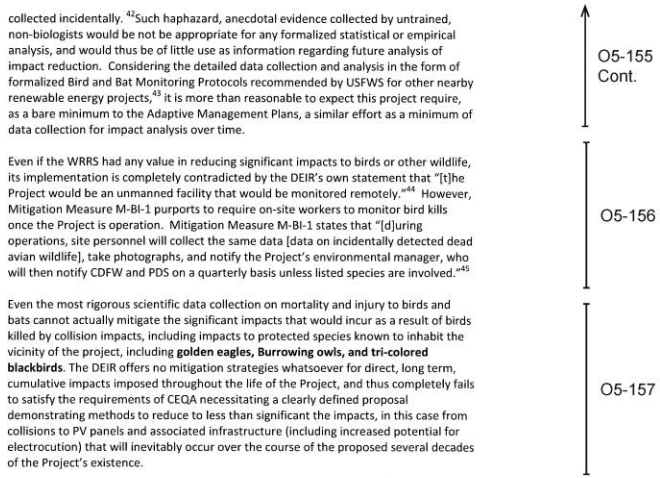
panels in the desert environment may mimic water bodies and inadvertently attract migrating or dispersing wetland bird species. Polarized reflections from solar PV arrays have been observed to attract insects (Horvath et al. 2010), which could in turn attract other sensitive wildlife, such as bats, but the magnitude of this effect is unknown, since no comprehensive scientific studies have been conducted for this potential phenomenon.

Little is known about the actual percentage of species and individuals that are negatively affected by glare or the pseudo-lake effect of PV arrays. The USFWS recognizes the lack of data on the effects of solar facilities on migratory bird mortality and has provided guidance on monitoring migratory bird mortalities at solar facilities (Nicolai et al. 2011).

O5-152 See responses to comments O3-6, O3-7, O5-18, and O5-149 to O5-151.

O5-153 See responses to comments O3-6, O3-7, O5-17 to O5-18, O5-130 to O5-143, and O5-149 to O5-151. The DEIR fully and adequately analyzes impacts to wildlife, including golden eagle and other special status birds. Further studies for golden eagle are not warranted, and a revised DEIR is not required.

O5-154 See responses to comments O3-6, O3-7, O5-17 to O5-18, O5-130 to O5-143, and O5-149 to O5-151. The



collected incidentally. [42]Such haphazard, anecdotal evidence collected by untrained, non-biologists would be not be appropriate for any formalized statistical or empirical analysis, and would thus be of little use as information regarding future analysis of impact reduction. Considering the detailed data collection and analysis in the form of formalized Bird and Bat Monitoring Protocols recommended by USFWS for other nearby renewable energy projects,[43] it is more than reasonable to expect this project require, as a bare minimum to the Adaptive Management Plans, a similar effort as a minimum of data collection for impact analysis over time.

Even if the WRRS had any value in reducing significant impacts to birds or other wildlife, its implementation is completely contradicted by the DEIR's own statement that "[t]he Project would be an unmanned facility that would be monitored remotely."[44] However, Mitigation Measure M-BI-1 purports to require on-site workers to monitor bird kills once the Project is operation. Mitigation Measure M-BI-1 states that "[d]uring operations, site personnel will collect the same data [data on incidentally detected dead avian wildlife], take photographs, and notify the Project's environmental manager, who will then notify CDFW and PDS on a quarterly basis unless listed species are involved."[45]

Even the most rigorous scientific data collection on mortality and injury to birds and bats cannot actually mitigate the significant impacts that would incur as a result of birds killed by collision impacts, including impacts to protected species known to inhabit the vicinity of the project, including **golden eagles, Burrowing owls, and tri-colored blackbirds**. The DEIR offers no mitigation strategies whatsoever for direct, long term, cumulative impacts imposed throughout the life of the Project, and thus completely fails to satisfy the requirements of CEQA necessitating a clearly defined proposal demonstrating methods to reduce to less than significant the impacts, in this case from collisions to PV panels and associated infrastructure (including increased potential for electrocution) that will inevitably occur over the course of the proposed several decades of the Project's existence.

[42] DEIR 2.2-89
[43] USWS Pacific Southwest Region. 2011, May 2. Nicolai, C, S Abeele, H Beebe, R Doster, E Kershner, and T McCabe. Monitoring Migratory Bird Take at Solar Power Facilities: An Experimental Approach. Retrieved on May 23, 2015 from http://www.sandiegocounty.gov/content/dam/sdc/pds/ceqa/Soitec-Documents/Final-EIR-Files/references/rtcref/ch9.0/rtcrefaletters/F1%202014-12-19_Nicolaietal2011.pdf
[44] DEIR, p. 1-12; *see also* DEIR, p. 1-3 ("Upon completion, Jacumba Solar would be monitored off site through a supervisory control and data acquisition (SCADA)
[45] DEIR, p. 5-22

15

O5-155 Cont.

O5-156

O5-157

DEIR fully and adequately analyzes impacts to golden eagle and tricolored blackbird. The fact that the commenter observed a tricolored blackbird colony 3.5 miles west of the project site in Jacumba Hot Springs, and that an unnamed birder photographed a golden eagle in the town of Jacumba in November 2014, do not affect the impact analysis because the site where the tricolored blackbird was observed has suitable habitat for tricolored blackbird. The project site, on the other hand, does not have any type of riparian or wetland habitat that would attract or support this species. Further, in June 2015, the California Fish and Game Commission decided by a 2-1 vote to not list the tri-colored blackbird as endangered.

O5-155 Please refer to response to comment O5-79, which include a description of the biologists and trained personnel that would collect this data.

O5-156 Please refer to responses to comments F1-2, S2-2, O5-12, and O5-149, which respond to the comments regarding the unmanned facility, biological monitoring, and data collection.

O5-157 Please refer to responses to comments F1-2, S2-2, O3-6, and O5-154. The DEIR provides adequate analysis and imposes mitigation where appropriate for direct, long-term, cumulative impacts to bird and bat species, including for golden eagle, burrowing owl, and tricolored blackbirds, because direct impacts to these

5. The DEIR Fails to Disclose, Analyze, and Mitigate Potentially Significant Impacts to Special-Status Species

Southern Grasshopper Mouse

The southern grasshopper mouse (*Onychomys torridus ramona*) is listed as a California Species of Special Concern.[46] There are only 26 occurrence records of this taxon in the California Natural Diversity Database ("CNDDB").[47] As described below, the Project sites provide suitable habitat for, and are within the geographic range of, the southern grasshopper mouse.

Historically, the southern grasshopper mouse inhabited mesas and valleys along the Pacific slope of the Peninsular and Transverse Ranges in southwestern California and extreme northwestern Baja California, Mexico.[48] Recent records document the occurrence of this taxon on the desert slopes of the San Gabriel Mountains and the Peninsular Ranges, near Sage and Aguanga in Riverside County, and from the vicinity of Banner, Jacumba, Boulevard and Oak Grove in San Diego County.[49] The Project area is within this narrow region, located in close proximity to documented occurrences of the species (Figure 2).

