Chapter 7
Response to Comments

SCH# 2017071020

Volume 3

RB Inyokern Solar Project
by R&L Capital, Inc. (PP16109)

Conditional Use Permit 23, Map #47;
Conditional Use Permit 27, Map #47; and
Inyokern Specific Plan Amendment 4, Map #47

Kern County
Planning and Natural Resources Department
Bakersfield, California

October 2020

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: http://kernplanning.com/

PLANNING AND NATURAL RESOURCES DEPARTMENT

Planning
Community Development
Administrative Operations

October 29, 2020

File: CUP 23, Map #47; CUP 27, Map # 47; and SPA 4, Map #47 (Circulation); S.D. #1

ADDRESSEE LIST (See Distribution List)

RE: Response to Comments for Draft Environmental Impact Report – RB Inyokern Solar Project by R&L Capital, Inc. (SCH #2017071020)

Dear Interested Party:

Enclosed is a document entitled *Volume 3 - Chapter 7 - Response to Comments*, for the above-referenced project. Section 15088 of the California Environmental Quality Act Guidelines requires the Lead Agency to evaluate comments on environmental issues received from persons who reviewed the Draft EIR and prepare a written response addressing each comment. This document is Chapter 7 of the Final EIR.

A public hearing has been scheduled with the Kern County Planning Commission to consider this request on November 12, 2020 at 7:00 p.m., or soon thereafter, at the Chambers of the Board of Supervisors, First Floor, Kern County Administrative Center, 1115 Truxtun Avenue, Bakersfield, California.

Due to COVID-19 and subsequent local emergency declarations by the Kern County Board of Supervisors, Staff is evaluating the possibility of facilitating an alternative form of public participation during this hearing. If you have any questions about the format of the hearing and/or wish to get more information, please contact the Staff Planner.

Thank you for your participation in the environmental process for this project. If you have any questions regarding this letter, please contact me at (661) 862-8997 or candiar@kerncounty.com.

Sincerely,

Ronelle Candia, Supervising Planner
Advance Planning Division

COMMENTING AGENCIES AND INTERESTED PERSONS: United States Department of the Navy, Naval Air Weapons Station China Lake; United States Fish and Wildlife Service; California Department of Transportation; Eastern Kern Air Pollution Control District; Eastern Kern County Resource Conservation District; Kern County Department of Agriculture; Kern County Public Health Services Department – Environmental Health Division; Kern County Fire Department - Office of the Fire Marshall; Kern County Public Works Department - Administration and Engineering Division; Kern County Public Works Department - Floodplain Management Section; Adams, Broadwell, Joseph, and Cardozo; Desert Tortoise Council; Indian Wells Valley Well Owners Association; Nancy L. Gooch; Pacific Gas and Electric Company.

RB Inyokern RTC
Mailing List

Department of the Navy
Naval Air Weapons Station
Attn: Captain J.T. Vaughan
1 Administration Circle
China Lake, CA 93555-6100

U.S. Fish and Wildlife Service
Attn: Brian Croft, Asst. Field Supervisor
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, CA 92262

Department of Transportation -District 9
Attn: Gayle Rosander,
External Project Liaison
500 South Main Street
Bishop, CA 93514

East Kern Air Pollution Control District
Attn: Glen E. Stephens, P.E.,
Air Pollution Control Officer

Eastern Kern County Resource
Conservation District
Attn: Judith A. Decker, President
300 S. Richmond Road
Ridgecrest, CA 93555

Kern County
Agriculture Department
Darin Heard, Assistant Agricultural
Commissioner

Kern County
Env Health Services Department

Kern County Fire Dept
Michael Nicholas, Assistant Fire
Marshall

Kern County Public Works Department/
Building & Development/
Administration and Engineering Division

Kern County Public Works Department/
Building & Development/Floodplain

Pacific Gas & Electric Company
Land Management
6111 Bolinger Canyon Road 3370A
San Ramon, CA 94583

Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA
94080-7037

Desert Tortoise Council
Attn: Ken MacDonald, Chairperson
4654 East Avenue S #257B
Palmdale, CA 93552

IWV Domestic Well Owners Association
Attn: Don Decker, Chairman
625 W. Ward Avenue
Ridgecrest, CA 93555

Nancy Gooch
337 Mari Ct.
Ridgecrest, CA 93555

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Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370
(661) 862-8600

Technical Assistance by:

Environmental Science Associates
626 Wilshire Boulevard, Suite 1100
Los Angeles, CA 90017
(213) 599-4300

October 2020

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7.1 Introduction

7.1.1 Purpose

As defined by Section 15050 of the California Environmental Quality Act (CEQA) *Guidelines*, the Kern County Planning and Natural Resources Department is serving as "Lead Agency" for the preparation of the Environmental Impact Report (EIR) for the RB Inyokern Solar Project (project or proposed project). The Final EIR presents the environmental information and analyses that have been prepared for the proposed project, including comments received addressing the adequacy of the Draft EIR, and responses to those comments. In addition to the responses to comments, clarifications, corrections, or minor revisions have been made to the Draft EIR. The Final EIR which includes the responses to comments, the Draft EIR, and the Mitigation, Monitoring, and Reporting Program, will be considered by the Planning Commission and the Board of Supervisors in the decision-making process for the proposed project.

7.1.2 Environmental Review Process

A Notice of Preparation (NOP)/Initial Study (IS) (SCH No. 2019060259) was circulated for a 30-day public review period beginning on July 12, 2017, and ending August 11, 2017. Nineteen individual written comment letters were received and used in the preparation of the Draft EIR. The Draft EIR for the proposed project was circulated for a 45-day public review period beginning on July 2, 2020, and ending August 17, 2020. A total of fourteen comment letters were received on the Draft EIR during the public review period and another four were received after the public review period. Responses to all eighteen comments received are provided below.

CEQA *Guidelines* Section 15088 requires that the lead agency evaluate comments on environmental issues received from persons and agencies that reviewed the Draft EIR and prepare a written response addressing the comments received. The response to comments is contained in this document—Volume 3, Chapter 7 of the Draft EIR. Volumes 1, 2, and 3 together constitute the Final EIR.

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7.2 Revisions to the Draft EIR

The revisions that follow were made to the text of the Draft EIR. Amended text is identified by page number. Additions to the Draft EIR text are shown with underline and text removed from the Draft EIR is shown with strikethrough. The revisions, as outlined below, fall within the scope of the original project analysis included in the Draft EIR and do not result in an increase to any identified impacts or produce any new impacts. No new significant environmental impact would result from the changes or from a new mitigation measure proposed to be implemented. Therefore, no significant revisions have been made which would require recirculation of the Draft EIR pursuant to CEQA Guidelines Section 15088.5 (Recirculation of an EIR Prior to Certification).

Global Revisions

~~SR 58~~Business East Route 58

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Pages 1-50 through 1-52:

MM 4.4-4: Prior to construction, the project proponent/operator shall conduct preconstruction surveys in suitable habitat for desert tortoise and shall implement the measures described below.

a. Pre-construction tortoise clearance surveys shall be conducted at 15-foot intervals to locate any desert tortoises prior to grading or ground disturbance. The surveys shall be conducted by a~~n authorized~~ designated biologist within 24 hours of the onset of the surface disturbance and prior to the installation of all tortoise-proof fencing. ~~An "authorized biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for this project. Name(s) of proposed authorized biologist(s) must be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for approval at least 15 days prior to initiating field surveys.~~

b. Designated ~~Authorized~~ biologists shall conduct preconstruction clearance surveys for desert tortoise prior to the start of any ground disturbing construction activity.

c. If a desert tortoise is found during preconstruction surveys, no one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures and to determine whether temporary exclusionary fencing is required. Designated ~~Authorized~~ biologists shall conduct clearance surveys for desert tortoises within the fenced project site after exclusionary fence installation if required by the wildlife agencies. Two surveys without finding any tortoises or new

tortoise signs shall occur prior to declaring the site clear of tortoises. All burrows that could provide shelter for a desert tortoise shall be excavated during the first clearance survey. A designated~~n authorized~~ biologist shall remain onsite until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular basis throughout construction in order to ensure that the fence is intact and that no tortoises can enter the construction area.

d. Designated ~~Authorized~~ biologists shall be onsite to survey for tortoises immediately prior to vegetation clearance activities in the event a tortoise was inadvertently missed during clearance surveys. A designated~~n authorized~~ biologist shall remain on-call throughout construction in the event a tortoise wanders onto the site.

e. All construction personnel shall watch for desert tortoises within the construction area and access roads whenever driving, transporting, or operating equipment.

f. If no desert tortoises are found during preconstruction surveys, the project proponent/operator shall provide a report to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife within one week of starting construction. This report shall be prepared by the ~~authorized~~ designated biologist. Following construction, the project proponent/operator shall submit the report within 90 days, documenting applicable desert tortoise measures taken during the project such as tortoise training, fence monitoring and maintenance, etc.

g. If a desert tortoise is observed on the project site after preconstruction surveys and during construction activities, construction shall cease in the vicinity of the tortoise and the tortoise shall be allowed to pass through the area on its own accord. No one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Concurrent with this effort, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be consulted regarding any additional avoidance, minimization, or mitigation measures that may be necessary. Once the animal is observed leaving the site, work in the area can resume. A report shall be prepared by a designated~~n authorized~~ biologist to document the occurrence of the desert tortoise within the site. This report shall be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and the Kern County Planning and Natural Resources Department after the impact occurs.

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Pages 1-52 through 1-54:

MM 4.4-6: Prior to the issuance of grading or building permits from the County, and for the duration of construction activities, and within a minimum of one-week initial ground disturbance, ~~all construction workers~~ all employees, contractors, or other person(s) working at the project site who are participating in construction of the project facilities shall attend an Environmental Awareness Training and Education Program that will be presented by an authorized biologist. Any personnel associated with construction that did not attend the initial training shall be trained by the authorized biologist prior to working on the project site.

Any employee responsible for the operations, maintenance, ~~and/or~~ decommissioning of the project facilities, and/or implementation of mitigation shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis during the duration of the project.

The Program will be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The Program shall include the components described below.

a. Information on the life history of the desert tortoise; Mohave ground squirrel, burrowing owl, Swainson's hawk, Cooper's hawk; nesting birds; as well as other wildlife, special-status plant species, and the California Department of Fish and Wildlife-regulated drainages that may be affected during construction activities. The program shall also discuss the legal protection status of each species, the definition of "take" under the Federal Endangered Species Act and California Endangered Species Act, measures the project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements.

b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site.

c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program and signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department.

d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.

e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.

f. The construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits. Unauthorized impacts may result in project stoppage, and/or fines depending on the impact and consultation with the California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service.

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Pages 1-60 through 1-66:

MM 4.4-10: The project proponent/operator shall implement the following measures, based on the recently updated California Department of Fish and Game (now California Department of Fish and Wildlife) 2012 Staff Report on Burrowing Owl Mitigation, to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels:

a. A qualified wildlife biologist shall be onsite during all initial grading and construction, pre-construction ground disturbing activities, and decommissioning activities. A qualified wildlife biologist (i.e., a wildlife biologist with the ability to identify the species and possessing previous burrowing owl survey and avoidance and minimization protection experience) shall conduct pre-construction surveys of all areas that will be permanently or temporary impacted, plus a 150-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows. The survey(s) shall occur no more than 14 days prior to ground-disturbing activities (i.e., exploratory geotechnical drilling, vegetation clearance, grading, etc.). The survey methodology shall be consistent with the methods outlined in the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation and shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting and mapping any potential burrows with burrowing owl signs or presence of burrowing owls. Surveys may be conducted concurrently with desert tortoise preconstruction surveys. A biologist shall prepare a preconstruction survey report that shall be submitted to California Department of Fish and Wildlife and the Kern County Planning and Natural Resources Department.

b. A qualified biologist shall conduct an additional pre-construction survey of all impact areas plus an approximately 492-foot buffer no more than 24 hours prior to start or restart (as the case may be) of ground disturbing activities

associated with construction or decommissioning activities as authorized by this approval to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures.

If active burrowing owl burrows are detected onsite, they shall be protected in place through the use of visual screens or through California Department of Fish and Wildlife-identified restricted activity dates and setback distances (presented in Table 4.4-4, Burrowing Owl Burrow Restricted Activity Dates and Setback Distances, below), or other measures as described in the 2012 California Department of Fish and Wildlife Staff Report to minimize disturbance impacts unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

TABLE 4.4-4: BURROWING OWL RESTRICTED ACTIVITY DATES AND SETBACK DISTANCES

	Level of Disturbance (m)		
Time of Year	**Low**	**Medium**	**High**
April 1–August 15	200	500	500
August 16–October 15	200	200	500
October 16–March 31	50	100	500

SOURCE: CDFW, 2012.

c. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation. Burrowing owls shall not be excluded from burrows unless or until:

~~a~~i. Occupied burrows shall not be disturbed during the nesting season generally defined as February 1 through August 31.

~~b~~ii. Before excluding owls during the non-nesting season, generally defined as September 1 through January 31, a qualified biologist meeting the Biologist Qualifications set forth in the 2012 California Department of Fish and Wildlife Staff Report, shall verify through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

~~c~~iii. A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and

submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:

~~i~~1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;

~~ii~~2. Type of scope and appropriate timing of scoping to avoid impacts;

~~iii~~3. Occupancy factors to look for and what will guide determination of vacancy and excavation timing, one-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape (i.e., look for sign immediately inside the door);

~~iv~~4. How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that owls do not reside in the burrow);

~~v~~5. Removal of other potential owl burrow surrogates or refugia onsite;

~~vi~~6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;

~~vii~~7. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;

~~vii~~8. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

d. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.

e. Temporary exclusion is mitigated in accordance with the measures described below.

f. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.

g. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

h. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially

active burrows within 160 feet of the active burrow and monitored for at least 48 hours after installation. If burrows will not be directly impacted by the Project, one-way doors shall be installed to prevent use and shall be removed after ground disturbing activities have concluded in the area. Only burrows that will be directly impacted by the Project shall be excavated and filled.

i. During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.

j. If passive relocation is required, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented onsite or offsite in accordance with Burrowing Owl Staff Report guidance. The following recommendations shall be implemented:

    i. Temporarily disturbed habitat shall be restored, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent/operator shall consult with the California Department of Fish and Wildlife when determining offsite mitigation acreages, but shall be no less than 160 acres.

    ii. In order to protect habitat, the measures described below shall be implemented.

        1. Permanently conserve similar vegetation communities (grassland, scrublands, desert, and agriculture [grazing lands]) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.

        2. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project proponent/operator may purchase available burrowing owl conservation bank credits.

        3. Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.

        4. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.

5. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans (including construction of artificial burrows if necessary), and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
6. Mitigation lands shall be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls.

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Pages 1-66 through 1-68:

MM 4.4-11: To mitigate for potential impacts to nesting birds, special-status birds <u>including the Swainson's hawk and peregrine falcon</u>, and birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during construction and decommissioning activities, the following measures shall be implemented as part of the approval for a grading or building permit:

a. During the avian nesting season (February 1–August 31), a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to initial vegetation clearing. Surveys need not be conducted for the entire project site at one time; they may be phased so that surveys occur within 7 days prior to clearing or disturbance in specific areas of the site. The surveying biologist must be qualified to determine the species, status, and nesting stage without causing intrusive disturbance. At no time shall the biologist be allowed to handle the nest or its eggs. The survey shall cover all reasonably potential nesting locations on and within 500 feet of the project site including ground nesting where species, such as California horned lark and killdeer might nest all shrubs that could support nests, and suitable raptor nest sites such as nearby trees, windrows and power poles. Swainson's hawk nest surveys will be conducted prior to construction according to the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* (California Department of Fish and Wildlife, 2010) and within a 5-mile buffer around the project site. Access shall be granted on private offsite properties prior to conducting surveys on private land. If access is not obtainable, the biologist shall survey these areas from the nearest vantage point with use of spotting scopes or binoculars.

b. If construction is scheduled to occur during the non-nesting season (September 1–February 1), no preconstruction surveys or additional measures are required for non-listed avian species.

c. If construction begins in the non-nesting season and proceeds continuously into the nesting season within any particular construction or decommissioning area, no surveys are required for non-listed avian species so long as all suitable nesting sites have been cleared from active construction/decommissioning areas.

d. If active nests are found, a 300-foot no-disturbance buffer shall be created around passerine species' nests unless adjusted by the qualified biologist based on the needs and sensitivities of individual species, a 0.5-mile no-disturbance buffer for Swainson's hawk nest, and a 500-foot no-disturbance buffer around other raptor species' nests (or a suitable distance otherwise determined in consultation with California Department of Fish and Wildlife). Any nest of a federal- or State-listed bird species shall require consultation with the appropriate agency (United States Fish and Wildlife Service or the California Department of Fish and Wildlife) to determine the appropriate buffer distance surrounding the nest to provide adequate nest protection. These buffers shall remain in effect until a qualified wildlife biologist has determined that the birds have fledged or the proposed project component(s) have been redesigned to avoid the area. All no-disturbance buffers shall be delineated in the field with visible flagging or fencing material.

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Page 88:

MM 4.11-1: Prior to the issuance of grading/building permits, the project proponent shall either:

a. Keep all recorded access easements within the project boundaries free and clear of development and revise site plans accordingly and provide an updated site plan to the Kern County Planning and Natural Resources Department showing the easement and panel setbacks;

b. Record a minimum ~~30-foot-wide public~~ 20-foot-wide legal access easement traversable to a standard vehicle for APN 352-501-04 approved by the Kern County Planning and Natural Resources Director and provide an updated site plan to the Kern County Planning and Natural Resources Department showing the easement and panel setbacks

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Page 82:

Impact 4.8-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	~~Potentially~~ Less than significant	No mitigation would be required; however, implementation of Mitigation Measure MM 4.3-3 would further reduce GHG emissions from construction activities.	Less than significant

Chapter 1, Executive Summary, Table 1-9, Summary of Impacts, Mitigation Measures, and Levels of Significance, Page 90:

MM 4.11-3: Prior to the operation of the solar facility, the operator shall consult with the Department of Defense to identify the appropriate Frequency Management Office officials to coordinate the use of telemetry to avoid potential frequency conflicts with military operations. The project proponent shall be responsible for initiating such consultation prior to the commencement of construction, and such consultation shall conclude upon determination by the Department of Defense that the Project will not unreasonably interfere with military operations, including the research, development, acquisition, testing, and evaluation mission at Naval Air Weapons Station China Lake.