The southern grasshopper mouse is believed to inhabit a variety of low, open and semi-open scrub habitats including low sagebrush, coastal sage scrub, mixed chaparral, riparian scrub, and annual grassland with scattered shrubs.[50] As a result, the Project sites provide suitable habitat for the southern grasshopper mouse. The Applicant's consultant concluded there is a low potential for the taxon to occur on the Project site. The determination was reported to be the lack of suitable grassland habitat found within the project area. However, the species is not limited to grassland habitat, and thus the consultant's determination is erroneous.

Research shows that populations of small mammals, including the grasshopper mouse, are becoming increasingly disturbed and reduced by energy development projects.[51] One such study demonstrated that there exist both independent and interactive effects of habitat and anthropogenic disturbance on the small mammal community, and that

[46] Previously referred to as the Ramona grasshopper mouse.

[47] California Natural Diversity Database (CNDDB). 2015. RareFind 5 [Internet]. California Department of Fish and Wildlife [2015 May 27].

[48] Bolster BC, ed. 1998. Terrestrial Mammal Species of Special Concern in California. California Department of Fish and Game, Sacramento (CA). pp. 124 to 126.

[49] *Ibid.*

[50] *Ibid.*

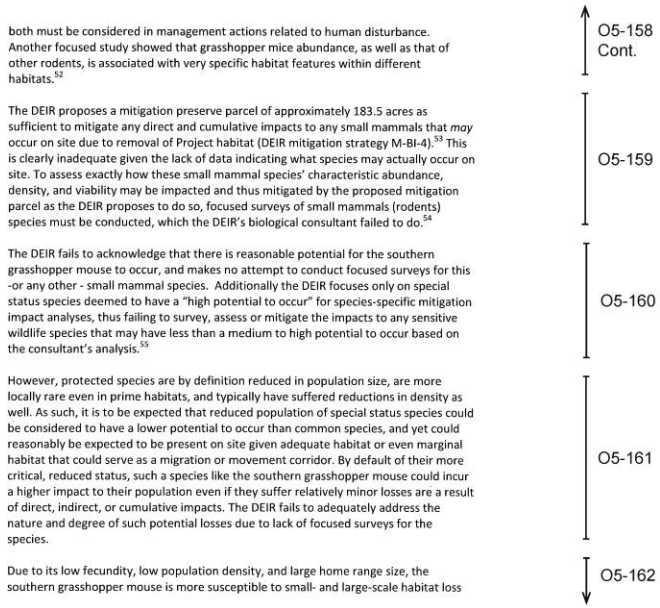
[51] Abernethy, I. M. (2011). *Independent and interactive effects of anthropogenic disturbance and habitat on small mammals.* Available From ProQuest Dissertations & Theses Full Text. Retrieved from http://search.proquest.com/docview/875887057?accountid=14068

16

O5-158

species would not result from the Proposed Project. The potential for indirect effects associated with foraging of golden eagles as well as other avian species and opportunistic nesting of avian species, which may include burrowing owls, are identified in the DEIR as significant impacts that are mitigated through the implementation of mitigation measures including M-BI-4 and M-BI-6 (DEIR pp. 2.2-51 - 2.2-52, 2.2-55, and 2.2-83 - 2.2-85).

O5-158 The County disagrees with the commenter's assertion that the consultant's determination of southern grasshopper mouse having low potential to occur on site is erroneous. There are no CNDDB or other records on the project site and this species' documented habitat including coastal scrub, grasslands, alkali scrub, mixed chaparral, and riparian scrub does not occur on site. The most recent CNDDB location in San Diego County is from 1992 with the closest two identifications from 1909 and 1974. The potential to occur table (Appendix G) included in Appendix 2.2-1 to the EIR has been revised to more clearly explain the low potential to occur determination.



both must be considered in management actions related to human disturbance. Another focused study showed that grasshopper mice abundance, as well as that of other rodents, is associated with very specific habitat features within different habitats.[52]

The DEIR proposes a mitigation preserve parcel of approximately 183.5 acres as sufficient to mitigate any direct and cumulative impacts to any small mammals that *may* occur on site due to removal of Project habitat (DEIR mitigation strategy M-BI-4).[53] This is clearly inadequate given the lack of data indicating what species may actually occur on site. To assess exactly how these small mammal species' characteristic abundance, density, and viability may be impacted and thus mitigated by the proposed mitigation parcel as the DEIR proposes to do so, focused surveys of small mammals (rodents) species must be conducted, which the DEIR's biological consultant failed to do.[54]

The DEIR fails to acknowledge that there is reasonable potential for the southern grasshopper mouse to occur, and makes no attempt to conduct focused surveys for this -or any other - small mammal species. Additionally the DEIR focuses only on special status species deemed to have a "high potential to occur" for species-specific mitigation impact analyses, thus failing to survey, assess or mitigate the impacts to any sensitive wildlife species that may have less than a medium to high potential to occur based on the consultant's analysis.[55]

However, protected species are by definition reduced in population size, are more locally rare even in prime habitats, and typically have suffered reductions in density as well. As such, it is to be expected that reduced population of special status species could be considered to have a lower potential to occur than common species, and yet could reasonably be expected to be present on site given adequate habitat or even marginal habitat that could serve as a migration or movement corridor. By default of their more critical, reduced status, such a species like the southern grasshopper mouse could incur a higher impact to their population even if they suffer relatively minor losses are a result of direct, indirect, or cumulative impacts. The DEIR fails to adequately address the nature and degree of such potential losses due to lack of focused surveys for the species.

Due to its low fecundity, low population density, and large home range size, the southern grasshopper mouse is more susceptible to small- and large-scale habitat loss

[52] Moroge, M. E. (1998). *Effects of habitat fragmentation on small mammals*. Available From ProQuest Dissertations & Theses Full Text. Retrieved from http://search.proquest.com/docview/304455535?accountid=14068
[53] DEIR, 7-6.
[54] ibid.
[55] DEIR 2.2-51

17

O5-158 Cont.

O5-159

O5-160

O5-161

O5-162

O5-159 The County agrees with the assessment and characterization of the wildlife species that have potential to occur on site as described in the DEIR and the Biological Resources Technical Report (Appendix 2.2-1). The determinations were made using the literature searches in accordance with the County's guidelines (Section 1.3, County of San Diego 2010a). Based on the results of the literature review and habitat assessment, focused small mammal trapping surveys were not required in order to adequately assess potential impacts to wildlife species because the County does not require trapping studies for non-listed species per their CEQA guidelines. Based on the geography, elevation, and vegetation communities present, no state or federally listed small mammal species have potential to occur. The southern grasshopper mouse is a California Species of Special Concern.