Chapter 3, Project Description, Pages 3-19 and 3-20:

Figure 3.10, *Phase 1 Site Plan*, and **Figure 3.11**, *Phase 2 Site Plan*, have been revised as follows, to depict the updated configuration and characteristics of the proposed project.

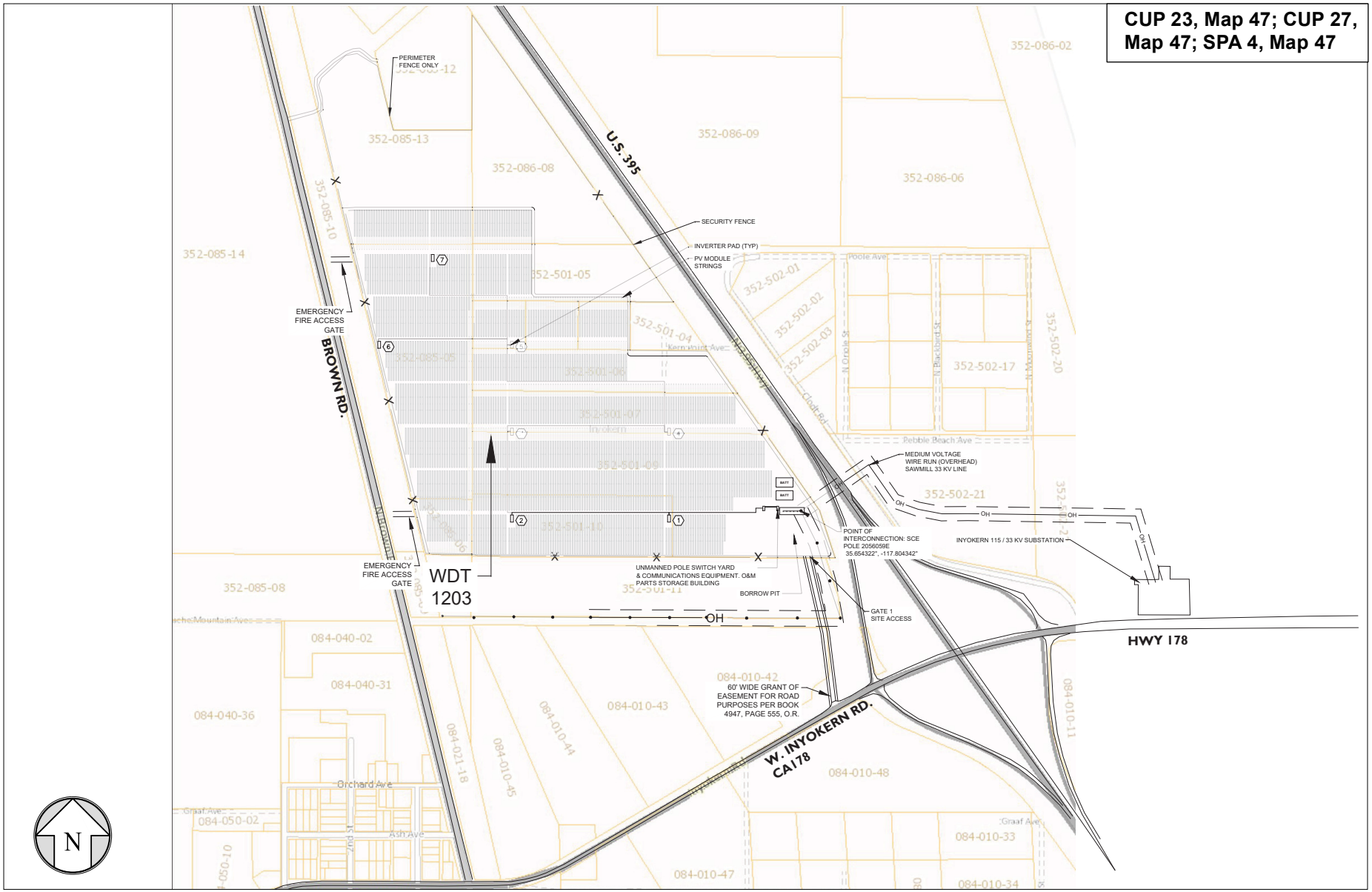

Figure 3-10: PHASE 1 SITE PLAN

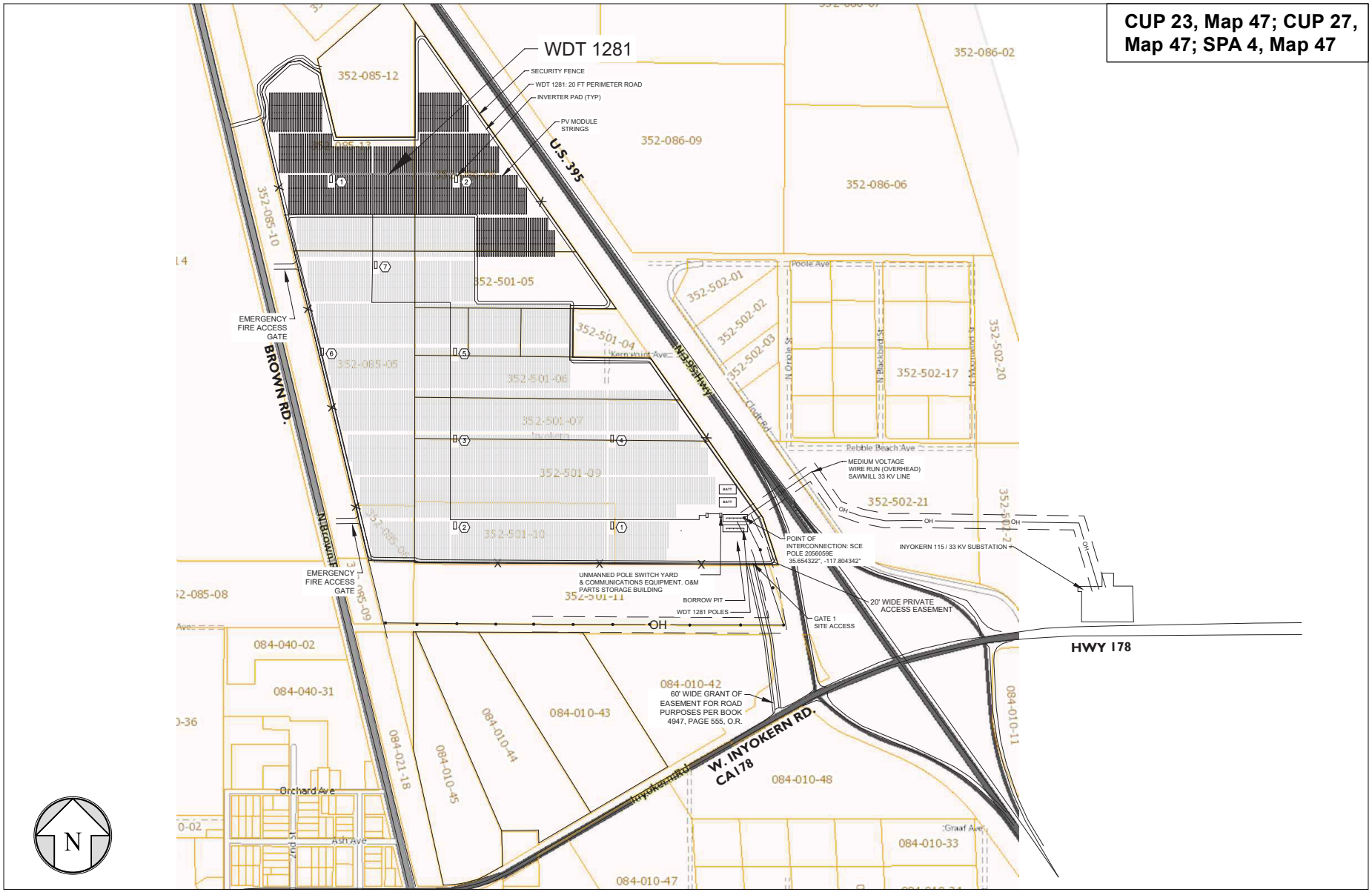

Figure 3-11: PHASE 2 SITE PLAN

Section 4.4, Biological Resources, Pages 4.4-38 and 4.4-39:

MM 4.4-4: Prior to construction, the project proponent/operator shall conduct preconstruction surveys in suitable habitat for desert tortoise and shall implement the measures described below.

a. Pre-construction tortoise clearance surveys shall be conducted at 15-foot intervals to locate any desert tortoises prior to grading or ground disturbance. The surveys shall be conducted by a~~n authorized~~ designated biologist within 24 hours of the onset of the surface disturbance and prior to the installation of all tortoise-proof fencing. ~~An "authorized biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for this project. Name(s) of proposed authorized biologist(s) must be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for approval at least 15 days prior to initiating field surveys.~~

b. Designated ~~Authorized~~ biologists shall conduct preconstruction clearance surveys for desert tortoise prior to the start of any ground disturbing construction activity.

c. If a desert tortoise is found during preconstruction surveys, no one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures and to determine whether temporary exclusionary fencing is required. Authorized biologists shall conduct clearance surveys for desert tortoises within the fenced project site after exclusionary fence installation if required by the wildlife agencies. Two surveys without finding any tortoises or new tortoise signs shall occur prior to declaring the site clear of tortoises. All burrows that could provide shelter for a desert tortoise shall be excavated during the first clearance survey. An authorized biologist shall remain onsite until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular basis throughout construction in order to ensure that the fence is intact and that no tortoises can enter the construction area.

d. Designated ~~Authorized~~ biologists shall be onsite to survey for tortoises immediately prior to vegetation clearance activities in the event a tortoise was inadvertently missed during clearance surveys. An authorized biologist shall remain on-call throughout construction in the event a tortoise wanders onto the site.

e. All construction personnel shall watch for desert tortoises within the construction area and access roads whenever driving, transporting, or operating equipment.

f. If no desert tortoises are found during preconstruction surveys, the project proponent/operator shall provide a report to U.S. Fish and Wildlife Service and

California Department of Fish and Wildlife within one week of starting construction. This report shall be prepared by the authorized biologist. Following construction, the project proponent/operator shall submit the report within 90 days, documenting applicable desert tortoise measures taken during the project such as tortoise training, fence monitoring and maintenance, etc.

g. If a desert tortoise is observed on the project site after preconstruction surveys and during construction activities, construction shall cease in the vicinity of the tortoise and the tortoise shall be allowed to pass through the area on its own accord. No one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Concurrent with this effort, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be consulted regarding any additional avoidance, minimization, or mitigation measures that may be necessary. Once the animal is observed leaving the site, work in the area can resume. A report shall be prepared by an authorized biologist to document the occurrence of the desert tortoise within the site. This report shall be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and the Kern County Planning and Natural Resources Department after the impact occurs.

Section 4.4, Biological Resources, Pages 4.4-40 and 4.4-41:

MM 4.4-6: Prior to the issuance of grading or building permits from the County, and for the duration of construction activities, and within a minimum of one-week initial ground disturbance, ~~all construction workers~~ all employees, contractors, or other person(s) working at the project site who are participating in construction of the project facilities shall attend an Environmental Awareness Training and Education Program that will be presented by an authorized biologist. Any personnel associated with construction that did not attend the initial training shall be trained by the authorized biologist prior to working on the project site.

Any employee responsible for the operations, maintenance, ~~and/or~~ decommissioning of the project facilities, and/or implementation of mitigation shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis during the duration of the project.

The Program will be developed and presented by the project qualified biologist(s) or designee approved by the qualified biologist(s). The Program shall include the components described below.

a. Information on the life history of the desert tortoise; Mohave ground squirrel, burrowing owl, Swainson's hawk, Cooper's hawk; nesting birds; as well as other wildlife, special-status plant species, and the California Department of Fish and Wildlife-regulated drainages that may be affected during construction activities. The program shall also discuss the legal protection status of each species, the definition of "take" under the Federal Endangered Species Act and

California Endangered Species Act, measures the project proponent/operator shall implement to protect the species, reporting requirements, specific measures for workers to avoid take of special-status plant and wildlife species, and penalties for violation of the requirements outlined in the California Environmental Quality Act mitigation measures and agency permit requirements.

b. An acknowledgement form signed by each worker indicating that the Worker Environmental Awareness Training and Education Program has been completed shall be kept on file at the construction site.

c. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the Worker Environmental Awareness Training and Education Program and signed acknowledgement forms shall be submitted to the Kern County Planning and Natural Resources Department.

d. A copy of the training transcript, training video or informational binder for specific procedures shall be kept available for all personnel to review and be familiar with as necessary.

e. A sticker shall be placed on hard hats indicating that the worker has completed the Worker Environmental Awareness Training and Education Program. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the Worker Environmental Awareness Training and Education Program and are wearing hard hats with the required sticker.

f. The construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits. Unauthorized impacts may result in project stoppage, and/or fines depending on the impact and consultation with the California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service.

Section 4.4, Biological Resources, Pages 4.4-45 through 4.4-48:

MM 4.4-10: The project proponent/operator shall implement the following measures, based on the recently updated California Department of Fish and Game (now California Department of Fish and Wildlife) 2012 Staff Report on Burrowing Owl Mitigation, to ensure potential impacts to burrowing owl resulting from project implementation will be avoided and minimized to less-than-significant levels:

a. A qualified wildlife biologist shall be onsite during all initial grading and construction, pre-construction ground disturbing activities, and decommissioning activities. A qualified wildlife biologist (i.e., a wildlife biologist with the ability to identify the species and possessing previous burrowing owl survey and avoidance and minimization protection experience) shall conduct pre-construction surveys of all areas that will be permanently or temporary impacted, plus a 150-meter (approximately 492-foot) buffer, to locate active breeding or wintering burrowing owl burrows. The survey(s)

shall occur no more than 14 days prior to ground-disturbing activities (i.e., exploratory geotechnical drilling, vegetation clearance, grading, etc.). The survey methodology shall be consistent with the methods outlined in the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation and shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting and mapping any potential burrows with burrowing owl signs or presence of burrowing owls. Surveys may be conducted concurrently with desert tortoise preconstruction surveys. A biologist shall prepare a preconstruction survey report that shall be submitted to California Department of Fish and Wildlife and the Kern County Planning and Natural Resources Department.

b. A qualified biologist shall conduct an additional pre-construction survey of all impact areas plus an approximately 492-foot buffer no more than 24 hours prior to start or restart (as the case may be) of ground disturbing activities associated with construction or decommissioning activities as authorized by this approval to identify any additional burrowing owls or burrows necessitating avoidance, minimization, or mitigation measures.

   If active burrowing owl burrows are detected onsite, they shall be protected in place through the use of visual screens or through California Department of Fish and Wildlife-identified restricted activity dates and setback distances (presented in Table 4.4-4, Burrowing Owl Burrow Restricted Activity Dates and Setback Distances, below), or other measures as described in the 2012 California Department of Fish and Wildlife Staff Report to minimize disturbance impacts unless otherwise authorized by California Department of Fish and Wildlife. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

TABLE 4.4-4: BURROWING OWL RESTRICTED ACTIVITY DATES AND SETBACK DISTANCES

	Level of Disturbance (m)		
Time of Year	**Low**	**Medium**	**High**
April 1–August 15	200	500	500
August 16–October 15	200	200	500
October 16–March 31	50	100	500

SOURCE: CDFW, 2012.

c. If avoidance of active burrows is infeasible, the owls can be passively displaced from their burrows according to recommendations made in the 2012 California Department of Fish and Wildlife Staff Report on Burrowing Owl Mitigation. Burrowing owls shall not be excluded from burrows unless or until:

   ~~a~~i. Occupied burrows shall not be disturbed during the nesting season generally defined as February 1 through August 31.

~~b~~ii. Before excluding owls during the non-nesting season, generally defined as September 1 through January 31, a qualified biologist meeting the Biologist Qualifications set forth in the 2012 California Department of Fish and Wildlife Staff Report, shall verify through noninvasive methods that either: (1) the owls have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls shall not be moved or excluded from burrows during the breeding season.

~~c~~iii. A Burrowing Owl Exclusion Plan is developed and approved by the applicable local California Department of Fish and Wildlife office and submitted to the Kern County Planning and Natural Resources Department. The plan shall include, at a minimum:

~~i~~1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;

~~ii~~2. Type of scope and appropriate timing of scoping to avoid impacts;

~~iii~~3. Occupancy factors to look for and what will guide determination of vacancy and excavation timing, one-way doors shall be left in place a minimum of 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily, and monitored for evidence that owls are inside and can't escape (i.e., look for sign immediately inside the door);

~~iv~~4. How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that owls do not reside in the burrow);

~~v~~5. Removal of other potential owl burrow surrogates or refugia onsite;

~~vi~~6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;

~~vii~~7. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;

~~vii~~8. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

d. Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the measures described below.

e. Temporary exclusion is mitigated in accordance with the measures described below.

f. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for 1 week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.

g. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

h. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or burlap bag shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. One-way doors shall be installed at the entrance to the active burrow and other potentially active burrows within 160 feet of the active burrow and monitored for at least 48 hours after installation. If burrows will not be directly impacted by the Project, one-way doors shall be installed to prevent use and shall be removed after ground disturbing activities have concluded in the area. Only burrows that will be directly impacted by the Project shall be excavated and filled.

i. During construction activities, monthly and final compliance reports shall be provided to the California Department of Fish and Wildlife, Kern County Planning and Natural Resources Department, and other applicable resources agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.

j. If passive relocation is required, compensatory mitigation for lost breeding and/or wintering habitat shall be implemented onsite or offsite in accordance with Burrowing Owl Staff Report guidance. The following recommendations shall be implemented:

    i. Temporarily disturbed habitat shall be restored, to pre-project conditions, including decompacting soil and revegetating. If restoration is not feasible, then the project proponent/operator shall consult with the California Department of Fish and Wildlife when determining offsite mitigation acreages, but shall be no less than 160 acres.

    ii. In order to protect habitat, the measures described below shall be implemented.

        1. Permanently conserve similar vegetation communities (grassland, scrublands, desert, and agriculture [grazing lands]) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals. Conservation shall occur in areas that support burrowing owl habitat and can be enhanced to support more burrowing owls.

        2. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission. If the project is located within the service area

of a California Department of Fish and Wildlife-approved burrowing owl conservation bank, the project proponent/operator may purchase available burrowing owl conservation bank credits.

3. Develop and implement a mitigation land management plan in accordance with Burrowing Owl Staff Report guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.
4. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.
5. Habitat shall not be altered or destroyed, and burrowing owls shall not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to California Department of Fish and Wildlife-approved management, monitoring and reporting plans (including construction of artificial burrows if necessary), and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
6. Mitigation lands shall be on, adjacent to, or in proximity to the impact site, where feasible, and where habitat is sufficient to support burrowing owls.

Section 4.4, Biological Resources, Pages 4.4-48 and 4.4-49:

MM 4.4-11: To mitigate for potential impacts to nesting birds, special-status birds <u>including the Swainson's hawk and peregrine falcon</u>, and birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during construction and decommissioning activities, the following measures shall be implemented as part of the approval for a grading or building permit:

a. During the avian nesting season (February 1–August 31), a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to initial vegetation clearing. Surveys need not be conducted for the entire project site at one time; they may be phased so that surveys occur within 7 days prior to clearing or disturbance in specific areas of the site. The surveying biologist must be qualified to determine the species, status, and nesting stage without causing intrusive disturbance. At no time shall the biologist be allowed to handle the nest or its eggs. The survey shall cover all reasonably potential nesting locations on and within 500 feet of the project site including ground nesting where species, such as California horned lark and killdeer might nest all shrubs that could support nests, and suitable raptor nest sites such as nearby trees, windrows and power poles. Swainson's hawk nest surveys will be conducted prior to construction according to the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties,*

California (California Department of Fish and Wildlife, 2010) and within a 5-mile buffer around the project site. Access shall be granted on private offsite properties prior to conducting surveys on private land. If access is not obtainable, the biologist shall survey these areas from the nearest vantage point with use of spotting scopes or binoculars.

b. If construction is scheduled to occur during the non-nesting season (September 1–February 1), no preconstruction surveys or additional measures are required for non-listed avian species.

c. If construction begins in the non-nesting season and proceeds continuously into the nesting season within any particular construction or decommissioning area, no surveys are required for non-listed avian species so long as all suitable nesting sites have been cleared from active construction/decommissioning areas.

d. If active nests are found, a 300-foot no-disturbance buffer shall be created around passerine species' nests unless adjusted by the qualified biologist based on the needs and sensitivities of individual species, a 0.5-mile no-disturbance buffer for Swainson's hawk nest, and a 500-foot no-disturbance buffer around other raptor species' nests (or a suitable distance otherwise determined in consultation with California Department of Fish and Wildlife). Any nest of a federal- or State-listed bird species shall require consultation with the appropriate agency (United States Fish and Wildlife Service or the California Department of Fish and Wildlife) to determine the appropriate buffer distance surrounding the nest to provide adequate nest protection. These buffers shall remain in effect until a qualified wildlife biologist has determined that the birds have fledged or the proposed project component(s) have been redesigned to avoid the area. All no-disturbance buffers shall be delineated in the field with visible flagging or fencing material.

Section 4.4, Biological Resources, Page 4.4-54

The residual effects on migratory birds of the project were determined to be less-than-significant. This cumulative analysis analyzes the potential for these incremental impacts of the project to combine with other past, present, and reasonably foreseeable projects to cause or contribute to a significant cumulative effect~~s~~ within the Central Valley portion of the Pacific Flyway for the duration of the project. Identified cumulative projects that involve the installation of PV panels have the potential to cause impacts to migratory birds associated with collisions. Little is known about the potential for impacts to migratory birds associated with the "fake lake effect." However, evidence suggests that significant impacts to migratory birds could occur even after mitigation. Nevertheless, accounting for the impacts of other projects in the area and acknowledging that some uncertainty remains, the cumulative impact determination in the Draft EIR was conservatively identified as significant and unavoidable~~. Further, as take authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA. Therefore, the proposed project, in combination with all identified cumulative projects, could result in a cumulatively considerable contribution to a significant cumulative impact~~.

Section 4.11, Land Use and Planning, Pages 4.11-31 and 4.11-32

MM 4.11-1: Prior to the issuance of grading/building permits, the project proponent shall either:

a. Keep all recorded access easements within the project boundaries free and clear of development and revise site plans accordingly and provide an updated site plan to the Kern County Planning and Natural Resources Department showing the easement and panel setbacks;

b. Record a minimum ~~30-foot-wide public~~ 20-foot-wide legal access easement traversable to a standard vehicle for APN 352-501-04 approved by the Kern County Planning and Natural Resources Director and provide an updated site plan to the Kern County Planning and Natural Resources Department showing the easement and panel setbacks

Section 4.11, Land Use and Planning, Page 4.11-34

MM 4.11-3: Prior to the operation of the solar facility, the operator shall consult with the Department of Defense to identify the appropriate Frequency Management Office officials to coordinate the use of telemetry to avoid potential frequency conflicts with military operations. The project proponent shall be responsible for initiating such consultation prior to the commencement of construction, and such consultation shall conclude upon determination by the Department of Defense that the Project will not unreasonably interfere with military operations, including the research, development, acquisition, testing, and evaluation mission at Naval Air Weapons Station China Lake.

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7.3 Response to Comments

A list of agencies and interested parties who have commented on the Draft EIR is provided below. A copy of each numbered comment letter and a lettered response to each comment are provided following this list.

- **Federal Agencies:**
  - Letter 1 – United States Department of the Navy, Naval Air Weapons Station China Lake (NAWSCL) (August 10, 2020)
  - Letter 2 – United States Fish and Wildlife Service (USFWS) (August 6, 2020)
- **State Agencies:**
  - Letter 3 – California Department of Transportation (Caltrans) (July 22, 2020)
- **Local Agencies:**
  - Letter 4 – Eastern Kern Air Pollution Control District (EKAPCD) (August 18, 2020)
  - Letter 5 – Eastern Kern County Resource Conservation District (EKCRCD) (August 17, 2020)
  - Letter 6 – Kern County Department of Agriculture (July 10, 2020)
  - Letter 7 – Kern County Environmental Health Division (July 7, 2020)
  - Letter 8 – Kern County Fire Department, Office of the Fire Marshall (July 8, 2020)
  - Letter 9 – Kern County Public Works Department, Administration and Engineering Division (August 17, 2020)
  - Letter 10 – Kern County Public Works Department, Floodplain Management Section (July 15, 2020)
  - Letter 11 - Kern County Public Works Department, Floodplain Management Section (July 30, 2020)
- **Interested Parties:**
  - Letter 12 – Adams, Broadwell, Joseph, and Cardozo (August 17, 2020)
  - Letter 13 – Desert Tortoise Council (August 14, 2020)
  - Letter 14 – Indian Wells Valley Well Owners Association (August 15, 2020)
- **Comment Letters Received After Comment Period**
  - Letter 15 – Kern County Public Works Department, Administration and Engineering Division (August 27, 2020)
  - Letter 16 – Kern County Public Works Department, Floodplain Management Section (August 28, 2020)
  - Letter 17 – Nancy L. Gooch (August 25, 2020)
  - Letter 18 – Pacific Gas and Electric Company (August 29, 2020)

Comment Letter 1: Department of the Navy, Naval Air Weapons Station China Lake

DEPARTMENT OF THE NAVY
NAVAL AIR WEAPONS STATION
1 ADMINISTRATION CIRCLE
CHINA LAKE, CA 93555-6100

5090
ARE2P
10 Aug 20

Ms. Ronelle Candia
2700 "M" Street, Suite 100
Bakersfield, CA 93301

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE RB INYOKERN SOLAR PROJECT BY R&L CAPITAL, INC (SCH #2017071020)

Thank you for allowing Naval Air Weapons Station (NAWS) China Lake the opportunity to comment on the Towne Place Suites Preliminary Plans. After reviewing the draft environmental impact report (EIR), NAWS China Lake has identified some areas for your consideration during the planning process in an effort to ensure military operations vital to accomplishing our national security mission are not adversely impacted. 1-A

The draft EIR appendices provides an analysis that determined the proposed flat non-glare photovoltaic panels would not impact pilots at the Inyokern Airport and NAWS China Lake. While the analysis examines the impacts to pilots, the analysis does not examine the potential affects to sensors and other sensitive testing systems within the NAWS China Lake ranges. As some solar technology may be incompatible with our military operations, further study may be required to limit potential impacts to the research, development, acquisition, testing, and evaluation (RDAT&E) mission at NAWS China Lake. 1-B

Finally, while outside the fence line, the Navy holds and manages lands that are located between the two sections of the proposed project. If any portion of the project requires access to or use of the Navy managed lands, the developer will be required to obtain a real estate agreement with NAWS China Lake. Additionally, the developer must notify the NAWS China Lake Environmental Management Division prior to conducting any activities on the Navy managed lands. 1-C

The Navy has long appreciated and valued the excellent collaborative relationship that exists between the County of Kern and the Military. This relationship ensures both compatible development and socioeconomic growth for the County while protecting and sustaining the military's mission. To this end, we welcome the opportunity to assist you and your team to collaboratively address and clarify key aspects of the proposed project to ensure compatibility with the military mission. 1-D

SUBJECT: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE RB INYOKERN SOLAR PROJECT BY R&L CAPITAL, INC (SCH #2017071020)

Once again, thank you for the opportunity to comment on the Draft EIR for the Inyokern Solar Project by R&L Capital, Inc. My point of contact for this project is Mr. John Kersey, the NAWS China Lake Community Planning Liaison Officer. He is available to meet with you or answer any questions you may have and can be reached at (760) 939-9438 or via email at John.Kersey@navy.mil.

Sincerely,

J. T. VAUGHAN
Captain, U.S. Navy
Commanding Officer

Response to Comment Letter 1: United States Department of the Navy, Naval Air Weapons Station China Lake (NAWSCL) (August 10, 2020)

1-A: The comment provides an introduction regarding the Naval Air Weapons Station (NAWS) China Lake, and its comments on the Draft EIR. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record

1-B: The comment states that the Draft EIR provides an analysis that determines the proposed flat non-glare photovoltaic panels would pose no impact on pilots at the Inyokern Airport and NAWS China Lake; however, the comment states that the Draft EIR does not examine the potential affects to sensors and other sensitive testing systems within the NAWS China Lake ranges. The comment recommends further study regarding potential impacts to limit adverse effects to the research, development, acquisition, testing, and evaluation mission at NAWS China Lake. Mitigation Measure MM 4.11-3 addresses the comment's concerns about the Project's potential to interfere with Navy sensors and other sensitive testing systems by requiring further consultation with the Department of Defense, as the comment requests. MM 4.11-3 has been modified as follows to more clearly address the comment's concerns:

> Prior to the operation of the solar facility, the operator shall consult with the Department of Defense to identify the appropriate Frequency Management Office officials to coordinate the use of telemetry to avoid potential frequency conflicts with military operations. <u>The project proponent shall be responsible for initiating such consultation prior to the commencement of construction, and such consultation shall conclude upon determination by the Department of Defense that the Project will not unreasonably interfere with military operations, including the research, development, acquisition, testing, and evaluation mission at Naval Air Weapons Station China Lake.</u>

While this modification adds clarity to the EIR, it does not reflect a new or substantially increased significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

1-C: The comment states that, while outside the fence line, the Navy holds and manages lands that are located between the two sections of the proposed project, and that if any portion of the project requires access to or use the Navy managed lands, the developer will be required to obtain a real estate agreement with NAWS China Lake. Furthermore, the comment states that the developer must notify the NAWS China Lake Environmental Management Division prior to conducting any activities on Navy managed lands. In compliance with this request, the project proponent will notify and coordinate with NAWS China Lake to obtain a real estate agreement in the event that access to Navy managed lands is required. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

1-D: The comment summarizes their appreciation for their inputs and consultation on this project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

In Reply Refer to:
FWS-KRN-15B0042-20CPA0171

August 6, 2020
Sent by Email

Ronelle Candia,
Supervising Planner
Advanced Planning Division
Planning and Natural Resources Department
Bakersfield, California 93301-2323

Subject: Draft Environmental Impact Report for the RB Inyokern Solar Project by R&L Capital, Inc. (SCH #2017071020), Kern County, California

Dear Ms. Candia:

The U.S. Fish and Wildlife Service (Service) has reviewed the draft environmental impact report for the RB Inyokern Solar Project. The County of Kern (County) is considering the issuance of a conditional use permit for the construction and operation of a photovoltaic electrical generating facility and battery energy storage. The proposed project would generate approximately 26.6 megawatts of electricity and occupy approximately 167 acres within the community of Inyokern. We are providing these comments under the authorities of the Federal Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq*., Endangered Species Act), the Migratory Bird Treaty Act (16 U.S.C. 703), and other authorities of the Department of the Interior. 2-A

DESERT TORTOISE

The proposed project lies within the range of the federally threatened desert tortoise (*Gopherus agassizii*). The draft environmental impact report notes that biologists did not detect any desert tortoises during surveys conducted during 2015. The only sign of desert tortoises was a carcass of a road-killed animal that was approximately 5 years old. For this reason, the Service does not recommend that the applicant apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Endangered Species Act. 2-B

To ensure that the proposed action does not kill or injure desert tortoises, the County has proposed several mitigation measures that the applicant would implement during construction. In general, the Service appreciates the County's inclusion of these protective measures as part of the proposed action. We note that MM 4.4-4a requires the applicant to obtain the Service's approval of authorized biologists to conduct the pre-construction tortoise clearance surveys. Because the Service is not issuing an incidental take permit for the proposed solar project, we have no authority to approve authorized biologists; therefore, we will not review their credentials. In the unlikely event that monitors find desert tortoises on site during construction, 2-C

we recommend that the County require R&L Capital, Inc., to contact our office at (760) 322-2070. 2-C (cont.)

COMMON RAVENS

We appreciate the County's support of the regional management program for the common raven (*Corvus corax*) and its inclusion of MM 4.4-8 in the draft environmental impact report. The implementation of the measures described in MM 4.4-8 should ensure that the proposed action does not contribute to the cumulative effect of common ravens on desert tortoises. 2-D

MIGRATORY BIRDS

We appreciate the County's inclusion of MM 4.4-11, which would prevent the destruction of active nests of migratory birds during construction. 2-E

We appreciate the opportunity to provide input into your planning process. If you have any questions, please contact Ray Bransfield of my staff at (805) 677-3398. 2-F

Sincerely,

BRIAN CROFT

Digitally signed by BRIAN CROFT
Date: 2020.08.06 12:07:56 -07'00'

Brian Croft
Acting Assistant Field Supervisor

Response to Comment Letter 2: United States Fish and Wildlife Service (USFWS) (August 6, 2020)

2-A: This comment summarizes the Project description and why comments are being provided. The comments are under the authorities of the Federal Endangered Species Act (FESA), the Migratory Bird Treaty Act MBTA, and other authorities of the Department of the Interior. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

2-B: The comment states that the proposed project lies within the range of the desert tortoise and that the Draft EIR notes that biologists did not detect any desert tortoise during the 2015 surveys with the exception of a road-killed animal carcass that was recorded approximately 5 years ago. Based on these results, it is recommend that the project proponent not apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Endangered Species Act. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

2-C: The comment notes the County's inclusion of protective measures to ensure that the proposed action will not kill or injure desert tortoises, and notes that it is unlikely biological monitors will find desert tortoises on site during construction. In addition, it is noted that MM 4.4-4a requires the project proponent to obtain the USFWS' approval of authorized biologists to conduct the pre-construction tortoise clearance surveys; however, since the USFWS is not issuing an incidental take permit for the proposed project, no USFWS approval for authorized biologists is required. The comment does note that if desert tortoise is identified by the proponent's biological monitors, USFWS should be contacted. Contact information for the USFWS is provided.

The lead agency concurs that Mitigation Measure MM 4.4-4 (a) should be revised to read as follows:

MM 4.4-4: Prior to construction, the project proponent/operator shall conduct preconstruction surveys in suitable habitat for desert tortoise and shall implement the measures described below.

a. Pre-construction tortoise clearance surveys shall be conducted at 15-foot intervals to locate any desert tortoises prior to grading or ground disturbance. The surveys shall be conducted by a~~n authorized~~ <u>designated</u> biologist within 24 hours of the onset of the surface disturbance and prior to the installation of all tortoise-proof fencing. ~~An "authorized biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for this project. Name(s) of proposed authorized biologist(s) must be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for approval at least 15 days prior to initiating field surveys.~~

b. <u>Designated</u> ~~Authorized~~ biologists shall conduct preconstruction clearance surveys for desert tortoise prior to the start of any ground disturbing construction activity.

c. If a desert tortoise is found during preconstruction surveys, no one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The U.S.