O5-160 Please refer to response to comment O5-158. The Draft EIR and associated technical reports analyze wildlife species in accordance with the lead agency's guidelines. The County's guidelines specify that the biological resources report must address all sensitive wildlife species that occur or have a high probability of occurring on the site or on land immediately adjacent to the site. (Section 1.4.6, County of San Diego 2010a). Therefore, the DEIR and associated technical reports analyze wildlife species in accordance with the lead agency's guidelines.

and fragmentation than other rodents.[56] As a result, any impacts to a subpopulation occurring on one of the Project sites would have relatively severe impacts to overall species viability and diversity. The DEIR failed to provide measures that ensure this potentially severe impact is mitigated.

Because trapping surveys were not conducted at the Project site, it is impossible for the public and decision makers to understand the Project's environmental setting and potential impacts, and the adequacy of the County's proposed mitigation measures.

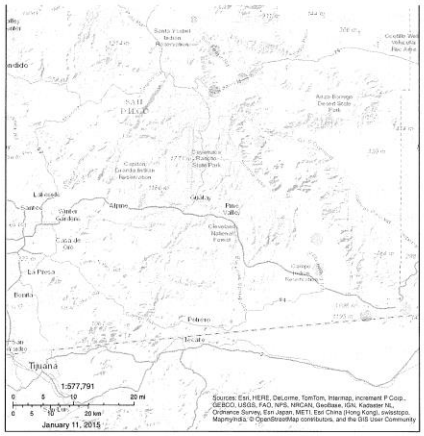


Figure 2. CNDDB records of the southern grasshopper mouse in the vicinity of the Project site.

[56] Bolster BC, editor. 1998. Terrestrial Mammal Species of Special Concern in California. California Department of Fish and Game, Sacramento (CA). pp. 124 to 126.

18

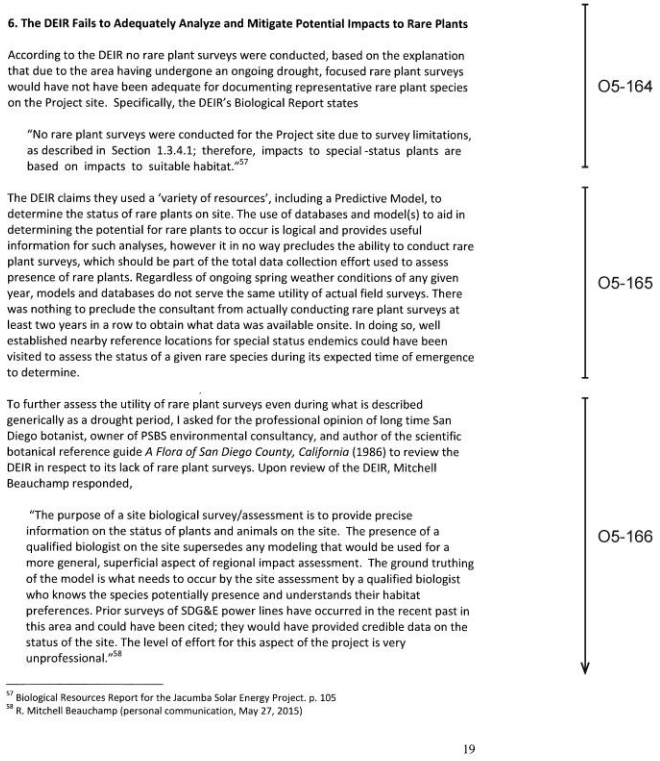
O5-162 Cont.

O5-163

O5-161 Please refer to response to comments O5-158 through O5-160.

O5-162 Please refer to response to comments O5-158 through O5-160. Comment noted, however, as stated above, whether or not the cited species is more sensitive to habitat loss or fragmentation than other species is mute as it is the County's opinion that the species had a low potential to occur. The Draft EIR did not need to provide mitigation measures because it concluded that impacts were less than significant.

O5-163 Please refer to response to comments O5-158 through O5-160. As noted in O5-158, the most recent CNDDB location is from 1992 and the closest locations are from 1909 and 1974. Trapping for non-listed small mammals is not required by the County, only habitat assessment.



6. The DEIR Fails to Adequately Analyze and Mitigate Potential Impacts to Rare Plants

According to the DEIR no rare plant surveys were conducted, based on the explanation that due to the area having undergone an ongoing drought, focused rare plant surveys would have not have been adequate for documenting representative rare plant species on the Project site. Specifically, the DEIR's Biological Report states

> "No rare plant surveys were conducted for the Project site due to survey limitations, as described in Section 1.3.4.1; therefore, impacts to special-status plants are based on impacts to suitable habitat."[57]

The DEIR claims they used a 'variety of resources', including a Predictive Model, to determine the status of rare plants on site. The use of databases and model(s) to aid in determining the potential for rare plants to occur is logical and provides useful information for such analyses, however it in no way precludes the ability to conduct rare plant surveys, which should be part of the total data collection effort used to assess presence of rare plants. Regardless of ongoing spring weather conditions of any given year, models and databases do not serve the same utility of actual field surveys. There was nothing to preclude the consultant from actually conducting rare plant surveys at least two years in a row to obtain what data was available onsite. In doing so, well established nearby reference locations for special status endemics could have been visited to assess the status of a given rare species during its expected time of emergence to determine.

To further assess the utility of rare plant surveys even during what is described generically as a drought period, I asked for the professional opinion of long time San Diego botanist, owner of PSBS environmental consultancy, and author of the scientific botanical reference guide *A Flora of San Diego County, California* (1986) to review the DEIR in respect to its lack of rare plant surveys. Upon review of the DEIR, Mitchell Beauchamp responded,

> "The purpose of a site biological survey/assessment is to provide precise information on the status of plants and animals on the site. The presence of a qualified biologist on the site supersedes any modeling that would be used for a more general, superficial aspect of regional impact assessment. The ground truthing of the model is what needs to occur by the site assessment by a qualified biologist who knows the species potentially presence and understands their habitat preferences. Prior surveys of SDG&E power lines have occurred in the recent past in this area and could have been cited; they would have provided credible data on the status of the site. The level of effort for this aspect of the project is very unprofessional."[58]

[57] Biological Resources Report for the Jacumba Solar Energy Project. p. 105
[58] R. Mitchell Beauchamp (personal communication, May 27, 2015)