Fish and Wildlife Service and California Department of Fish and Wildlife shall be contacted for further guidance and consultation on additional measures and to determine whether temporary exclusionary fencing is required. Designated ~~Authorized~~ biologists shall conduct clearance surveys for desert tortoises within the fenced project site after exclusionary fence installation if required by the wildlife agencies. Two surveys without finding any tortoises or new tortoise signs shall occur prior to declaring the site clear of tortoises. All burrows that could provide shelter for a desert tortoise shall be excavated during the first clearance survey. A designated~~n authorized~~ biologist shall remain onsite until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular basis throughout construction in order to ensure that the fence is intact and that no tortoises can enter the construction area.

d. Designated ~~Authorized~~ biologists shall be onsite to survey for tortoises immediately prior to vegetation clearance activities in the event a tortoise was inadvertently missed during clearance surveys. A designated~~n authorized~~ biologist shall remain on-call throughout construction in the event a tortoise wanders onto the site.

e. All construction personnel shall watch for desert tortoises within the construction area and access roads whenever driving, transporting, or operating equipment.

f. If no desert tortoises are found during preconstruction surveys, the project proponent/operator shall provide a report to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife within one week of starting construction. This report shall be prepared by the ~~authorized~~ designated biologist. Following construction, the project proponent/operator shall submit the report within 90 days, documenting applicable desert tortoise measures taken during the project such as tortoise training, fence monitoring and maintenance, etc.

g. If a desert tortoise is observed on the project site after preconstruction surveys and during construction activities, construction shall cease in the vicinity of the tortoise and the tortoise shall be allowed to pass through the area on its own accord. No one shall be allowed to touch the tortoise without authorization from the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. Concurrent with this effort, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife shall be consulted regarding any additional avoidance, minimization, or mitigation measures that may be necessary. Once the animal is observed leaving the site, work in the area can resume. A report shall be prepared by a designated~~n authorized~~ biologist to document the occurrence of the desert tortoise within the site. This report shall be submitted to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife and the Kern County Planning and Natural Resources Department after the impact occurs.

This modification adds clarity to the EIR and does not reflect a new or substantially increased significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

2-D: The comment states appreciation for the County's inclusion of MM 4.4-8, a Raven Management Plan, which when implemented should ensure that the proposed action does not contribute to the cumulative effect of common ravens on desert tortoise. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

2-E: The comment states appreciation for the County's inclusion of MM 4.4-11, which would mitigate and prevent the destruction of active nests of migratory birds during construction. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

2-F: The comment provides contact information for any further questions. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 9
500 SOUTH MAIN STREET
BISHOP, CA 93514
PHONE (760) 872-0785
FAX (760) 872-0678
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

July 22, 2020

Ms. Ronelle Candia
Kern Planning/Natural Resources Dept.
2700 M Street, Suite 100
Bakersfield, CA 93301

File: Ker-395-23.0
DEIR
SCH #: 2017071020

RB Inyokern Solar Project Draft Environmental Impact Report (DEIR)

Dear Ms. Candia:

The California Department of Transportation (Caltrans) District 9 appreciates the opportunity to review the DEIR for the RB Inyokern Solar project near the northwest junction of State Route 178 and US 395. We offer the following: 3-A

- The Project's security fence should be placed on Project property at a distance from the US 395 barbed wire right-of-way (R/W) fence, sufficient for its maintenance within project property. 3-B

- Details regarding US 395 gen-tie crossing may be found in Section 602.4B Transverse Encroachments within Access-controlled Right-of-way of the **Encroachment Permit Manual**. Supports for overhead lines must be locate outside the access control R/W. In this case it looks to be well over 400-ft, and traffic control would be required. Underground installation would be preferred (via bore and jack or horizontal directional drilling) from outside of the R/W. This would not require traffic control. 3-C

  See: https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/encroachment-permits/chapter-6-ada.pdf

- On page 3-27, the 3rd quarter 2020 construction start schedule should be updated. 3-D

- For Caltrans encroachment permit information (for US 395 gen-tie crossing, traffic control, etc.), Stephen Winzenread - District 9 Encroachment Permit Engineer, may be contacted at (760) 872-5222 or stephen.winzenread@dot.ca.gov. 3-E

  See: https://dot.ca.gov/programs/traffic-operations/ep

We value our cooperative working relationship with Kern County regarding development impacts on the state transportation system. For any questions, feel free to contact me at (760) 872-0785 or at gayle.rosander@dot.ca.gov. 3-F

Sincerely,

Gayle J. Rosander

GAYLE J. ROSANDER
External Project Liaison

c: State Clearinghouse
Mark Reistetter, Caltrans D9

Response to Comment Letter 3: California Department of Transportation (Caltrans) (July 22, 2020)

3-A: The comment states appreciation for the opportunity to review the Draft EIR for the RB Inyokern Solar Project near the northwest junction of SR 178 and US 395. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

3-B: The comment states that the Project's security fence should be placed on the Project property at a distance from the US 395 barbed wire right-of-way (R/W) fence, sufficient for its maintenance within project property.

The security fencing around the perimeter of the Project will be installed within the parcel boundaries and not encroach upon the existing R/W of a Caltrans roadway. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

3-C: This comment states that details regarding the US 395 gen-tie crossing may be found in Section 602.4B Transverse Encroachments within Access-controlled Right-of-way of the *Encroachment Permit Manual.* In addition, the comment states that supports for overhead lines must be located outside the access control R/W which appears to be well over 400-feet away and traffic control would be required. Another option is for underground installation which is more preferred (via bore and jack or horizontal directional drilling) from outside the R/W and this activity would not require traffic control.

It should be noted that Mitigation Measure MM 4.15-1 (a) requires the Project proponent to prepare and submit a Traffic Control Plan for review and approval to Caltrans District 9 and the lead agency prior to the issuance of building permits. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

3-D: This comment refers to Draft EIR page 3-27, the 3rd quarter 2020 construction start schedule should be updated. If approved, it is anticipated that construction work will commence in the 2nd quarter of 2021. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

3-E: The comment provides contact information regarding Caltrans encroachment permit information. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

3-F: This comment states that Caltrans values their working relationship with Kern County regarding development impacts on the state transportation system and provides contact information for any further questions. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 4: Eastern Kern Air Pollution Control District

Eastern Kern
Air Pollution Control District

Glen E. Stephens, P.E.
Air Pollution Control Officer

August 10, 2020

Ronelle Candia, Supervising Planner
Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

SUBJECT: Comments for Draft Environmental Impact Report for RB Inyokern Solar Project

Dear Ms. Candia:

Eastern Kern Air Pollution Control District (District) is in receipt of the Draft Environmental Impact Report (DEIR) for the RB Inyokern Solar Project.

4-A

Commercial solar power generation facilities 10 acres and larger are required to submit a Fugitive Dust Emission Control Plan, Fugitive Dust Emission Monitoring Plan, and apply for an Authority to Construct prior to commencing construction of the facility.

Thank you for your cooperation in this matter. Should you have any questions, please telephone Samuel Johnson our office at (661) 862-5250.

Sincerely,

Glen E. Stephens, P.E.
Air Pollution Control Officer

GES:SJ:tf

Administrative Office: 2700 "M" Street, Suite 302, Bakersfield, CA 93301-2370
Phone (661) 862-5250 – Fax (661) 862-5251
www.kernair.org – ekapcd@kerncounty.com

Response to Comment Letter 4: Eastern Kern Air Pollution Control District (EKAPCD) (August 18, 2020)

4-A: The comment confirms EKAPCD's receipt of the Draft EIR and notes that solar facilities 10 acres and larger are required to submit a Fugitive Dust Emission Control Plan, Fugitive Dust Emission Monitoring Plan and apply for an Authority to Construct prior to commencing construction of the facility. As discussed in Section 4.3, *Air Quality*, of the EIR, construction and operation of the proposed project would be conducted in compliance with applicable rules and regulations set forth by the EKAPCD, including all necessary permits. Additionally, fugitive dust would be reduced through implementation of Mitigation Measures MM 4.3-1, MM 4.3-2, MM 4.3-3, MM 4.3-4, MM 4.3-5, MM 4.3-6, and MM 4.3-8, which would be implemented in conformance with the applicable EKACPD plans and regulations and Kern County General Plan Policies 20 and 21. Specifically, Mitigation Measure MM 4.3-2 requires that prior to the issuance of grading or building permits, the project proponent shall provide a comprehensive Grading Plan for review by the Kern County Planning and Natural Resources Department to reduce fugitive dust emissions resulting from wind erosion at the site. As noted, the proposed project would be required to comply with applicable EKACPD plans and regulations and, as such, the project proponent would coordinate with the EKACPD as necessary. This comment has been noted for the record.

Comment Letter No. 5: Eastern Kern County Resource Conservation District

Eastern Kern County
Resource Conservation District
300 S. Richmond Road, Ridgecrest, CA 93555
760.384.5477
FAX 760.384.5499
www.ekcrcd.org
ekcrcd@gmail.com

August 17, 2020

Ronelle Candia, Supervising Planner
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Email: CandiaR@co.kern.ca.us

Re: Draft Environmental Impact Report for RB Inyokern Solar Project Phase 1&2 by R&L Capital, Inc. (SCH #2017071020)

Dear Ms. Candia:

Thank you for the opportunity to comment on this Draft Environmental Impact Report (Draft EIR). 5-A

The Eastern Kern County Resource Conservation District (EKCRCD) recommends Alternative 1 (No Project Alternative) because of stated significant and unavoidable effects (project or cumulative), which cannot be mitigated. If Alternative 1 is not an option, then we recommend Alternative 4, No Ground-Mounted Utility-Solar Development Alternative - Distributed Commercial and Industrial Rooftop Solar Only. Those unavoidable effects enumerated in the Draft EIR include significant adverse effects on aesthetics (including glare), air quality, biological resources, hydrology and water quality, utilities and service systems, and wildfire. The EKCRCD especially objects to the effects of glare/distraction, blowing dust, and cumulative adverse effects to the rare, threatened, and endangered species, especially the Mojave ground squirrel and desert tortoise. 5-B

With respect to glare/distraction, the Draft EIR states "[with mitigation] the project would not conflict with the ALCUP and impacts would be less than significant." Any impact to aircraft is significant due to the catastrophic nature of a failure. The Draft EIR identified two possible scenarios whereby pilots and motorists could become distracted and/or visually impaired by the solar array leading to loss of life, fire, and health hazards to surrounding personnel and communities. Furthermore the Draft EIR cites no studies of how accident rates compare between airports or stretches of highway with adjacent solar arrays and those with no adjacent solar arrays. 5-C

With respect to air quality, despite mitigation sand and dust would blow across Highway 395, possibly limiting motorist visibility, and into surrounding residential areas to the east, affecting sensitive receptors and increasing the risk of valley fever for all residents. 5-D

The Mojave ground squirrel is listed as a threatened species by the state of California. According to *A Conservation Strategy for the Mohave Ground Squirrel (Xerospermophilis mohavensis)* (MGS), published in 2019 by the California Department of Fish and Wildlife (CDFW), the MGS has been sighted within the proposed project area (p. 28), and this area contains highly suitable habitat for the MGS (p. 29). Furthermore Leitner (*Trans. West. Sect. Wild. Soc.*, 44:2008) states that the proposed project area lies in a connectivity corridor between the Little Dixie Wash and the Coso Range – Olancha core populations of the species. This corridor could be important in providing a migration route for the MGS as it responds to climate change. As cited in the CDFW 2019 Strategy (p. 75), "under the assumption of increased drought and decreased precipitation, scientists predict MGS will move to the north and northwest in response to the changing environment, likely seeking drought refugia provided by the foothills of the Sierra Nevada mountain ranges." 5-E

The EKCRCD opposes removing high-quality habitat lying in a connectivity corridor for a threatened species, whether listed federally or by the state of California. 5-F

Similarly the desert tortoise (federally listed as threatened) is in jeopardy from large-scale solar development. Mortality as high as 50% can be expected from translocation, and translocation also increases mortality of tortoises native to the area that the tortoises are being translocated into. If this trend continues, it is only a matter of time before the desert tortoise becomes extinct. While we currently cannot speak to desert tortoise abundance or habitat quality within the proposed project site, surveys (currently not available on the California Energy Commission website) done for the proposed Solar Millennium project, which was located south of Highway 178 site along Brown Road, found abundant desert tortoise and high-quality tortoise habitat. If desert tortoise exist on the proposed project site, we recommend No Project as translocation is not effective mitigation. 5-G

Thank you for giving us the opportunity to comment. The EKCRCD feels that the proposed location is not suitable for solar development because it would pose unacceptable risks to humans and wildlife. 5-H

Respectfully,

Judith A. Decker (DLG)

Judith A. Decker
President, Eastern Kern County RCD

cc. Kern County Board of Supervisors
Kern County Air Pollution Control District
State Clearinghouse
Inyokern Community Services District

Response to Comment Letter 5 Eastern Kern County Resource Conservation District (EKCRCD) (August 17, 2020)

5-A: The comment states that they appreciate the opportunity to comment on the Draft EIR. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-B: The comment recommends approval of Alternative 1 (No Project Alternative) because of the proposed project's stated significant and unavoidable effects, which cannot be mitigated. If Alternative 1 is not an option, the comment recommends approval of Alternative 4, No Ground-Mounted Utility-Solar Development Alternative-Distributed Commercial and Industrial Rooftop Solar Only. The comment lists the unavoidable effects enumerated in the Draft EIR, which includes adverse effects on aesthetics, air quality, biological resources, hydrology and water quality, utilities and service systems, and wildfire. The comment specifically objects to the effects of glare/distraction, blowing dust, and cumulative adverse effects to the rare, threatened, and endangered species.

As required by CEQA, the Draft EIR evaluated a "No-Project/No-Build Alternative." This alternative, though, would not achieve any of the project's objectives, including offsetting energy generated from fossil fuels or helping to achieve California's renewable energy goals. The Draft EIR also evaluated Alternative 4: No Ground-Mounted Utility-Solar Development Alternative—Distributed Commercial and Industrial Rooftop Solar Only ("Distributed Alternative"). As the Draft EIR found, however, there are a number of drawbacks to this alternative, including prohibitively high costs, delayed buildout, and the project operator's lack of control of or access to suitable sites. Thus, while the Draft EIR finds that Alternative 4 is the environmentally superior action alternative under CEQA, it properly cautions that:

> *It is important to note that it is considered to be impracticable and infeasible to construct the Rooftop Solar Alternative within the same timeframe and/or with the same efficiency as the proposed project because the project proponent lacks control and access to the sites required to develop 26.6 MW of distributed solar generated electricity. In addition, Alternative 4 would not achieve the objective of assisting California load-serving entities in meeting their obligations under California's RPS Program.*

This comment states a preference on the part of the commenter but does not allege that the Draft EIR's alternatives discussion is inadequate. Additionally, the comment does not assert a deficiency in the Draft EIR analysis or determinations regarding hydrology and water quality, utilities and service systems, and wildfire or suggest that it be modified. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-C: This comment discusses the glare/distraction that the Draft EIR states would not conflict with the ALCUP and impacts would be less than significant. The comment states that the Draft EIR identified two possible scenarios whereby pilots and motorists could become distracted and/or visually impaired by the solar array. In addition, the comment states that the Draft EIR does not cite any studies of how accident rates compare between airports or stretches of highway with adjacent solar arrays and those with no adjacent solar arrays.

As explained in the Draft EIR in Section 4.1, *Aesthetics*, Impact 4.1-4, it is a common misconception that PV panels cause excessive glare. In contrast to concentrated solar technology, which uses mirrors to reflect sunlight to heat fluids, modern PV panels reflect as little as two percent

of incoming sunlight—less than soil or wood shingles. A Glare Study was prepared for the Project to address any potential impacts to air traffic from the Inyokern Airport and NAWS China Lake, which was included as Appendix B of the Draft EIR. As discussed, a Solar Glare Hazards Analysis Tool was used to determine the potential for glare as well as identifying the potential effects on the human eye when glare does occur. This tool meets Federal Aviation Administration (FAA) glare analysis requirements. Proposed solar operations were studied for six landing approaches for three runways located at the Inyokern Airport and six landing approaches for three runways and the ATC tower located at NAWS China Lake. As concluded by the Glare Study, there would be no glare visible from the proposed solar operations to aircrafts due to the orientation of the panels and their rotational limits.

To further reduce glare potential, the project would be required to implement Mitigation Measures MM 4.1-5 and MM 4.1-6, which require the use of non-reflective and non-glare materials when feasible. It should also be noted that the Inyokern Airport did not submit a comment regarding the project, and the comment received from the NAWS- China Lake (see Comment letter 1) did not raise any concerns regarding glare from the Project.

The comment alleges a lack of studies regarding how accident rates compare between airports or stretches of highway with adjacent solar arrays and those without adjacent solar. The comment's assertions imply that CEQA requires new studies until all uncertainty regarding existing environmental conditions or a project's impacts thereon have been removed. This is not the case. As the California Supreme Court has emphasized, an EIR need not achieve "technical perfection or scientific certainty." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515. Instead, CEQA requires "adequacy, completeness, and a good-faith effort at full disclosure." CEQA Guidelines § 15003(i). The appropriate degree of specificity and analysis a given issue warrants depends on "the nature of the project and the rule of reason." *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 679; *see also* CEQA Guidelines Section 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.").

"CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct exhaustive studies to cover every potentiality. Here, as described above, glare from solar PV arrays such as those proposed by the Project is minimal and is not expected to impact air or motor vehicle traffic. Additional studies are not warranted.

The Lead Agency reminds the commenter that CEQA requires neither scientific certainty nor exhaustiveness but rather adequacy, completeness, and a good-faith effort at full disclosure in light of what is reasonably feasible. See, e.g., Sierra Club v. City of Orange (2008) 163 Cal.App.4th 523, 544 ("CEQA requires an EIR to reflect a good faith effort at full disclosure; it does not mandate perfection, nor does it require an analysis to be exhaustive."). The comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-D: This comment asserts that sand and dust would blow across Highway 395, possibly limiting motorist visibility, and into surrounding residential areas, affecting sensitive receptors and

increasing the risk of Valley Fever. The comment does not provide evidence to support these assertions.

In addition, Section 4.3, *Air Quality*, of the Draft EIR, provides a background on Valley Fever. The Draft EIR states the *Coccidioides* spores are found in the top few inches of soil, and that Project construction ground-disturbing activities would occur from site preparation, grading, trenching as well as system installation, and testing, commissioning, cleanup and restoration. The proposed project has the potential to generate fugitive dust and suspend Valley Fever spores with the dust that could then reach nearby sensitive receptors. The Draft EIR states that it is possible that onsite workers could be exposed to valley fever as fugitive dust is generated during construction.

Implementation of Mitigation Measure MM 4.3-11 would provide training and personal protective respiratory equipment to construction workers and provide information to all construction personnel and visitors about Valley Fever. Mitigation Measure MM 4.3-12 would require a one-time fee shall be paid to the Kern County Public Health Services Department in the amount of $3,200 for Valley Fever public awareness programs. With the implementation of Mitigation Measures MM 4.3-11 and MM 4.3-12, dust from the construction of the proposed project would not add significantly to the existing exposure level of people to this fungus, including construction workers, and impacts would be reduced to less-than-significant levels.

The project would also implement Mitigation Measures MM 4.3-1 through MM 4.3-10, which requires compliance with Eastern Kern Air Pollution Control District rules, regulations and codes, including a Fugitive Dust Emission Monitoring Plan, and to obtain an Authority to Construct and an Authority to Operate permit from the Air District. With the implementation of the mitigation measures and compliance with Air District requirements, dust from the construction of the proposed project would not add significantly to the existing exposure level of people to this fungus, including construction workers, and impacts would be reduced to less-than-significant levels.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-E: This comment references two reports, *A Conservation Strategy for the Mohave Ground Squirrel* (*Xerospermophilis mohavensis*) published by CDFW in 2019 and *Trans. West. Sect. Wild. Soc*., 44:2008 published by Leitner. The comment states that according to the first report that the proposed Project site is located in an area where Mohave ground squirrel (MGS) have been sighted and that the area contains highly suitable habitat for MGS. Regarding the second report, the comment states that the Project site lies in a connectivity corridor between the Little Dixie Wash and Coso Range-Olancha core populations. Finally, the comment refers back to CDFW 2019 stating that "under the assumption of increased drought and decreased precipitation, MGS will move to the north and northwest in response to changing environment, likely seeking drought refugia provided by the foothills of the Sierra Nevada mountain ranges."

The comment is correct that there are the reported occurrences of MGS in the general area, which are published in biological baseline reports and in the 2081 permit application submitted in February 2020. However, given the relative isolation of the site from occupied habitats to the north, south, or west due to residential development in adjacent areas, habitat quality and suitability are diminished at the Project site. The comment is likely referring to Figure 1 in CDFW (2019) with regards to connectivity. The resolution of CDFW's map is too low to accurately determine the boundaries of the connectivity corridors. In this area, it appears to coincide with Highway 395. Because the subject property is in between highway and residential developments, it is at best at

the boundary of the linkage and very likely already impaired as a connector because of existing highway and residential development. Since the main part of the connectivity corridor is west of the developed portions of the developed portions of Inyokern, the project would not affect MGS seeking drought refugia in the foothills of the Sierra Nevada.

Additionally, the Project proponent will obtain a Section 2081 Incidental Take Permit (ITP) from the California Department of Fish and Wildlife (CDFW) that specifically covers MGS and desert tortoise. Appropriate measures are recommended and include the purchase of CDFW approved compensation lands to mitigate for the loss of habitat. With the issuance of the ITP, impacts to MGS and desert tortoise would be considered less than significant.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-F: The comment states that they oppose removing high-quality habitat lying in a connectivity corridor for a threatened species, whether listed federally or by the State of California.

As per response to Comment 5-E, the site is not considered to be high-quality habitat, nor does it detract from habitat connectivity, as the main functional portion of the connectivity corridor lies between the Inyokern Airport and foothills of the Sierra Nevada up to about 6,000 feet elevation. Residential development between Highway 395 and areas west of the airport have already eliminated connectivity in the immediate area of the subject property.

As noted in Section 4.4, *Biological Resources*, of the Draft EIR and in the reports prepared for the Project (see Draft EIR Appendix D), the project site is generally disturbed by a variety of previous uses, and native plant cover and diversity is typically low within disturbed areas on the site. There are disturbances in several locations on that have resulted in conditions that promote the growth of non-native species. There is no biological evidence to assert the site is "pristine" in nature. The project is required to comply with Mitigation Measures MM 4.4-1 through MM 4.4-11 and those requirements imposed by the CDFW Section 2081 ITP.

This comment has been noted for the record and no revisions to the Draft EIR are warranted.

5-G: The comment states that desert tortoise are in jeopardy from large-scale solar developments and that desert tortoise experience up to 50 percent mortality from translocation. In addition, the comment asserts there is an increase in mortality of tortoises native to the area that the tortoises are being translocated into. The comment also states the Solar Millennium project would have been located south of Highway 178 along Brown Road and that surveys for that project found an abundance of desert tortoise and high-quality tortoise habitat. The comment recommends approval of the No Project Alternative because the comment claims that translocation is not effective mitigation for desert tortoise.

During focused tortoise surveys in 2015, the carcass piece of a recently-dead adult tortoise was the only tortoise sign found. During subsequent MGS trapping in 2015, reconnaissance surveys in 2016, and biological monitoring during an unrelated pipeline project in 2020, no evidence of living tortoises were found on the subject property. The pipeline project was conducted on the property directly south of the subject project. Since 2015 two additional carcasses consisting of disarticulated shell fragments were found on-site, which may have been brought onto the site by a raven, dog, or other opportunistic scavenger. No evidence of living tortoises (e.g., especially scat, burrows, tracks, etc.) has been found. Given these observations, tortoises are unlikely to occur on the site and translocation is not likely required. If a tortoise is discovered by clearance surveys at

the time of construction, both CDFW and USFWS shall be contacted to ensure the latest scientific methods are implemented to ensure the displaced tortoise is safely introduced into safe habitats, likely south of the community of Inyokern, very near the abandoned Solar Millennium solar site.

Solar Millennium's Ridgecrest Solar Power Project was a proposed solar thermal project that is a completely different technology from the PV solar project proposed by the proponent. The California Energy Commission (CEC) staff recommended against approving because of damage to desert wildlife and the project was terminated in 2014.

There is no indication that desert tortoise occupies or uses the Project site. The observation of a tortoise carcass was noted in the Draft EIR. It is also important to note that USFWS explicitly states they do not recommend that desert tortoise be covered under an ITP (see Response 2-B), precisely because the species is unlikely to occupy the Project site or otherwise be impacted by the Project. However, as noted in Response 5-E, above, the Project will obtain an ITP that covers desert tortoise. It should also be noted that MM 4.4-5 requires that the project proponent retain the services of a qualified biologist who meets the qualifications of the USFWS prior to the issuance of grading permits. Compliance with this measure would ensure that potential impacts to biological resources such as desert tortoise, Mohave ground squirrel, and other special status wildlife and plant species would be less than significant.

See also Response 2-B and 2-C. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

5-H: This comment states that the EKCRCD feels that the proposed location is not suitable for solar development because it would pose unacceptable risks to humans and wildlife.

The comment does not provide any evidence that the project would pose unacceptable risks to humans and wildlife. Nor does the comment provide any support for its assertions. The Draft EIR thoroughly discusses the project's potential impacts and provides sufficient mitigation measures to reduce impacts to less than significant levels. The comment provides no specifics regarding the adequacy of the Draft EIR and does not contradict the foundational "rule of reason" that governs CEQA. See, e.g., A Local & Regional Monitor, 12 Cal.App.4th at 1794 ("In reviewing the sufficiency of an EIR, the rule of reason applies."); Sierra Club, 163 Cal.App.4th at 544 ("CEQA requires an EIR to reflect a good faith effort at full disclosure; it does not mandate perfection, nor does it require an analysis to be exhaustive."); Chaparral Greens v. City of Chula Vista (1996) 50 Cal.App.4th 1134, 1145 (same); Kings County, 221 Cal.App.3d at 712 (same).

This comment has been noted for the record and no revisions to the Draft EIR are warranted.

Comment Letter 6: Kern County Department of Agriculture

July 10, 2020

Kern County Planning and Natural Resources Department
2700 “M” Street, Sutie 100
Bakersfield, CA 93301
Attb: Janice Mayes

Re: Kern County Department of Agriculture Comments Regarding Planning Dept. Project SCH#2017071020

To Whom It May Concern,

The Kern County Department of Agriculture, as the local agricultural authority, has received a request for comments regarding a Draft EIR for RB Inyokern Solar Project. Upon initial review, we have the following input as it relates to our department responsibilities.

The applicant shall determine if they are subject to provisions of the California Desert Native Plants Act (CDNPA). The provisions of the act can be found in the California Food and Agricultural Code, Division 23, Sections 80001-80201.

The purpose of the CDNPA is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or agricultural commissioner of the county where collecting will occur, and the county will charge a fee. Asian Citrus Psyllid (ACP)

6-A

Please feel free to contact our office.

With appreciation,

Darin Heard
Assistant Agricultural Commissioner
Kern County Dept. Agriculture

Response to Comment Letter 6: Kern County Department of Agriculture (July 10, 2020)

6-A: The comment provides an introductory comment and describes the Kern County Department of Agriculture as the local agricultural authority. The comment states that the project proponent needs to determine whether the project site is subject to the provisions of the California Desert Native Plants Act (CDNPA). The comment goes on to describe the purpose of the CDNPA. As described in Section 4.4, *Biological Resources*, of the Draft EIR, the Phase 1 project site is vegetated mostly by Mojave creosote bush scrub, which tends more towards allscale (saltbush) scrub in the north portion of Phase 1 and the Phase 2 project site is mainly dominated by allscale (saltbush) scrub. Furthermore, as discussed throughout Section 4.4, Biological Resources, of the Draft EIR, the project would comply with the applicable provisions of the CDNPA. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

KERN COUNTY
Public Health Services
DEPARTMENT

MATTHEW CONSTANTINE
DIRECTOR

2700 M STREET, SUITE 300 BAKERSFIELD, CALIFORNIA, 93301-2370 VOICE: 661-862-8740 FAX: 661-862-8701 WWW.CO.KERN.CA.US/EH

INTEROFFICE MEMORANDUM

To: Ronelle Candida Date: July 7, 2020
From: Evelyn Elizalde
Subject: Draft EIR for RB Inyokern Solar Project

The Kern County Environmental Health Division has reviewed the above referenced project. This Division has the local regulatory authority to enforce state regulations and local codes as they relate to waste discharge, water supply requirements, and other items that may affect the health and safety of the public or that may be detrimental to the environment.

The Environmental Health Division requests that the following conditions be placed on the subject project and be satisfied prior to issuance of building permits:

1. Please log in to the California Environmental Reporting System (CERS) at http://cers.calepa.ca.gov/ and create an account and facility. If you have questions on what needs to be uploaded please contact Bilal Korin at (661)862-8730 or korinb@kerncounty.com
2. The method of water supply and sewage disposal for the proposed project shall be approved by Kern County Environmental Health Division.
3. If any abandoned wells are found during the grading and construction process, the applicant shall contact the Land and Water Division for permitting and destruction procedures.

7-1

Response to Comment Letter 7: Kern County Environmental Health Division (July 7, 2020)

7-A: The comment states that the Kern County Environmental Health Division (EHD) reviewed the Draft EIR and states the EHD has the local regulatory authority to enforce state regulations and local codes as they relate to waste discharge, water supply requirements, and other items that may affect the health and safety of the public. The Lead Agency acknowledges that the EHD is the responsible agency to enforce State regulations and local codes as they relate to waste discharge, water supply requirements and other items affecting public health.

The comment requests that three conditions be placed on the project prior to the issuance of building permits, including: 1) creating an account with the California Environmental Reporting System (CERS); 2) approval of water supply and sewage disposal by the Kern County Environmental Health Division; and 3) coordination with the Land and Water Division if abandoned wells are encountered during the grading and construction process. Mitigation Measure MM 4.9-1 requires registration with CERS and the preparation of a Hazardous Materials Business Plan. As discussed in Chapter 3, *Project Description,* the project would not require permanent employees; therefore, no septic tanks or permanent toilets would be required, and no permanent water source is necessary. Water for day to day maintenance will be either from an on-site water well or trucked onto the site. The Inyokern Community Services District would provide water during construction and operation of the project.

In compliance with EHD's request, as a condition of approval, the Conditional Use Permit will require the project proponent to coordinate with Kern County Environmental Health Division if abandoned water wells are discovered during constructions activities. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Office of the Fire Marshal
Kern County Fire Department

Fire Prevention
2820 M St. • Bakersfield, CA 93301 • www.kerncountyfire.org
Telephone 661-391-3310 • FAX 661-636-0466/67 • TTY Relay 800-735-2929

July 8, 2020

Kern County Planning and Natural Resources Department
2800 M St., Bakersfield, CA 93301
Attn.: Ronelle Candia

Re: Kern County Fire Department Comments Regarding Planning Department Project CUP 23, Map #47 & SPA 4, Map #47

To Whom It May Concern,

The Kern County Fire Department (KCFD), as the local fire authority, has received a request for comments regarding Draft EIR for RB Inyokern Solar Project (SCH#2017071020). Upon initial review, it has been determined that all ground mounted solar array projects over 1MW will require Fire Department plan review prior to construction and meet requirements set forth in KCFD Solar Panel Standard #503-507. All Stationary Energy Storage Systems must be applied for directly with KCFD for separate permitting and pre-construction approval.

A more detailed review and project comments will be conducted when the building permit is pulled and plans are submitted to KCFD.

8-A

Please feel free to call our Fire Prevention Office at 661-391-3310 with any questions.

Sincerely,
Michael Nicholas
Assistant Fire Marshal
Kern County Fire Department

Response to Comment Letter 8: Kern County Fire Department, Office of the Fire Marshall (July 8, 2020)

8-A: The comment describes the Kern County Fire Department's (KCFD) local regulatory authority to enforce state and local codes related to fire protection and health and safety. The comment states that all ground mounted solar array projects over 1 megawatt (MW), like the project, will require KCFD review and meet requirements set forth in KCFD Solar Panel Standard #503-507. The project proponent will also need to secure a separate KCFD permit for any proposed stationary energy storage systems. The Lead Agency acknowledges that the project will require KCFD review and acknowledges that a permit would be required for the proposed Energy Storage System (ESS) and that the KCFD would be the responsible regulatory authority for the project. Kern County Fire Department is identified in Section 2.6.4, of the Draft EIR, as a Local Responsible Agency. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 9: Kern County Public Works Department, Administration and Engineering Division

COUNTY OF KERN
PUBLIC WORKS DEPARTMENT
Office Memorandum

To: Lorelei Oviatt, Director
Planning and Natural Resources Department
Attn: Ronelle Candia, Supervising Planner

August 17, 2020

From: Joshua Champlin, Supervising Engineer
Administration and Engineering Division

Subject: 7-5.3 Draft Environmental Impact Report for the RB Inyokern Solar Project by R&L Capital, Inc. (SCH#2017071020).

This Department has reviewed the Draft Environmental Impact Report for the subject project and concurs with its' findings and Mitigation Measure MM 4.15-1. However, we do recommend the following:

1. Please contact the California Department of Transportation since State Route 395 and State Route 178 is under their jurisdiction.

9-A

Thank you for the opportunity to comment on this project, if you have any questions or comments please contact Paul Candelaria of this department.

Response to Comment Letter 9: Kern County Public Works Department, Administration and Engineering Division (August 17, 2020)

9-A: The comment expresses appreciation for the opportunity to comment on the project and concurs with the findings and Mitigation Measure 4.15-1. The comment recommends that the California Department of Transportation be contacted, since State Route 395 and State Route 178 are both under their jurisdictions. In compliance with this recommendation, the California Department of Transportation is included in the notification process regarding this EIR through the State of California Office of Planning and Research. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 10: Kern County Public Works Department, Floodplain Management Section

Office Memorandum

KERN COUNTY

To: Planning and Natural Resources Department
Ronelle Candia

Date: July 15, 2020

From: Public Works Department
Floodplain Management Section
Kevin Hamilton, by Brian Blase

Phone: (661) 862-5098
Email: BlaseB@kerncounty.com

Subject: Draft Environmental Impact Report
RB Inyokern Solar Project

Our section has reviewed the attached subject documents and has the following comments:

The runoff of storm water from the site will be increased due to the increase in impervious surface generated by the proposed development.

The subject property is subject to flooding.

Therefore, this section recommends the following be included as Conditions of Approval for this project:

The applicant shall provide a plan for the disposal of drainage waters originating on site and from adjacent road right-of-ways (if required), subject to approval of the Engineering, Surveying and Permit Services Department, per the Kern County Development Standards.

Associated flood hazard requirements will need to be incorporated into the design of this project per the Kern County Floodplain Management Ordinance.

10-A

Response to Comment Letter 10: Kern County Public Works Department, Floodplain Management Section (July 15, 2020)

10-A: The comment notes that the project site is subject to flooding, that runoff of storm water from the site would increase due to the increase in impervious surface generated by the proposed project, and requests that the following be included as Conditions of Approval for this project:

> *The applicant shall provide a plan for the disposal of drainage waters originating on site and from adjacent road right-of-ways (if required), subject to approval of the Public Works Department, per the Kern County Development Standards.*
>
> *Associated flood hazard requirements will need to be incorporated into the design of this project per the Kern County Floodplain Management Ordinance.*

The Draft EIR identifies that the proposed project would result in an increase in impervious surfaces, which in turn, would result in an increase in stormwater runoff. Specifically, new impervious surfaces would be associated with newly-constructed access roads, PV module and other equipment foundations, substations, energy storage systems, the operations and maintenance building, and other improvements. The vast majority of the project site would remain pervious and absorb most precipitation. Further, as described in Draft EIR Section 4.10, *Hydrology and Water Quality*, the proposed project must comply with the requirements of the Kern County Code of Building Regulations, as well as with Kern County Development Standards, the Floodplain Management Ordinance, and the Kern Country Water Quality Control Plan.