19

O5-164

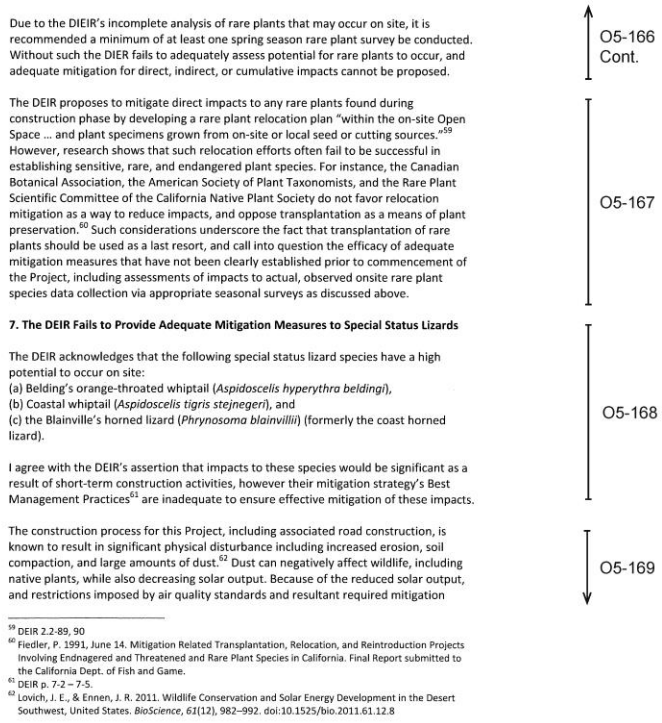
O5-165

O5-166

O5-164 Comment is introductory, but please refer to response to comment O3-15.

O5-165 Please refer to response to comment O3-15.

O5-166 Please refer to response to comment O3-15. In addition, the botanists who developed the model also visited the site on numerous occasions to perform other surveys and are therefore very familiar with the site, conditions, and microhabitats present, which informed model development.



Due to the DIEIR's incomplete analysis of rare plants that may occur on site, it is recommended a minimum of at least one spring season rare plant survey be conducted. Without such the DIER fails to adequately assess potential for rare plants to occur, and adequate mitigation for direct, indirect, or cumulative impacts cannot be proposed.

O5-166 Cont.

The DEIR proposes to mitigate direct impacts to any rare plants found during construction phase by developing a rare plant relocation plan "within the on-site Open Space ... and plant specimens grown from on-site or local seed or cutting sources."[59] However, research shows that such relocation efforts often fail to be successful in establishing sensitive, rare, and endangered plant species. For instance, the Canadian Botanical Association, the American Society of Plant Taxonomists, and the Rare Plant Scientific Committee of the California Native Plant Society do not favor relocation mitigation as a way to reduce impacts, and oppose transplantation as a means of plant preservation.[60] Such considerations underscore the fact that transplantation of rare plants should be used as a last resort, and call into question the efficacy of adequate mitigation measures that have not been clearly established prior to commencement of the Project, including assessments of impacts to actual, observed onsite rare plant species data collection via appropriate seasonal surveys as discussed above.

O5-167

7. The DEIR Fails to Provide Adequate Mitigation Measures to Special Status Lizards

The DEIR acknowledges that the following special status lizard species have a high potential to occur on site:
(a) Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*),
(b) Coastal whiptail (*Aspidoscelis tigris stejnegeri*), and
(c) the Blainville's horned lizard (*Phrynosoma blainvillii*) (formerly the coast horned lizard).

I agree with the DEIR's assertion that impacts to these species would be significant as a result of short-term construction activities, however their mitigation strategy's Best Management Practices[61] are inadequate to ensure effective mitigation of these impacts.

O5-168

The construction process for this Project, including associated road construction, is known to result in significant physical disturbance including increased erosion, soil compaction, and large amounts of dust.[62] Dust can negatively affect wildlife, including native plants, while also decreasing solar output. Because of the reduced solar output, and restrictions imposed by air quality standards and resultant required mitigation

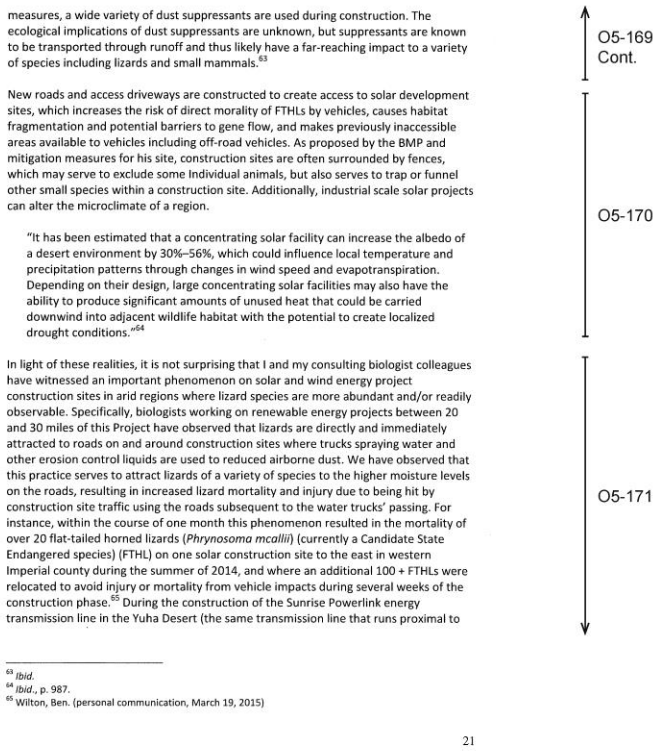
O5-169

[59] DEIR 2.2-89, 90
[60] Fiedler, P. 1991, June 14. Mitigation Related Transplantation, Relocation, and Reintroduction Projects Involving Endnagered and Threatened and Rare Plant Species in California. Final Report submitted to the California Dept. of Fish and Game.
[61] DEIR p. 7-2 – 7-5.
[62] Lovich, J. E., & Ennen, J. R. 2011. Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States. *BioScience*, *61*(12), 982–992. doi:10.1525/bio.2011.61.12.8

20

O5-167 Please refer to response to comment O3-15. Dudek's habitat restoration professionals have been implementing transplanting and new planting for over two decades and know that these types of efforts can be very successful. Further, any restoration efforts would be linked to 5-year success criteria which would require a successful implementation.

O5-168 The County disagrees that the mitigation provided for special-status lizards is inadequate because these species could occur throughout any of the vegetation communities present on site, having an equal chance of occurring throughout. Therefore the proposed vegetation mitigation ratios would protect this population and avoid significant impacts. This land will be placed into a long-term conservation easement and will be maintained in perpetuity for biological purposes. With regard to the effectiveness of short-term mitigation measures: the measures outlined on pages 7-2 through 7-5, plus M-BI-7 will reduce the amount of impact to these species by fencing off areas, thus not allowing unintentional access into surrounding habitat; will include monitoring to rescue detected lizards and other animals; will include dust protection; will protect drainages; will protect against entrapment; and will include low vehicle speeds to allow wildlife to avoid collision. These combined measures will reduce the impacts to a level that is less than significant.



measures, a wide variety of dust suppressants are used during construction. The ecological implications of dust suppressants are unknown, but suppressants are known to be transported through runoff and thus likely have a far-reaching impact to a variety of species including lizards and small mammals.[63]

New roads and access driveways are constructed to create access to solar development sites, which increases the risk of direct morality of FTHLs by vehicles, causes habitat fragmentation and potential barriers to gene flow, and makes previously inaccessible areas available to vehicles including off-road vehicles. As proposed by the BMP and mitigation measures for his site, construction sites are often surrounded by fences, which may serve to exclude some Individual animals, but also serves to trap or funnel other small species within a construction site. Additionally, industrial scale solar projects can alter the microclimate of a region.