As discussed in Section 4.10, *Hydrology and Water Quality*, Draft EIR page 4.10-19, per Mitigation Measure MM 4.10-1, a drainage plan would be prepared in accordance with the Kern County Development Standards and Kern County Code of Building Regulations. The Kern County Development Standards establish guidelines including but not limited to site development standards and mitigation, flood control requirements, erosion control, and on-site drainage flow requirements. Therefore, with adherence to all existing regulations regarding erosion and site drainage, the proposed project would neither alter the course of a stream or river nor result in substantial erosion onsite or offsite. Implementation of Mitigation Measure MM 4.10-1 and a stormwater pollution prevention plan (SWPPP), as described in the Draft EIR and required to be implemented for the proposed project, would reduce impacts to a less-than-significant level. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 11: Kern County Public Works Department, Floodplain Management Section

Office Memorandum

KERN COUNTY

To: Planning and Natural Resources Department
Ronelle Candia

Date: July 30, 2020

From: Public Works Department
Floodplain Management Section
Kevin Hamilton, by Brian Blase

Phone: (661) 862-5098
Email: BlaseB@kerncounty.com

Subject: Air Quality Impact Assessment with Draft Environmental Impact Report
RB Inyokern Solar Project

From the information supplied, we have no comments or recommendations regarding the above project.

11-A

Response to Comment Letter 11: Kern County Public Works Department, Floodplain Management Section (July 30, 2020)

11-A: The comment states that the Kern County Public Works Department, Floodplain Management Section reviewed the Draft EIR and states that they have no comments on the Draft EIR. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter No. 12: Adams, Broadwell, Joseph, and Cardozo

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
nlotan@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
ANDREW J. GRAF
TANYA A. GULESSERIAN
KENDRA D. HARTMANN*
KYLE C. JONES
RACHAEL E. KOSS
NIRIT LOTAN
AARON M. MESSING
WILLIAM C. MUMBY

MARC D. JOSEPH
Of Counsel

Not admitted in California. Licensed in Colorado.

August 17, 2020

VIA EMAIL AND U.S. MAIL

Lorelei H. Oviatt AICP, Director
Planning & Natural Resource Department
Kern County
2700 M Street, Suite 100
Bakersfield, CA 93301-2370
Email: loreleio@co.kern.ca.us

VIA EMAIL ONLY

Craig Murphy, Assistant Director
Email: murphyc@co.kern.ca.us

Ronelle Candia, Supervising Planner
Email: candiar@kerncounty.com

Re: Comments on the Draft Environmental Impact Report – RB Inyokern Solar Project (SCH No. 2017071020)

Dear Ms. Oviatt, Mr. Murphy and Ms. Candia:

We are writing on behalf of Citizens for Responsible Solar to provide comments on the Draft Environmental Impact Report ("DEIR") prepared for the RB Inyokern Solar Project (SCH No. 2017071020) ("Project") proposed by R&L Capital Inc. ("Applicant"). The project proposes to construct and operate a 26.6 megawatt (MW) solar photovoltaic electrical generating facility and battery energy storage on approximately 166.5 acres of privately-owned land in the unincorporated community of Inyokern in the eastern high desert region of Kern County, California ("County"). The proposed Project would interconnect to an existing Southern

12-A

California Edison (SCE) 33-kilovolt (kV) electrical distribution line to an existing SCE Inyokern Substation approximately 0.5 miles to the east.

The Applicant is requesting a Conditional Use Permit (CUP) from Kern County for the construction and operation of the 20 MW Phase 1 solar PV electrical generating facility on approximately 124.5 acres and the construction and operation of the 6.6 MW Phase 2 solar PV electrical generating facility on approximately 41.93 acres.

12-A (cont.)

Based on our review of the DEIR, appendices, and other relevant records, we have determined that the DEIR fails to meet the requirements of the California Environmental Quality Act ("CEQA"). Specifically, the DEIR suffers from the following deficiencies:

- Failure to provide a proper project description as required under CEQA;
- Failure to properly establish the environmental setting for and adequately disclose, analyze and mitigate the Project's impacts on biological resources;
- Failure to adequately disclose and analyze the Project's impacts on air quality and from greenhouse gas emissions;

12-B

For each of these reasons, the County must revise and recirculate the DEIR in order to properly disclose, analyze, and mitigate the Project's significant impacts. The County cannot certify the EIR or approve the project until a revised draft EIR addresses these issues.

These comments were prepared with the assistance of conservation biologist Renee Owens and air quality experts Matt Hagemann and Paul E. Rosenfeld of Soil/Water/Air Protection Enterprise ("SWAPE"). Ms. Owens' comments and curricula vitae are attached to this letter as **Exhibit A**.[1] SWAPE's technical

12-C

[1] **Exhibit A** – Letter from Renee Owens re: Comments on the Draft Environmental Impact Report for RB Inyokern Solar dated August 16, 2020. ("Exhibit A").

comments and curriculum vitae are attached to this letter as **Exhibit B**.[2] Exhibits 1 and 2 are fully incorporated herein and submitted to the County herewith. Therefore, the County must separately respond to the technical comments of SWAPE and Ms. Owens in addition to our comments.

12-C (cont.)

I. STATEMENT OF INTEREST

Citizens for Responsible Solar ("Citizens") is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The association includes California Unions for Reliable Energy and its member labor organizations, and their members and families, and other individuals that live and/or work in Kern County.

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

12-D

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

Finally, the organizational members of the Citizens are concerned about projects that risk serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits

[2] **Exhibit B** – Letter from SWAPE to Nirit Lotan re: Comments on the RB Inyokern Solar Project (SCH No. 2017071020) dated July 28, 2020 ("Exhibit B").

are weighed against significant impacts to the environment and it is in this spirit that we offer these comments. 12-D (cont.)

II. LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an EIR, except in limited circumstances.[3] The EIR is the very heart of CEQA.[4] "The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[5]

CEQA has two primary purposes. First, CEQA is designed to inform decisionmakers and the public about the potential, significant environmental effects of a project.[6, 7] CEQA's purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. In this respect, an EIR "protects not only the environment but also informed self-government."[8] 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." 12-E

To fulfill this function, the discussion of impacts in an EIR must be detailed, complete, and "reflect a good faith effort at full disclosure."[9] CEQA requires an EIR to disclose all potential direct and indirect, significant environmental impacts of a project.[10] In addition, an adequate EIR must contain the facts and analysis necessary to support its conclusions.[11]

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[3] *See, e.g.,* Pub. Res. Code § 21100.
[4] *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.
[5] *Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal. App.4th 98, 109.
[6] 14 Cal. Code Regs. ("**CEQA Guidelines**"), § 15002, subd. (a)(1).
[7] See, e.g., Pub. Resources Code § 21100.
[8] *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.
[9] CEQA Guidelines § 15151; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 721-722.
[10] Pub. Resources Code § 21100, subd. (b)(1); CEQA Guidelines § 15126.2, subd. (a).
[11] See *Citizens of Goleta Valley* 52 Cal.3d at 568.

The second purpose of CEQA is to require public agencies to avoid or reduce environmental damage when possible by requiring appropriate mitigation measures and through the consideration of environmentally superior alternatives.[12] 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." To that end, if an EIR identifies significant impacts, it must then propose and evaluate mitigation measures to minimize these impacts.[13] CEQA imposes an affirmative obligation on agencies to avoid or reduce environmental harm by adopting feasible project alternatives or mitigation measures.[14] Without an adequate analysis and description of feasible mitigation measures, it would be impossible for agencies relying upon the EIR to meet this obligation.

12-F

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."[15] As the courts have explained, "a prejudicial abuse of discretion" occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process."[16]

III. THE DEIR FAILS TO ADEQUATELY DESCRIBE THE PROJECT

12-G

The DEIR fails to meet CEQA's requirements because it lacks an accurate, complete, and stable project description, rendering the entire environmental

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[12] CEQA Guidelines § 15002, subds. (a)(2)-(3); see also, *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564; *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 391, 400.
[13] Pub. Res. Code §§ 21002.1, subd. (a), 21100, subd. (b)(3).
[14] Pub. Res. Code §§ 21002-21002.1.
[15] *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.
[16] *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.

impacts 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]."[17] CEQA requires that a project be described with enough particularity that its impacts can be assessed.[18] Accordingly, a lead agency may not hide behind its failure to obtain a complete and accurate Project description.[19]

It is impossible for the public to make informed comments on a project of unknown or ever-changing description. California courts have held that "a curtailed or distorted project description may stultify the objectives of the reporting process."[20] Furthermore, "only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost…"[21] Without a complete project description, the environmental analysis under CEQA is impermissibly limited, thus minimizing the project's impacts and undermining meaningful public review.[22]

12-G (cont.)

Despite this clear mandate, all the DEIR provides in the Project Description section regarding the proposed energy storage systems ("ESS") is the following short statement:

> The proposed project may have up to two onsite ESS (one for each facility developed). Each ESS would be able to provide at least four hours of energy storage capacity for the electric grid. Each ESS would occupy approximately a 65-by-150-foot area within the project site and would consist of battery storage modules placed in either multiple prefabricated enclosures or steel buildings near the onsite switchyard.
> The ESS would either be installed contemporaneously or after the installation of the PV facilities. *The final location is dependent on final design and may require construction of a vault or other form of supporting*

[17] *County of Inyo v. City of Los Angeles* (3d Dist. 1977) 71 Cal.App.3d 185, 193.
[18] *Id.* at p. 192.
[19] *See Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 311.
[20] *County of Inyo v. City of Los Angeles* (3d Dist. 1977) 71 Cal.App.3d 185, 192.
[21] *Id.* at p. 192-193, p. 198.
[22] *See, e.g., Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1988) 47 Cal.3d 376.

> *foundation similar to other structures onsite*. The ESS would consist of battery banks housed in electrical enclosures and buried electrical conduit. The battery enclosures would have fire suppression equipment installed that automatically suppress thermal emergencies. *Although the energy storage technology has not been determined at this time*, it could include any commercially available battery technology, including but not limited to lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride or any type of flow batteries (…)[23]

As is clear from this quote, the County fails to provide the most basic information regarding the ESS, including its location, the type of energy storage technology that will be used and its design. The DEIR therefore fails as an informational document. Moreover, characteristics of the Project have direct impacts on Project's potentially significant impacts from fire and hazardous chemicals, and they must be disclosed. In addition, SWAPE lists the following information as missing information that must be disclosed:

12-G (cont.)

> a) A volume estimate of the number and type of chemical suppressants and water sources and water volumes that may be necessary to fight a reasonable worst case fire scenario;
> b) A list of all chemical components in the batteries under consideration including chemicals in the electrolyte;
> c) Plans to show that secondary containment would be adequate to handle the volume of chemicals and any water required to fight a worst-case scenario fire;
> d) A list of all chemicals that are anticipated to be necessary to fight a battery fire;
> e) A Spill Prevention and Response Plan to address specific hazardous materials necessary for operation; and
> f) An Emergency Action Plan to include ability of local resources to fight a lithium ion battery fires and an evaluation of response times.[24]

[23] DEIR, p. 3-21, 3-22, emphasis added.
[24] Exhibit B: SWAPE comments, p. 3.

The DEIR must be revised to properly describe all Project's component, including relevant details regarding the ESS characteristics and components. 12-G (cont.)

IV. THE DEIR FAILS TO ESTABLISH THE EXSITING SETTING FOR THE PROJECT

CEQA requires that an EIR will include a description of the physical environmental conditions in the vicinity of the project, also known as "baseline" conditions.[25] The existing environmental setting is the starting point from which the lead agency must measure whether a proposed project may cause a significant environmental impact.[26]

Describing the environmental setting accurately and completely for each environmental condition in the vicinity of the Project is critical to an accurate, meaningful evaluation of environmental impacts. The courts have clearly stated that "[b]efore the impacts of a project can be assessed and mitigation measures considered, an [environmental review document] must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined."[27] 12-H

The DEIR, however, fails to properly describe the environmental setting both for a long list of biological resources and for hazards and hazardous materials on the Project site, as described below.

A. The DEIR Fails to Establish the Existing Setting for Desert Tortoise

According to the DEIR and the biological reports, the only focused survey for the Endangered Species Act (ESA) listed Desert Tortoise (DT) were conducted in 12-I

[25] 14 CCR § 15125.
[26] *See, e.g.*, *Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.* (March 15, 2010) 48 Cal.4th 310, 316; *Fat v. County of Sacramento* (2002) 97 Cal.App.4th 1270, 1278 ("*Fat*"), citing Remy, et al., Guide to the Calif. Environmental Quality Act (1999) p. 165.
[27] *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 952.

2015.[28] The DEIR reliance on this five years old survey violates CEQA in two separate ways – first, because it violates the CEQA mandate that DEIRs will make impacts determinations based on existing conditions at the time the NOP is published and second, because it violates CEQA mandate that existing conditions will represent the most accurate and understandable picture practically possible of the Project's impacts, because it completely fails to account for the substantial differences between rainy and dry years.

CEQA requires that the lead agency generally describes physical environmental conditions

> "…*as they exist at the time the notice of preparation is published,* or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective."[29]

The notice of preparation ("NOP") for this project was published and circulated in July 2017. [30] Therefore, as a starting point, the DEIR must at the very least include a survey from 2017 to properly represent existing conditions. By failing to conduct a survey at the time the NOP was published, the County violated CEQA.

12-I (cont.)

Second, the CEQA Guidelines are clear regarding the purpose of establishing the existing conditions for a project site. As stated in the "Environmental Setting" Guidelines:

> "The purpose of this requirement is to give the public and decision makers *the most accurate and understandable picture practically possible* of the project's likely near-term and long-term impacts."[31]

As explained by Ms. Owens in her comments, the scientific reality is that ecosystems are not static. To gain a comprehensive and scientifically accurate

[28] Exhibit A, p. 2.
[29] 14 CCR § 15125(a)(1), emphasis added.
[30] DEIR, p. 2-4.
[31] 14 CCR § 15125(a). emphasis added.

baseline, it is impossible to rely on one point in time, especially when trying to make determinations for projects that are expected to operate for several decades. Therefore, a more comprehensive review is needed.[32]

One major factor in changes in ecosystems is rain. Wetter rainy seasons can have a substantial impact on habitats. Thus, it is important that the existing conditions discussion take into account the difference between rainy and dry years and seasons. Ms. Owens also points out that both California Native Plants Society and the California Department of Fish and Wildlife's survey protocols emphasize the need to conduct surveys in a way that accounts for plants variability in different seasons and different years.[33]

This is especially true for desert habitats and for desert species like the desert tortoise. Ms. Owens notes that in her surveys of southern California habitats during and after 2019 (which is an example of a demonstrably wetter rainy season), she observed exponentially higher numbers of annual and perennial plants emergent and flowering. She also explains that research of the species in the Mojave desert "show that much of the variation in energetic variables, including movement and dispersal, was associated with one single climatic variable, rainfall."[34] Both 2017 and 2019 had, comparably to 2015, much wetter rainy season.[35]

The DEIR must therefore be revised to include further surveys that will properly reflect existing conditions for the desert tortoise. First, by reflecting the conditions at the time the NOP was published and, second, by accounting for the variability in the conditions that is the result of changes in rainfall. Accounting for the impact of rainfall is important to abide by CEQA's mandate to present "the most accurate and understandable picture." Since there were well documented wetter rainy seasons in recent years, accounting for it is definitely "practically possible" under CEQA.

12-I (cont.)

[32] Exhibit A, p. 2-4.
[33] Exhibit A, p. 2-3.
[34] Exhibit A, p. 3-4.
[35] Exhibit A, p. 2

In addition, Ms. Owens explains that the DEIR drew the wrong conclusion from the fact that a desert tortoise carcass was found on the site. Contrary to the DEIR's conclusion that this is "evidence that this site is currently unoccupied by tortoises,"[36] Ms. Owens shows that relevant Fish and Wildlife Service protocol for the species clearly states that "occurrence of either live tortoises or tortoise sign (burrows, scats, and carcasses) in the action area indicates desert tortoise presence."[37]

12-I (cont.)

B. The DEIR Fails to Establish the Existing Setting for Special Status Species

Despite the fact the DEIR discusses a number of special status species, it fails to conduct focused surveys for any them except for the desert tortoise and Mohave ground squirrel.[38] Instead, the DEIR relies heavily on reconnaissance surveys and database review for establishing the existing conditions.

As explained by Ms. Owens, by doing so, the DEIR fails to properly establish the existing setting for these species, for the following reasons:

12-J

While databases and reports are a standard part of the process for gathering information on a site, they cannot replace focused or protocol surveys when it comes to determining the presence, status, or scope of a particular species at a project. Ms. Owens explains that in focused surveys the biologist focuses on the species that is the subject of the survey, without splitting their attention with other plant and animal species, that live on different areas on the site and are active in different ways and on different times of the day and night. At the same time,

> Reconnaissance surveys, like those conducted by the Applicant's consultant, serve the purpose of generating an overall picture of what habitats exist on site. They do not and cannot replace data representative of species specific or taxa-specific surveys.[39]

[36] DEIR Volume 2 Appendix D p. 6
[37] Exhibit A, p. 4-5.
[38] Exhibit A, p. 5.
[39] Exhibit A, p. 6.

This is especially important when attempting to detect elusive, cryptic, rare or endangered species that requires a particular degree of intensive focus and species-specific search methodology by the surveying biologist.[40] Ms. Owens explains that "The demonstrated need for species-intensive focus is why agencies require protocol surveys to be conducted for one focal species at a time."[41]

In particular, Ms. Owens explains that studies of Mojave Desert species show that their presence and abundance are highly variable from year to year and depend on many factors such as rainfall, soil disturbance and more. This underscores the importance of project-wide focused surveys that can provide accurate data both on presence and on potential mitigation.

Reliance on databases also fails to provide substantial evidence for baseline determinations. Ms. Owens shows that the DEIR relies heavily on the California Natural Diversity Database (CNDDB) to make determinations about the potential for species to occur. However, she explains that the CNDDB is a very limited resource and cannot be relied upon such determinations, for a number of reasons.

12-J (cont.)