> "It has been estimated that a concentrating solar facility can increase the albedo of a desert environment by 30%–56%, which could influence local temperature and precipitation patterns through changes in wind speed and evapotranspiration. Depending on their design, large concentrating solar facilities may also have the ability to produce significant amounts of unused heat that could be carried downwind into adjacent wildlife habitat with the potential to create localized drought conditions."[64]

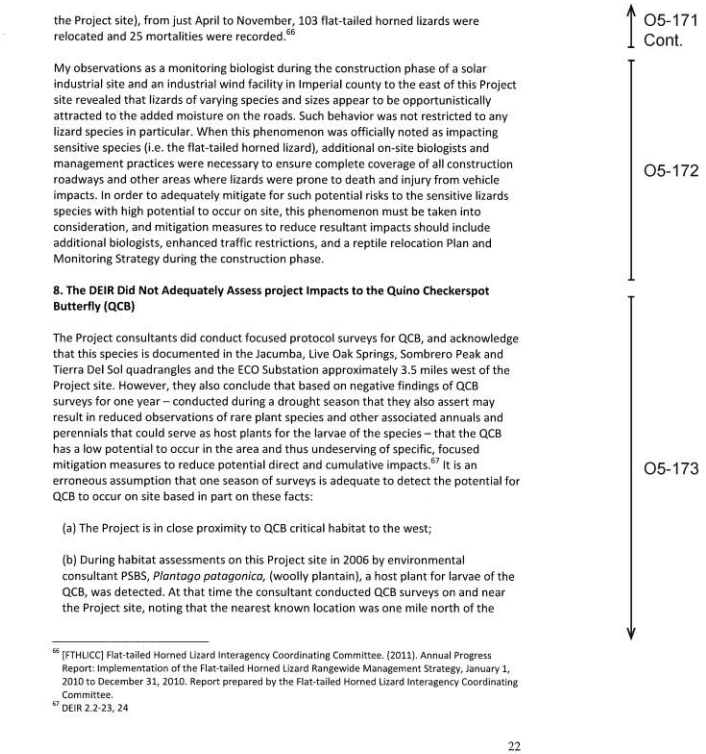
In light of these realities, it is not surprising that I and my consulting biologist colleagues have witnessed an important phenomenon on solar and wind energy project construction sites in arid regions where lizard species are more abundant and/or readily observable. Specifically, biologists working on renewable energy projects between 20 and 30 miles of this Project have observed that lizards are directly and immediately attracted to roads on and around construction sites where trucks spraying water and other erosion control liquids are used to reduced airborne dust. We have observed that this practice serves to attract lizards of a variety of species to the higher moisture levels on the roads, resulting in increased lizard mortality and injury due to being hit by construction site traffic using the roads subsequent to the water trucks' passing. For instance, within the course of one month this phenomenon resulted in the mortality of over 20 flat-tailed horned lizards (*Phrynosoma mcallii*) (currently a Candidate State Endangered species) (FTHL) on one solar construction site to the east in western Imperial county during the summer of 2014, and where an additional 100 + FTHLs were relocated to avoid injury or mortality from vehicle impacts during several weeks of the construction phase.[65] During the construction of the Sunrise Powerlink energy transmission line in the Yuha Desert (the same transmission line that runs proximal to

[63] *ibid.*
[64] *ibid.*, p. 987.
[65] Wilton, Ben. (personal communication, March 19, 2015)

21

O5-169 Comment noted. It is likely that without mitigation, dust would be a concern, though the impact to lizards, which occur in very dusty and windy areas, is not known. However, implementation of M-BI-8 will mitigate for potential dust by implementing several measures including speed reduction, watering, wind thresholds, and other measures including dust suppressants. While a specific soil binder has not been selected at this time, the EPA has evaluated the potential contamination effects of a number of dust suppressants including soil binding agents and found that they did not result in contamination (EPA 2008: Testing of Dust Suppressants for Water Quality Impacts [[available at: http://www.epa.gov/region9/air/dust/DustSuppressants-sept2008.pdf]]), contrary to the commenters assertion.

O5-170 Comment noted. However, the commenter is addressing impacts to flat-tailed horned lizards which occur many miles to the east in the lower and sandy desert region in Imperial County and Borrego Springs areas. This species does not occur in this area and the desert habitats that the commenter is discussing are not present. Please also refer to response to comment O5-171 and O5-172. The cited discussion regarding micro climate effects of large 'concentrating solar projects' are not relevant to the Proposed Project as the technology proposed is PV not concentrated solar technology.



the Project site), from just April to November, 103 flat-tailed horned lizards were relocated and 25 mortalities were recorded.[66]

My observations as a monitoring biologist during the construction phase of a solar industrial site and an industrial wind facility in Imperial county to the east of this Project site revealed that lizards of varying species and sizes appear to be opportunistically attracted to the added moisture on the roads. Such behavior was not restricted to any lizard species in particular. When this phenomenon was officially noted as impacting sensitive species (i.e. the flat-tailed horned lizard), additional on-site biologists and management practices were necessary to ensure complete coverage of all construction roadways and other areas where lizards were prone to death and injury from vehicle impacts. In order to adequately mitigate for such potential risks to the sensitive lizards species with high potential to occur on site, this phenomenon must be taken into consideration, and mitigation measures to reduce resultant impacts should include additional biologists, enhanced traffic restrictions, and a reptile relocation Plan and Monitoring Strategy during the construction phase.

8. The DEIR Did Not Adequately Assess project Impacts to the Quino Checkerspot Butterfly (QCB)

The Project consultants did conduct focused protocol surveys for QCB, and acknowledge that this species is documented in the Jacumba, Live Oak Springs, Sombrero Peak and Tierra Del Sol quadrangles and the ECO Substation approximately 3.5 miles west of the Project site. However, they also conclude that based on negative findings of QCB surveys for one year – conducted during a drought season that they also assert may result in reduced observations of rare plant species and other associated annuals and perennials that could serve as host plants for the larvae of the species – that the QCB has a low potential to occur in the area and thus undeserving of specific, focused mitigation measures to reduce potential direct and cumulative impacts.[67] It is an erroneous assumption that one season of surveys is adequate to detect the potential for QCB to occur on site based in part on these facts:

(a) The Project is in close proximity to QCB critical habitat to the west;

(b) During habitat assessments on this Project site in 2006 by environmental consultant PSBS, *Plantago patagonica,* (woolly plantain), a host plant for larvae of the QCB, was detected. At that time the consultant conducted QCB surveys on and near the Project site, noting that the nearest known location was one mile north of the

[66] [FTHLICC] Flat-tailed Horned Lizard Interagency Coordinating Committee. (2011). Annual Progress Report: Implementation of the Flat-tailed Horned Lizard Rangewide Management Strategy, January 1, 2010 to December 31, 2010. Report prepared by the Flat-tailed Horned Lizard Interagency Coordinating Committee.

[67] DEIR 2.2-23, 24

22

O5-171 Cont.

O5-172

O5-173

O5-171 Comment noted. As noted in response to comment O5-170, the species the commenter is discussing (Flat Tail-horned lizard) occurs far to the east in very different habitats and would not be found on site. Environmental conditions in the desert can be much different than those on site – potentially being 20 to 40 degrees hotter than at the project location. It is possible that lizards in that environment may be attracted to water, but there is no scientific substantiation. In the instance at the Proposed Project site the conditions are distinct and the construction proposed includes a combination of soil stabilization (binders) and watering for dust suppression only that would not result in any pooling or water that might be attractive to wildlife.

O5-172 See response to comment O5-171. The referenced lizard species (Flat Tail-horned lizard) is not known to occur in the project area, rather is known in the Imperial Valley desert floor several miles east and more than 2,000 feet in elevation drop from the project site. Sensitive reptile species have been identified as potentially occurring on the project site and impacts identified as potentially significant absent mitigation (Impact BI-W-1 and BI-W-2 p 2.2-51 of the DEIR). The monitoring requirements in mitigation M-BI-1, and the referenced County Biological Report Format and Requirement Guidelines, conducted by a County-approved biologist, are adequate to ensure that all

Jacumba Railroad Depot, approximately 2 miles north of the Jacumba Solar Project site.[68]

(c) Finally, in their comments to the final SOITEC PEIR regarding construction of an industrial solar facility just west of the Jacumba solar Project, the USFWS recommends that the despite the PEIR's finding of no QCB on site, the Project proponent should continue with focused QCB surveys until project construction is initiated in light of the "variable detectability of the species".[69] It follows that the same logic is applied to this Project, and QCB surveys should continue up until commencement of construction; without which actual direct and indirect impacts of the Project to the Quino Checkerspot cannot adequately be assessed.

O5-173 Cont.

CONCLUSION

Based on the issues described in this letter, it is my professional opinion that the obligations of CEQA have not been met, and that the Project would result in significant and unmitigated impacts to several sensitive biological resources.

O5-174

Sincerely,

Renée Owens, M.S.

Senior Biologist

[68] Beauchamp, Mitch (personal communication, May 27, 2015)
[69] Final SOITECT PEIR, Comment F1-17

23

sensitive wildlife species, including reptiles, identified during construction activities will be avoided or impacts reduced to a less than significant level.

O5-173 Please refer to response to comment O3-8. The USFWS only requires one season of surveys for analysis purposes, and this is adequate for County analysis as well. Further, in order to comply with probable USFWS project requirements to conduct focused Quino checkerspot surveys during the season prior to construction, Dudek conducted a second set of protocol-level focused surveys in 2015. These surveys were negative.

O5-174 Comment noted. This comment concludes the letter and no further response is required.

RENÉE OWENS

Curriculum Vitae
9712 Snow View Drive, El Cajon, CA 92021
619-201-1965
renee@wildlifezone.net

- College Instruction in Biology, Botany, Environmental Science, Tropical Ecology, Zoology
- Recipient, National Geographic Research and Exploration Award
- USFWS Recovery permits for endangered Least Bell's vireo Quino checkerspot butterfly, threatened California gnatcatcher
- Environmental non-profit campaign development, volunteer coordination, training, workshop presentation, lobbying, fundraising
- Rare plant, raptor, herptile, and nesting bird surveys
- CEQA, NEPA Biological and Environmental Assessments
- Mitigation and Restoration Monitoring, HCP Planning and Implementation
- Integrated Natural Resource Management
- Small business management, website design, grant writing

For over two decades Ms. Owens has worked and volunteered as a conservation biologist, adjunct college professor, non-profit coordinator, writer, activist, and public speaker. She is founder and co-owner of Sage Wildlife Biology, specializing in wildlife research, education, and environmental compliance, established in 1993. She is certified in community college instruction, and her extensive research experience includes study in California and Latin America.

Her college instruction includes courses in Biology, Tropical Ecology, Zoology, Botany, and Environmental Science for San Diego State University, Palomar College, Boston University, and Imperial Valley College. Her research in Venezuela has been featured by National Geographic (*Crocodiles of the Orinoco, Land of the Anaconda*), Discovery, BBC, Dateline NBC, and Sierra magazine.

Sage Wildlife Biology consultancy provides services for a broad spectrum of projects that include one or more of the following: Ethology, ecological and conservation research, restoration and mitigation management, biological assessments, Habitat Conservation Plan development and implementation; surveys, mapping, and reporting of rare, threatened, sensitive, and endangered species.

Projects incorporate research and regulatory compliance from the local to federal level. Clients have included private, public, and government entities; she is an Approved Biologist for San Diego County, USDA, USFWS, DOI, and BLM.

Her research and work projects encompass many species and habitats in North and South America, including passerines, raptors, shorebirds, herptiles, cetaceans, pinnipeds, and carnivores. She leads annual workshops on CEQA and NEPA review as it relates to biological resources and public comment, and on endangered species identification and conservation. Regardless of the species or habitat involved, Ms. Owens always strives to apply the tenants of successful and humane conservation to all projects.

EDUCATION

Community College Instructor Certification, University of California San Diego, La Jolla, CA

Advanced Coursework in Statistics, Ecology Seminars, University of Tennessee, Knoxville, TN

MS Ecology (ABD), San Diego State University, San Diego, CA

BS Biology, State University of New York at Geneseo, Geneseo, NY

O5-175

O5-175 Comment noted. This comment is a resume attachment and does not require a response.

WORK EXPERIENCE

Adjunct Professor, Department of Math, Science, and Engineering, Imperial Valley College, Imperial, CA. Instructor in Environmental Science, Biology. 2012 – present.

Owner, Sage Wildlife Biology LLC. Environmental compliance, research, and education in California and South America. 1993 – present.

Representative Projects:

Marine mammal research, San Diego county (2013 – present). Conducting natural history breeding season research and impact analysis of human interaction on Harbor seal rookery in La Jolla, CA.

Biologist, Los Angeles Regional Interoperable Communications System (2013). Conducted habitat assessments, sensitive species surveys, sensitive plant surveys, co-authored Biological Assessment for PEIR/ PIES, 218 site project including coastal regions to mountains to deserts. County-wide project was federally funded to create broadband wireless network using Long-Term Evolution (LTE) technology while minimizing impacts to native habitats and ecosystems. Management recommendations and design included maximizing use of existing man-made structures for project implementation while avoiding sites near riparian areas and watersheds.