First, many species sightings are not actually reported on the public CNDDB. For example, for most birds the CNDDB maps only those occurrences that can be associated with "evidence of nesting." Second, CNDDB records are voluntarily reported and only exist for locations that have been surveyed to a greater extent than others. As a result, explains Ms. Owens, "the lack of CNDDB records, or records from any other database or report (i.e. the DRECP) does not mean a species is absent"[42]

This means that the CNDDB presents, at best, a conservative description of what may or may not be present onsite and is limited in its ability to predict species currently present at any given locale. This is also evident in the disclaimer posted by CDFW on the CNDDB website:

[40] Exhibit A, p. 6.
[41] Exhibit A, p. 6.
[42] Exhibit A, p. 9.

> "(…) we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers."[43]

The DEIR must be revised to include focused surveys for the relevant special status species and/or their representative taxa: bats, reptiles, raptors, nesting and migratory birds.[44]

12-J (cont.)

C. The DEIR Fails to Establish the Existing Conditions for Hazards and Hazardous Materials

The "Hazards and Hazardous Materials" section of the DEIR describes the affected environment and regulatory setting for hazards and hazardous materials in the Project site, as well as the project's potential impacts on residences and other sensitive receptors that could be exposed to these hazards.[45] The DEIR states that the information for the hazards analysis is "based primarily" on two Phase I Environmental Site Assessments ("ESAs"). These assessments include the Terracon ESA from 2015 and the SEI ESA from 2014.

However, as stated in the DEIR, the SEI ESA from 2014 "is actually for a site that is south of the project site when a different location was being evaluated." The DEIR goes on to argue that "[h]owever, considering that Phase I reports examine a 1-mile radius of a location, it was still used as relevant to the proposed project locations."[46]

SWAPE's review of both ESA's found that indeed, the SEI ESA was prepared for a different parcel south of the Project. *This means that a large part of the Project was never covered by an ESA*. SWAPE found that the area of the Project site not covered by a Phase I ESA is roughly coincident with the "Phase 2" Project site. That means that out of roughly 165 acres; about 40 acres were never reviewed in a phase I ESA.

12-K

[43] https://wildlife.ca.gov/Data/CNDDB/About
[44] Exhibit A, p. 9.
[45] DEIR, p. 4.9-1.
[46] DEIR, p. 4.9-21.

This lack of information regarding the Project site is a failure to establish the existing setting for the Project. As SWAPE explains, [a]n inspection is an integral part of standards for performing a Phase I ESA established by the US EPA and the American Society for Testing and Materials Standards (ASTM)." [47] A Proper Phase I ESA that covers the whole of the Project's site is required to properly set the existing conditions for the project, as required under CEQA. The County must revise the DEIR to properly reflect the findings and conclusions of such an updated Phase I ESA.

12-K (cont.)

V. THE DEIR FAILS TO DISCLOSE AND ANALYZE SIGNIFICANT IMPACTS ON BIOLOGICAL RESOURCES, AIR QUALITY AND GHG

An EIR must fully disclose all potentially significant impacts of a Project and implement all feasible mitigation to reduce those impacts to less than significant levels. The lead agency's significance determination with regard to each impact must be supported by accurate scientific and factual data.[48] An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.[49]

12-L

As described below, the DEIR violates CEQA by failing to support its impact analysis with substantial evidence with regard to biological resources, air quality and GHG.

A. <u>The DEIR Fails to Adequately Disclose and Analyze Impacts on Biological Resources</u>

12-M

According to the DEIR, a total of 92 plant species were identified on the project site during the biological surveys[50] and 14 special-status plant species have been recorded within the vicinity of the project site.[51] Wildlife species observed or otherwise detected on the project site included four reptiles, twenty six birds

[47] Exhibit B: SWAPE comments, p. 2.
[48] 14 CCR § 15064(b).
[49] *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.
[50] DEIR, 4.4-4.
[51] DEIR, 4.4-8.

species, and nine mammal species[52], and fifteen special-status wildlife species (three reptiles, eight birds, and four mammals) have been recorded within the vicinity of the project site.[53]

Despite that, the DEIR fails to properly disclose and analyze the Project's impacts on many of the biological resources within the Project Site and vicinity.

As described below, the DEIR makes an unsupported claim that the "lake-effect" impact of solar projects on birds is "uncertain," when in fact there is substantial evidence that shows the impacts of the phenomenon. The DEIR also fails to properly disclose, analyze and, as a result, mitigate, the Project's impacts on a number of Special Status avian Species, including Swainson's Hawk, and on reptiles.

12-M (cont.)

1. <u>The DEIR's Impact Analysis Relies on Unsupported and Illogical Assumptions</u>

In its impact discussion, the DEIR includes the following statement:

> Direct impacts to special-status species are unlikely to result from project operation and maintenance activities because implementation of the project onsite would remove habitat for special-status species on the project site and restrict sensitive wildlife species movement into the project site…"[54]

12-N

As Ms. Owens explains, this statement is so "scientifically erroneous" that "it brings into question the logic of other arguments in the document regarding lack of impacts".[55] First, because removal of habitat is a primary cause of significant ecological impacts. Second, because this statement is not based on any evidence due to the DEIR's failure to conduct proper surveys and establish the existing conditions and finally, because most bird species have high natal site fidelity and will return to

[52] DEIR, 4.4-8.
[53] DEIR, 4.4-13.
[54] DEIR, 4.4-34.
[55] Exhibit A, p. 10

their specific location of birth regardless of the addition of anthropogenic activities and constructs.[56]

Ms. Owens points out that since birds fly, they are not especially restricted by fencing or an "awareness" program and moreover, birds are known to take advantage of man-made constructs for perching, shade, nesting, or attraction as a stopover and thus exposing themselves to injury, harm, and reduced fertility over time, as is shown in the evidence presented by Ms. Owens.

12-N (cont.)

2. <u>Failure to Analyze Impacts on Birds From the "Lake Effect"</u>

Under its discussion of impacts and mitigation measure for biological resources, the DEIR discusses impacts from operational and maintenance of the project. Here, the DEIR devotes a few short paragraphs to the phenomenon known as "the lake effect". As Ms. Owens explains, this is a well-documents phenomenon in which birds are attracted to solar panels that may appear as bodies of water, which result in injury, death, or stranding from strikes to panels and associated structures.[57]

12-O

The DEIR, however, states that:

> though it is apparent that solar energy facilities present a risk of fatality for birds, additional standardized and systematic fatality data would be needed to better understand and quantify the risks.[58]

The DEIR then argues that despite the fact that "[t]he causes of avian injuries and fatalities at commercial-scale solar projects continue to be evaluated by the USFWS, CDFW, and others," still "there remains a great deal of uncertainty regarding the extent to which birds might be impacted by the project" for various reasons. The DEIR then lists the reasons for this purported uncertainty as follows:

[56] Exhibit A, p. 10.
[57] Exhibit A, p. 11.
[58] DEIR, 4.4-34.

> (1) the mortality data from the other projects has been collected over a relatively short period of time and still is being evaluated
> (2) in most cases, the cause of death is not clear; and
> (3) mortality information from one project location is not necessarily indicative of the mortality that might be found at another project location.[59]

The DEIR concludes that "[t]herefore, "fake lake effect" does not have a significant direct or indirect impact on migratory birds including foraging raptors." It also states that "there was no consistent pattern to support or refute the hypothesis that water-dependent species were more susceptible to mortality at solar facilities." Finally, the DEIR adds that "[i]n order to determine if the operational phase of the project is resulting in a significant amount of avian mortality, a monitoring program would be implemented as described in Mitigation Measure MM 4.4-12."[60]

12-O (cont.)

As explained by Ms. Owens in her comments, none of these claimed reasons for the purported "uncertainly" of the lake effect is supported by the evidence. On the contrary, and as Ms. Owens shows, there is substantial evidence that supports the conclusion this phenomenon presents significant impacts for birds and must be analyzed and mitigated in an environmental document.

Regarding the claim that mortality data from other projects has been collected over a relatively short period of time and still is being evaluated, Ms. Owens explains that "mortality monitoring has been conducted as long as the commercial industry of solar panel-powered energy has existed"[61] and quotes relevant peer-reviewed articles. She also shows that the data are abundant, and methodologies standardized, which enables proper impact evaluation, as discussed in more details below.

[59] DEIR, 4.4-34.
[60] DEIR, 4.4-34, 4.4-35.
[61] Exhibit A, p. 11.

Regarding the claim that in most cases the cause of death is not clear, Ms. Owens presents evidence this is incorrect. She presents a detailed review of the data presented to the agencies from monitoring reports, which clearly indicates cause of death. Ms. Owens has also conducted herself mortality monitoring at several industrial solar sites and presents evidence, backed by photos, that "the majority of strikes that cause injury and death are readily interpreted due not only to the condition of the bird but the evidence on the solar panels themselves"[62]

12-O (cont.)

Ms. Owens also presents data refuting the DEIR's argument that data do not exist to confirm water birds are more susceptible to lake effect mortality. Ms. Owens explains that when considering the many hundreds of migrant species of all types that fly over solar project it is clear that there is preponderance of water loving species among those that strike the panels. This is especially obvious given the fact that the most abundant species that reside in proximity to the solar sites are not water birds.[63]

In addition, Ms. Owens explains that the DEIR also omits required analysis of impacts to entire bird populations, not just to individuals: the evidence presented below clearly shows that bird strikes to solar panels can cause injury and death to birds of many species, including protected ones (e.g. Swainson's hawk, burrowing owl, tricolored blackbird). For these and other rare and endangered species, "loss of even a few breeding adults can significantly reduce the population's regional population stability."[64]

12-P

The DEIR also contradicts itself regarding the impact of the lake effect. Under the cumulative impact discussion, the DEIR includes the following statement:

> Little is known about the potential for impacts to migratory birds associated with the "fake lake effect." *However, evidence suggests that significant impacts to migratory birds could occur even after mitigation*. Further, as take

[62] Exhibit A, p. 12.
[63] Exhibit A, p. 12.
[64] Exhibit A, p. 15-16.

> authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA. Therefore, the proposed project, in combination with all identified cumulative projects, could result in a cumulatively considerable contribution to a significant cumulative impact.[65]

12-P (cont.)

As Ms. Owens notes, the emphasized statement contradicts the DEIR's entire discussion claiming insignificant operational impacts to birds from the lake effect.[66]

Ms. Owens presents in her comments an expansive body of literature, reports and data that constitutes substantial evidence and supports the conclusion that solar projects present a significant risk to birds due to the impacts of the "lake effect". At the same time, these data refutes the argument that the lake-effect is "uncertain" and show it is not supported by the evidence.

Below is a summary of *some* of the evidence presented by Ms. Owens in her comments[67]

- **Compilation of data from avian mortality reports for solar desert facilities submitted to the state and federal Fish and Wildlife agencies between 2011 and 2016**. This compilation lists species that are protected under the Federal ESA, California ESA, California Species of Special Concern, and Migratory Bird Treaty Act, and have been killed by collision deaths at Southern California desert solar facilities. The data shows that protected, endemic, and unusual desert migrants of all sizes are affected by the lake effect.

12-Q

- **Peer-review studies** that documented the lake effect and evaluated its potential impact on birds' populations. Using the data in these and other studies, Ms. Owens calculated that bird deaths in the region would number between 548,000 and over 4,347,000, causing a significant cumulative

12-R

[65] DEIR, p. 4.4-54., emphasis added.
[66] Exhibit A, p. 16.
[67] Exhibit A, p. 18- 23.

impact.[68]

12-R (cont.)

- **Data and reports from government agencies acknowledging the lake effect impacts**. This includes the Solar Energy Development Programmatic EIS PEIS , published by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and the U.S. Bureau of Land Management, which concluded that "Since birds are prone to collisions with reflective surfaces, it would be expected that a utility-scale solar energy project could cause significant bird mortality."
  The USFWS, in their comments on the Palo Verde Solar DEIR, confirms that there is growing evidence of the impacts from what is known as the "lake effect," especially for water-associated birds and other species seeking migratory stopover habitat.
  The 2015 National Renewable Energy Laboratory's review of avian monitoring and mitigation information at existing utility-scale solar facilities also acknowledged the potential impacts, stating that "PV facilities may attract some species of birds through what has been called the "lake effect"'.

12-S

- **Mortality reports** from the California Valley Solar Ranch Project (CVSRP), located in the California desert region. The reports from the site, which is arguably of lower overall quality habitat than the Project site, show 703 bird mortalities were reported at CVSRP over the course of just two years, including three burrowing owls, despite burrowing owl mitigation measures described in the EIR. Ms. Owens calculated, based on this data and after accounting for the relevant differences, that throughout the life of the Project strikes could thus total an average of 1,194 birds, including an unknown number of rare, SSC, and ESA listed species. This, concludes Ms. Owens, means the Project "would thus pose a high risk of significantly impacting an entire population or a resident or migratory species that uses this site for nesting, foraging, or a migratory flyway."[69]

12-T

The evidence presented in Ms. Owens comments clearly demonstrates that the risks of PV panel avian collisions are considerable, recognized by state and

[68] Exhibit A, p. 21.
[69] Exhibit A, p. 19.

federal agencies, measurable using scientific protocols, and quantifiable to the extent required for estimating compensatory mitigation needs. The DEIR must be revised to properly disclose, analyze and mitigate the lake effect's potentially significant impacts on birds.

12-T (cont.)

3. <u>The DEIR fails to Disclose, Analyze and Mitigate Impacts on Swainson's Hawk</u>

Swainson's Hawk ("SWHA") is listed as "Threatened" under the California Endangered Species Act. The Project and surrounding habitat were not surveyed for the presence of SWHA using standard methods from Swainson's Hawk Survey Protocols, and yet the DEIR biological technical report concludes that "Based on the field survey and habitat assessment (…) none of the following special status species reported from the region will be adversely affected by site development: Swainson's hawk (…)" and recommends no mitigation measures.[70]

12-U

As Ms. Owens explains, this analysis is entirely flawed. The DEIR claims that there is low potential for nesting Swainson's hawks to occur but makes no analysis of the impact of operations from strikes to panels and power lines (discussed above) and from loss of habitat, discussed below.

The DEIR claim that SWHA "would not nest onsite and probably not forage there (as they tend to prefer fallow agricultural fields and other open areas in the desert)"[71] is not supported by the evidence. The California Department of Fish and Wildlife's Swainson's Hawk Survey Protocols specifically states that Swainson's hawks may also forage in grasslands, Joshua tree woodlands, and other desert scrub habitats that support a suitable prey base.[72] This is also Ms. Owens conclusion based on both her study of the specie and of three years conducting raptor surveys on a project site directly in the SWHA migratory flight path.[73]

[70] Exhibit A, p. 24.
[71] DEIR, p. 4.4-18.
[72] Exhibit A, p. 25.
[73] Exhibit A, p. 25.

The high likelihood that SWHAs may use the Project site for foraging or a stopover is also supported by the evidence available from recent sightings of SWHAs within several miles of the Project area. Ms. Owens lists a number of recent sightings in the Project's vicinity. The CDFW also makes the following statement with regard to SWHA:

> the Department considers conversion of foraging areas to renewable energy power plant facility sites to be habitat loss. For example, solar panel arrays are expected to eliminate most or all foraging potential. Significant habitat loss may result from individual projects and cumulatively, from multiple projects.[74]

Finally, Ms. Owens notes that while the DEIR refers to the SWHA as "uncommon biological resource," uncommon does not indicate low impact; in fact, often, it is the opposite. The CDFW states with respect to the low population numbers of SWHA in the region, that:

> The small number of breeding Swainson's hawks in the Antelope Valley and the potential isolation from other Swainson's hawk populations makes the Antelope Valley population *particularly susceptible to extirpation*.[75]

The DEIR must be revised to include a discussion of the significant impacts of foraging habitat loss from the Project and require enforceable mitigation measures to reduce those impacts.

12-U (cont.)

4. <u>The DEIR Fails to Disclose and Analyze Impacts on Other Special Status Avian Species</u>

The DEIR's biological technical report states as follows:

> CMBC concludes that none of the following special status species reported from the region will be adversely affected by site development: Swainson's

12-V

[74] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83991&inline, p.2.
[75] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83991&inline, p.2., emphasis added.

hawk, Cooper's hawk, sharp-shinned hawk, prairie falcon, loggerhead shrike, or LeConte's thrasher. As such, no adverse impacts have been identified and no mitigation measures are recommended. [76]

As explained by Ms. Owens in her comments, this statement in not supported by the evidence for several reasons. First, no adequate surveys were conducted to establish the current baseline of these species, as required by law. Second, all of these species are "widely accepted as breeding residents of the region and thus could use the site for breeding, foraging, or moving between territories."[77] Third, several of these species, which require special protection under the California Endangered Species Act (CESA) or are California Species of Special Concern (SSC), have been noted on eBird and the CNDDB. Due to the high potential of operational impacts, discussed above, the DEIR has failed to provide adequate analysis and mitigation for these species. 12-V (cont.)

Therefore, the DEIR must be revised to conduct appropriate resident, nesting, and migratory bird surveys to establish existing conditions, acknowledge and analyze potentially significant impacts and provide adequate mitigation, as discussed in more detail in Ms. Owens comments.

5. <u>The DEIR Fails to Disclose, Analyze and Mitigate Impacts to Reptiles</u>

As Ms. Owens explains, "[i]t is widely accepted in the scientific community that reptiles represent a key taxon in desert habitats and are highly sensitive to anthropogenic ground disturbances."[78] At the same time, explains Ms. Owens, reptiles are also virtually impossible to detect without conducting comprehensive surveys, that were not conducted here, due to their behavioral characteristics.[79] A recent study by the USGS of reptile species in arid alluvial sand habitat, found 12-W

[76] DEIR Volume 2 Appendix D p. vii.
[77] Exhibit A, p. 29.
[78] Exhibit A, p. 31.
[79] Id.

results that were "completely unexpected" and revealed an abundance and diversity beyond what by the survey conductors have expected.[80]

At the same time, reptiles are susceptible to impacts from human activities and construction, including risk of direct morality by vehicles, habitat fragmentation and potential barriers to gene flow. large concentrating solar facilities may also create localized drought conditions, or alter the microclimate of a region, impacting reptiles.