Habitat Conservation Planning and Development, City and County of San Diego (2006 - 2013). Federally permitted surveys for California gnatcatcher, Quino checkerspot butterfly, Least Bell's vireo; Migratory Bird Treaty Act nesting bird surveys, herptile surveys, population assessments, and concurrent development of endangered species critical habitat components of Habitat Conservation Plans including the San Diego Multiple Species Conservation Plan and Multiple Habitat Conservation Plans.

MHCP Restoration, City of San Diego Black Mountain Open Space, CA (2011). Principal biologist for biological assessments and mitigation design and monitoring on behalf of the Black Mountain Open Space Park development project; supervised biological components of mitigation management, including coordination with the City of San Diego to implement restoration efforts within the MHCP.

Wildfire Prevention and Brush Management, California Fire Safe Council and USDA Forest Service, San Diego County, CA (2009-2011). Principal investigator responsible for brush management projects for the Alpine and California Fire Safe Council in areas adjacent to U.S. Forest Service land. Included habitat mapping, sensitive plant and bird surveys, GPS mapping, monitoring and management of vegetation reduction and invasive species management teams (consisting of two to thirty individuals), and preparation of the Biological Evaluations for the Bureau of Land Management. Project development included consultation and coordination with private landowners, scientists, Home Owners Associations, other stakeholders, and Forest Service and BLM staff.

Biologist, Pattern Energy Ocotillo Express Wind Project, BLM land, Imperial County, CA (2010-2011). Conducted daily and weekly surveys for a Environmental Assessment (EA) incorporating extensive focused wildlife surveys throughout 15,000 acres of Bureau of Land Management land in Imperial County. Involved preparation of the a EA with recommendations for avoidance of impacts to sensitive habitats and species including golden eagles, Peninsular bighorn sheep, burrowing owls, and flat-tailed horned lizards.

Perpetual Land Management Plan, San Elijo and Greenland Reserves, San Diego County (2005 – present). Principal biologist reporting on the status of two habitat preserve Habitat Conservation Plans on behalf of The Escondido Creek Land Conservancy. The areas combined incorporate 110 acres of riparian wetland, oak woodland, coastal sage scrub, and chaparral habitats; created in compliance with California Environmental Quality Act (CEQA) and Multiple Habitat Conservation Plan (MHCP) planning. Third party beneficiaries of these preserves are the USFWS and California Department of Fish and Wildlife. Project duties include

O5-175
Cont.

habitat mapping, surveying and reporting of sensitive, threatened, and endangered plant and animal species as well as habitat suitability analysis, invasive floral species monitoring and removal, and recommendations for riparian corridor restoration.

California Wild Heritage Campaign, Wilderness Society (2002 -2003). Duties as a biologist and campaign organizer included biological surveys and mapping of proposed wilderness areas, coordination of volunteers, lobbying of Congressional politicians, organizing of tabling events, educational materials, and outreach campaigns.

Endangered Species Conservation and Natural History Research (1996-2002). Funded by the National Geographic Research Foundation, Wildlife Conservation Society (WCS), The Venezuelan National Council for Scientific and Technological Research (CONICIT), and Venezuela's federal wildlife agency (Profauna); co-researcher in a unique eight year study of the natural history of the green anaconda. Research incorporated radio telemetry, mark and recapture, genetic analysis, and mating system study; findings were used to develop a sustainable conservation program for 175,000 acres of flooded savanna and forest in Apure, Venezuela. Provided eco-tourism and wetland restoration management recommendations for other regions with similar habitats. Included habitat suitability analysis, population assessments and nest monitoring, and reintroduction of endangered species (Orinoco crocodile, Arau turtle, and the Red-footed tortoise); as well as natural history study of the endangered giant otter previously considered regionally extinct. Ms. Owens also generated a resident bird list for a 150,000 acre preserve comprised of over 400 species including one previously undocumented species for the region.

Threatened Species Monitoring and Critical Habitat Assessment, (USFWS) Camp Pendleton Marine Base, (1994-1995). Principal biologist, participated in a long term monitoring effort of the California gnatcatcher for Camp Pendleton Marine Base in Oceanside, CA. The study incorporated monitoring of the species during breeding and non-breeding seasons; included data collection for over 40 active breeding pairs spanning an area of several thousand acres. Data was used to generate reports on habitat suitability as related to nesting success, contributed to critical habitat assessments and recovery planning.

Least Bell's Vireo Endangered Species Recovery Plan (USFWS) (1991-1995). Conducted 5 years of breeding season nest monitoring surveys and invasive species management as part of the USFWS Endangered Species Recovery Plan for the Least Bell's Vireo; duties included monitoring, banding, and reporting annually on 25 to 70 nesting pairs throughout San Diego County while providing habitat assessments and reports for Critical Habitat evaluation and population recovery analysis.

Campaign Director, Wildlife Conservationist Certification Training Program. 2009-2011. Conservation grant from the San Diego Foundation, collaborating with San Diego Audubon, funded the development and implementation of a program designed to solicit, educate, and train adult volunteers for a long term commitment to volunteer activism and naturalist interpretive programs. Certification included class instruction, field trips, and 30 hour commitment to an environmental campaign.

Visiting Assistant Professor, Department of Math, Science, and Engineering, Imperial Valley College, Imperial, CA. Lecture and laboratory instruction in Environmental Science and Botany. 2008.

Adjunct Professor and Research Fellow. Boston University Tropical Ecology Program, Cumbaya, Ecuador. Included lecture and intensive field study of tropical habitats including cloud and mangrove forest, Pacific intertidal zones, rainforest, Galapagos Islands, and Paramo. 1999 –2000.

Campaign Director and Biologist, World Society for the Protection of Animals, Boston, MA. Responsible for research, project development, and reporting for wildlife related campaigns in Latin America. Included travel to

O5-175
Cont.

various Central American to lead training workshops, implement campaigns for species in biodiversity hotspots including key watersheds, coral reef, Pacific coastal rainforest, among other habitats; and oversight of emergency disaster relief that incorporated basic veterinary care instruction, organizational and material support, livestock vaccinations, as well as support for wildlife and companion animals. 1998-1999.

Wildlife Biologist, HELIX Environmental Planning Inc. (formerly Sweetwater Biological). Biologist responsible for ornithological and herptile surveys and monitoring; mitigation and restoration monitoring, reporting, and management; and contributions to Habitat Conservation Plans for private and government entities. 1996, 2000-2001.

Adjunct Professor, Palomar Community College, San Marcos, CA. Instruction in General Biology for majors, non-majors. 1994 - 1996.

Laboratory Assistant, Toxicology and Physiology Departments, University of Rochester Medical Center, Rochester, NY. Duties included research in environmental toxicology, Muscular Sclerosis, Parkinson's disease. 1987 – 1989.

Wildlife Conservation Intern, Mumford Wildlife Research Station and Preserve, Mumford, NY. Conducted research on breeding success of nesting Eastern Bluebirds and parasitism of breeding passerines; included monitoring and mapping of 250 nest boxes and species use, also conducted surveys with Preserve visitors regarding public interest for wildlife and conservation. 1987.

VOLUNTEER EXPERIENCE

National Sierra Club, Wildlife and Endangered Species Committee, Marine Action Committee. 2010 – present.

San Diego Audubon Society Conservation Committee, 2009 – 2014.

San Diego Sierra Club (SDSC) Executive Committee, 2008 – 2010.

SDSC Conservation Committee Chair, 2007 – 2010.

SDSC Wildlife Committee Chair, Forest and Wilderness Committee, Political Committee, 1994-1996, 2000 – 2008.

Wildlife Research Institute Scientific Advisory Committee, 2006 – 2008.

Lakeside Emergency Wildlife Rehabilitation Center, 2000 – 2005.

AWARDS / HONORS

- San Diego Foundation Vision Fund Environmental Education and Conservation Grant 2010
- Photo, "TIME Great Images of the 20th Century", TIME Magazine Publications 2000
- CONICIT Award for the Novel Researcher 1998
- CITES and Profauna Joint Research Grant 1996
- National Geographic Film and Research Grant 1996
- National Geographic Research and Exploration Award 1996
- Wildlife Conservation Society Research Grant 1996
- Sierra Club Emily Durbin Leadership in Conservation Award 1995
- SDSU Harry Hamber Academic Graduate Scholarship 1991
- U.S. National Triathlon Championships 1989

O5-175
Cont.

- New York State Regents Academic Scholarship 1983

CERTIFICATIONS and WORKSHOPS

- U.S. Fish and Wildlife Recovery Permit for the Coastal California gnatcatcher, Least Bell's Vireo, Quino checkerspot butterfly.
- Acoustic Monitoring of Bats, Field Techniques Workshop, Wildlife Society, 2012
- Desert Tortoise Council, Survey Techniques Workshop, Certificate of Completion November 2010
- Flat-tailed Horned Lizard BLM Survey Techniques Workshop, Certificate of Completion, 2010
- Desert Tortoise Council, Survey Techniques Workshop, Certificate of Completion, 2006
- USFWS Arroyo Toad Workshop, Certificate of Completion , Camp Pendleton Marine Base, 1999
- Willow Flycatcher Workshop, SD Natural History Museum, Certificate of Completion, 1995

PROFESSIONAL AFFILIATIONS

- Association of Field Ornithologists
- Citizen Science League
- Marine Mammal Society
- National Association of Biology Teachers
- Society for Conservation Biology
- Society for the Study of Amphibians and Reptiles
- Wildlife Society

INTERNATIONAL SOCIETY CONFERENCE PRESENTATIONS

- "Conservation of the Green Anaconda in Venezuela", Annual Conference of the Society for the Study of Ichthyology and Herpetology, La Paz, Baja California, Mexico, 2000.
- "Trends in the International Reptile Pet Trade", Annual Conference for the Humane Society International, Boston, MA, 1998.
- "Navigation and Orientation of Long Distance Migrants: How Bobolinks use Stellar and Magnetic Cues for Migration", Annual Conference for the Society of Behavioral Ecology, Albany, NY, 1987.

Select PUBLICATIONS and ARTICLES

- Rivas, J.A. and Owens, R.Y. 1999. Teaching conservation effectively: a lesson from life history strategies. *Conservation Biology*, 13 (2): 453-454.
- Owens, Renee Y. In prep. (*Conservation Biology*.) Economic and social costs of "joint use" policy management of a Harbor seal rookery in a developed coastal zone of California.
- Owens, Renee Y. In revision. *Journal of Field Ornithology*. Nesting associations between wasps of the genus *Polybia* and passerine birds of the Venezuelan Llanos.

O5-175
Cont.

- Owens, Renee Y. 2014. The USDA's Dirty Secret: A Century-Old Wildlife Killing Machine, *The EcoReport* (January). Retrieved from http://www.theecoreport.com/green-blogs/sustainability/conservation/wildzone/the-usdas-dirty-secret-a-century-old-wildlife-killing-machine/
- Owens, Renee Y. 2013. Be Afraid, Be Very Afraid! *The EcoReport* (February). Retrieved from http://www.theecoreport.com/green-blogs/sustainability/conservation/wildlife/be-afraid-be-very-afraid/
- Owens, Renee Y. 2012. Rebirth of Green: Resolution for 2013. *San Diego Loves Green: The Wild Zone* (December). Retrieved from http://www.sandiegolovesgreen.com/the-re-birth-of-green-resolution-for-2013.
- Owens, Renee Y. 2012. Coyotes: The Media's Modern Bogeyman. *San Diego Loves Green: The Wild Zone* (December). Retrieved from: http://www.sandiegolovesgreen.com/coyotes-the-medias-modern-bogeyman-2/
- Rivas, J.A. and Owens, Renee Y. 2002. Orinoco crocodile (*Crocodylus intermedius*): Age at First Reproduction. *Herpetological Review*. 33 (3): 203.
- Rivas, J. A., R. Y. Owens, and S. A. Aktay, 2001. *Paleosuchus trigonatus* (Schneider's Smooth fronted Caiman): Nesting and hatching. *Herpetological Review*. 32: 251.
- Rivas, J. A., Owens R. Y. and Calle, P.P. 2001. *Eunectes murinus*: Juvenile predation. *Herpetological Review*. 32 (2): 107-108.
- Rivas, J. A. and R. Y. Owens. 2000. *Eunectes murinus* (green anaconda): cannibalism. *Herpetological Review*. 31(1):44-45
- Rivas, J. A., Thorbjarnarson, J. B., Owens, R. Y and M. C, Muñoz, 1999. *Eunectes murinus*: caiman predation. *Herpetological Review*. 30 (2): 101
- Owens, R.Y. 1997. Informe técnico al Servicio de Fauna de Venezuela (Profauna): Regional population assessment of the endangered giant otter (*Pteronura brasiliensis*) in Apure State, Venezuela.
- Unpublished Master's Thesis, "Bioacoustics of the Commerson's Dolphin (*Cephalorhynchus commersonii*) with Recommendations for Applied Conservation" 1994.

REFERENCES

Patrick L. Hord, conservation biologist, non-profit manager 858-220-4732 chatamour7@yahoo.com

Jill Fritz, Michigan Director, Humane Society of the U.S. 517-515-3839 jfritz@humanesociety.org

Jane Higginson, retired college instructor, environmental consultant 619-219-9311 archelonia@cox.net

O5-175
Cont.