In particular, Ms. Owens notes that a major mortality cause for reptiles is that lizards of varying species and sizes are attracted to the humidity created by water-spraying trucks on roads (a common practice during construction). This results in increased mortality and injury from construction site traffic on the roads.

Ms. Owens explains that this phenomenon is under-reported because development sites rarely have biologists deliberately searching project sites and roads for lizards when the mitigation measures and resulting permits do not require such an effort. However, when the phenomenon was officially notes it required additions measures and management practices. It is important to note that that mortalities from even one project could have a "population level effect, especially if a species sub-population is isolated or part of a Distinct Population Segment."[81]

The DEIR must be revised to conduct appropriate surveys for reptiles, analyze and address potential impacts, and include appropriate mitigation measures to reduce impacts. Such measures may include additional biologists present onsite during all hours of construction, enhanced traffic restrictions, and a reptile relocation Plan and Monitoring Strategy during the construction phase.[82]

12-W (cont.)

[80] Exhibit A, p. 31-32.
[81] Exhibit A, p. 34.
[82] Exhibit A, p. 34.

B. <u>The DEIR Fails to Adequately Disclose and Analyze Impacts on Air Quality</u>

In the Air Quality section of the DEIR, the agency is required to disclose, analyze and propose mitigation to reduce the Project's construction and operation emissions of pollutants to less than significant levels. However, as shown by SWAPE[83] and explained below, the DEIR analysis is flawed, therefore rendering its conclusion regarding air quality impacts unsupported.

As described below, the DEIR's air quality analysis relies on emissions calculated with the modeling tool of CalEEMod.2016.3.2. This modeling tool provides recommended default values based on site-specific information. Agencies may change those default values only if such changes are justified by substantial evidence. Failure to properly use the modeling tool or use the correct data results in a failure to properly estimate project's impacts. SWAPE's review found multiple errors and omissions in the air quality analysis, which may result in an underestimation of the Project's air quality impacts. The County must address these flaws prior to reaching a conclusion regarding the projects' impacts. These errors and omissions include: 12-X

1. **Failure to account for all operational air quality impacts**: As SWAPE show, the DEIR only evaluates the Project's operational emissions from three sources: water trucks, maintenance trucks and employee vehicles. However, according to the CalEEMod User's Guide, operational emissions must include a long list of additional sources, including fugitive dust associated with roads, architectural coating activities, off-road equipment used during operation, emergency generators and more.[84] By failing to account for all emissions sources, the DEIR underestimates the Project's operational emissions. 12-Y

2. **Underestimation of land use size**: SWAPE's review found that the model failed to account for the whole of land uses proposed. The land use size of a project impacts in turn the calculations of emissions caused by architectural coatings, energy use and more.[85] By failing to account for the correct land use size, the DEIR underestimates the Project's emissions. 12-Z

[83] Exhibit B: SWAPE comments.
[84] Exhibit B, p.3-4.
[85] Exhibit B, p. 4-5.

3. **Use of incorrect land use type** – SWAPE show that the model incorrectly categorized the Project as "User Defined Industrial". Such categorization requires that the user will enter all necessary operational information instead of the default information (for example, vehicle fleet mix, energy intensity values, indoor and outdoor water use rates etc.) As SWAPE shows, this was not done. Therefore, the Project should not be modeled as "User Defined" and the model may underestimate Project's emissions.[86] 12-A2

4. **Use of an incorrect construction schedule** – SWAPE compared the construction schedule described in the DEIR with the construction schedule of the CalEEMod output files and found them to be inconsistent with each other. Specifically, the first phase of construction, "Mobilization and Site Preparation," or "Grading," was underestimated by approximately 50%[87]. As a result, the model may underestimate the Project's construction-related emission and should not be relied upon to determine Project significance. 12-B2

5. **Unsupported changes to construction values** – SWAPE's review found that several manual changes were made to the Project's anticipated off-road construction equipment horsepower values, load factor values, and usage hours. As SWAPE explain, those changes are not consistent with the information provided in the DEIR and not properly supported or justified by the evidence.[88] 12-C2

6. **Failure to model proposed off-road construction equipment list** – SWAPE found that the model included in the Project's CalEEMod model both underestimates the pieces of equipment and fails to include the types of equipment indicated by the equipment list included in the DEIR. Thus, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.[89] 12-D2

[86] Exhibit B, p 5.
[87] Exhibit B, p. 9.
[88] Exhibit B, p. 9.
[89] Exhibit B, p. 9.

7. **Underestimation of construction trips** – SWAPE found that while the traffic study anticipated construction to generate an average of 75 personnel trips and 10 heavy truck trips per day, the Project's model included only 49 total daily worker trips and daily vendor trips. The result is that the model underestimates the Project's construction-related emissions.[90] 12-E2

8. **Unsupported application of mitigation measures** – SWAPE found that the Project's model included the measure of "Reduce Vehicle Speed on Unpaved Road" used to mitigate air quality impacts. However, the model assumed that vehicle speed will be reduced to 15 MPH, while according to the DEIR vehicles can travel up to 25 MPH. The model should have instead included a vehicle speed of 25 MPH in the model and since it did not, impacts are underestimated.[91] 12-F2

C. <u>The DEIR Fails to Adequately Disclose and Analyze Impacts on Climate Change from Greenhouse Gas ("GHG") Emissions</u>

CEQA requires agencies to "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project."[92] A lead agency can determine the significance of a project's GHG emissions by (1) quantifying GHG emissions resulting from the project; and/or (2) relying on a qualitative analysis or performance based standards.[93] The "agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."[94] Finally, as with the analysis of all impact areas, the agency must employ all feasible mitigation measures to reduce or eliminate impacts. 12-G2

Here, the County fails to adequately analyze and mitigate GHG impacts on climate change from the Project's construction and operational activities by using an inapplicable threshold of significance to determine the impact's significance.

The DEIR's GHG section includes a discussion of various GHG rules and policies, and a calculation of projected GHG emissions from Project's construction and operations, as is appropriate under CEQA. However, after calculating the

[90] Exhibit B, p 11.
[91] Exhibit B, p 12.
[92] CEQA Guidelines, § 15064.4 (a).
[93] CEQA Guidelines, § 15064.4 (a)(1) and (a)(2)
[94] CEQA Guidelines, § 15064.4 (b).

Project's projected GHG emissions, the GHG moves on to argue that the projected value of 16 MTs per year of CO2e "is below the EKAPCD threshold of 25,000 MTs per year of CO2e. Therefore, the project's contribution to climate change would not be cumulatively considerable and the project would not conflict with the State's goal to reduce GHG emissions to 1990 levels by 2020."[95]

This conclusion is entirely flawed as it relies on the Eastern Kern Air Pollution Control District (EKAPCD) threshold of significance, which is not applicable to the Project. An agency must consider "[w]hether the project emissions exceed a threshold of significance that the lead agency determines applies to the project."[96] Particularly for GHG emissions analysis, while the lead agency has discretion to choose a modeling system and methodology, the selection of the methodology and its application must be supported by substantial evidence.[97]

The EKAPCD's threshold clearly does not apply to this Project. The DEIR cites to the EKAPCD's adopted 2012 Addendum to its CEQA Guidelines on GHG impacts, which adopts quantitative thresholds when EKAPCD is the CEQA lead agency.[98] As SWAPE notes, in adopting the Addendum, EKAPCD staff anticipated the applicable projects to be "large industrial projects or modifications to existing industrial projects that do not require conditional use permits from a land-use agency or a permit from the California Energy Commission."[99] This Project is not a large industrial project that does not require a County permit and which requires EKAPCD to be the lead agency. In fact, the Project requires a conditional use permit from Kern County as the lead land-use agency.

12-G2 (cont.)

Notably, the EKAPCD states that the 25,000 tons per year (tpy) limit is appropriate for determining significance, in part because "ARB and EPA determined that this threshold would be appropriate for facilities whose GHG emissions may be subject to regulation" and then cites to the federal EPA's Final Rule for Mandatory Reporting of Greenhouse Gases ("EPA GHG Reporting

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[95] DEIR, p.4-8.18.
[96] CEQA Guidelines, § 15064.4 (b)(2).
[97] CEQA Guidelines, § 15064.4 (c); see also *Center for Biological Diversity v. Dept. of Fish & Wildlife* ("*Newhall Ranch*") (2015) 62 Cal.4th 204.
[98] DEIR, p. 4.8-14. *See also,* "Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects When Serving as Lead CEQA Agency." EKAPCD, March 8, 2012, ("Addendum"), *available at*: http://www.kernair.org/Documents/CEQA/EKAPCD%20CEQA%20GHG%20Policy%20Adopted%203-8-12.pdf.
[99] Exhibit B, p. 13.

Rule").[100, 101] SWAPE notes that the types of facilities applicable to this EPA regulation, such as stationary fuel combustion sources, fossil-fueled generating units, vehicle manufacturing, and manufacturing of products and chemicals, do not apply to this Project, as a solar project.[102] Moreover, these facilities are subject to the EPA GHG Reporting Rule precisely because they are expected to emit above 25,000 tpy of GHGs.[103].

12-G2 (cont.)

In addition, according to the Federal Register explaining the development of this particular GHG regulation, the 25,000 tpy threshold was a figure adopted to determine applicability of a facility to the GHG *reporting regulation*:

> "From these analyses, we concluded that a 25,000 metric ton threshold suited the needs of the reporting program by providing comprehensive coverage of emissions with a reasonable number of reporters, thereby creating the robust data set necessary for the quantitative analyses of the range of likely GHG policies, programs and regulations."[104]

The adopted 25,000 tpy threshold is therefore not determinative of the significance of the impacts of a source's GHG emissions. Rather the threshold was intended to determine whether a stationary source would be subject (or applicable) to the GHG reporting requirements.

12-H2

In sum, the Project does not constitute the types of facilities intended by the EKAPCD and the threshold of 25,000 tpy is not applicable to determine the significance of the Project's GHG impacts. Moreover, the DEIR fails to provide substantial evidence to support its application of this threshold, stating only that the County did not adopt its own applicable threshold. The 25,000 MT CO_2e/yr threshold should not be used in determining the Project's GHG significant impacts and the GHG analysis must be revised to rely on an appropriate threshold and analysis.

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[100] Addendum, p. 4.
[101] 74 Fed. Reg. 56260, 56273 (Oct. 30, 2009), *Mandatory Reporting of Greenhouse Gases; Final Rule* ("2009 Federal Register"), *available at*: https://www.govinfo.gov/content/pkg/FR-2009-10-30/pdf/E9-23315.pdf.
[102] Exhibit B, p. 13
[103] 2009 Federal Register, p. 56260.
[104] 2009 Federal Register, p. 56272 (emphasis added).

VI. THE DEIR FAILS TO MITIGATE IMPACTS ON BIOLOGICAL RESOURCES

An EIR must identify and describe any feasible measure that can be implemented to reduce or avoid each potentially significant environmental effect of the project.[105] Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments.[106]

CEQA requires that "[f]ormulation of mitigation measures shall not be deferred until some future time."[107] CEQA allows for the specific details of a mitigation measure to be developed after project approval only under certain conditions. As discussed below, these conditions are not fulfilled here.

As described below, the DEIR violates CEQA by improperly deferring mitigation and by relying on mitigation measures that are neither enforceable nor effective.

12-I2

A. The DEIR Fails to Adequately Mitigate Impacts on Birds from the Lake Effect

As discussed above, the DEIR fails to properly disclose and analyze Project's impacts on birds. The DEIR, however, includes some measures presented in the "mitigation measures" section that will purportedly respond to such potential impacts. As explained below, these measures do not quality as proper mitigation measures under CEQA.

12-J2

MM 4.4-12 states as follows:

> During the operations and maintenance phase of the project, an Avian Mortality Monitoring Program shall be developed in coordination with California Department of Fish and Wildlife and U.S. Fish and Wildlife Service and implemented to systematically and periodically determine the

[105] PRC §21100(b)(3), 14 CCR §15126.4(a)(1).
[106] 14 CCR §15126.4(a)(2)
[107] 14 CCR § 15126.4, subd. (a)(1)(B).

> extent of mortality occurring due to collisions with solar arrays. The measures listed below apply to the program.[108]

The measure lists several sub-measures regarding data collection and monitoring, including the following measure:

> e. *Appropriate performance standards for mitigation of impact*s to any species regulated by the Bald and Golden Eagle Protection Act, the Endangered Species Act, and the California Endangered Species Act *exist through required consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife* under their respective regulatory and permitting frameworks. *If, after 2 years of mortality monitoring, project impacts to any other avian species caused by the project are shown to result in a substantial, long-term reduction in the demographic viability of the population of the species in question, then adaptive management must be implemented to reduce impacts to below this threshold.* Adaptive management measures may include but not be limited to passive avian diverter installations, the use of sound, light or other means to discourage site use consistent with legal requirements, onsite habitat management or pre control measures consistent with applicable legal requirements, or modification to support structures to exclude nesting birds.[109]

12-J2 (cont.)

These measures constitute an improper deferral of mitigation under CEQA for several reasons. Mitigation may be deferred "when it is impractical or infeasible to include those details during the project's environmental review."[110] As described below and in Ms. Owens comments, this is not the case here. There is substantial evidence and methodologies to properly and feasibly mitigate the lake effect impacts. One such method, described by Ms. Owens, is appropriate compensatory mitigation that contributes to a conservation grant, trust, or other relevant entity that has demonstrated successful conservation of regional migratory birds.[111]

12-K2

[108] DEIR, p. 4.4-49.
[109] DEIR, p. 4.4-50, emphasis added.
[110] 15126.4(a)(1)(B)
[111] Exhibit A, p. 16-17.

CEQA only allows for deferral of mitigation under strict conditions, requiring that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure.[112]

The DEIR fails entirely to obey by these standards. First, it states that "[a]ppropriate performance standards for mitigation of impacts (…) exist through required consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife," giving the impression that such performance standards are already written and readily available. However, as explained by Ms. Owens:

> The DEIR is misleading in stating that "Appropriate performance standards for mitigation of impacts to any species…exist through required consultation." Consultation with agencies about industrial solar site mitigation to birds may result in site-specific, Project-specific, and species-specific decisions about mitigation that are highly discretionary because such mitigation measures for operational impacts are not standardized whatsoever, largely untested, and are dependent upon the final EIR mitigation determinations as permitted.[113]

12-L2

The DEIR thus violates the second requirement to adopt specific performance standards. These standards are yet to be determined and, as such, cannot be binding and cannot be reviewed by the public.

Second, the DEIR claims that "adaptive management must be implemented to reduce impacts to below *this* threshold"[114]. However, the DEIR fails to explain what exactly is "this" threshold the mitigation measure refers to, and indeed such a threshold is nowhere to be found in the DEIR. As explained by Ms. Owens:

12-M2

[112] 15126.4(a)(1)(B)
[113] Exhibit A, p. 15.
[114] Emphasis added.

> There is no species-specific "standard" for species harmed by solar Projects infrastructure, and there is no threshold defined as the DEIR infers. This is simply not accurate, and the statement and its underlying assumptions must be retracted. If not, the DEIR must present the actual standards and thresholds they are alluding to for avian species that may be impacted by the Project.[115]

12-M2 (cont.)

The DEIR thus violates the first requirement to commit to mitigation. If there is no clear threshold, it is impossible to mitigate the impact below that threshold.

Third, as Ms. Owens explains, there is no evidence, and the DEIR presents no peer-reviewed evidence, that "adaptive management" measures, including diverters, sound, or light, have been scientifically demonstrated to reduce strikes by birds to solar panels. The DEIR thus violates the third requirement, that potential action(s) can feasibly achieve the standards.

12-N2

The courts have been clear that where an EIR improperly defers mitigation, the approving agency abuses its discretion by failing to proceed as required by law.[116] The DEIR does just that.

In addition, Ms. Owens points out that the proposed measures in the DEIR are flawed in themselves: first, because they purport to rely on two years of data collection to gather all the required data to formulate mitigation. This assumption, explains Ms. Owens, is "specious" and is not an adequate scope of data. As she explains, "[m]uch about any given species' population viability can change over the next few decades due to impacts from climate change, development, and other pressures, and this will not be reflected predictively in two years"[117]

12-O2

Ms. Owens also points out that the DEIR claims in its discussion regarding birds and operational impact mitigation, that "solar photovoltaic panels consist of

12-P2

[115] Exhibit A, p. 15.
[116] Golden Door Properties, LLC v. Cty. of San Diego, 50 Cal. App. 5th 467, 264 Cal. Rptr. 3d 309, 349 (2020)
[117] Exhibit A, p. 14-15.

non-reflective glass that minimizes the "fake lake-effect." However, the DEIR provides no substantial evidence to support the claim that non-reflective coating can, or does, serve to reduce impacts to birds. Ms. Owens adds that she personally documented bird collisions panels despite being covered with thick layer of dust. Finally, Ms. Owens also explains that not enough is known about what actual physical characteristics in solar projects cause the lake effect phenomenon in different species, and therefore not enough is known to support the assumption that non-reflective surfaces will mitigate the impact.[118]

12-P2 (cont.)

B. <u>The DEIR fails to Mitigate Impacts on Fully Protected Species</u>

The DEIR acknowledges the likelihood of foraging eagles on the project site and that electrocution is a risk for avian species.[119] However, Ms. Owens notes that the DEIR's proposed mitigation for impacts on the golden eagle, a California Fully Protected species amount to following the Avian Power Line Interaction Committee Guidelines specifications, and creating a monitoring program, discussed above. However, explains Ms. Owens,

> if a golden eagle is injured or killed by any aspect of the Project infra-structure at any time, this amounts to "take", which is prohibited and cannot permitted for Fully Protected species without a detailed, approved habitat conservation plan, which does not exist for this Project . As such, the applicant must explain, specifically, how death or injury to any golden eagles will be avoided for the life of the Project[120]

12-Q2

This is especially important, explains Ms. Owens, in light of the fact that APLIC recommended mitigation has not proven to be highly effective in reducing eagle mortality.

Ms. Owens states that the same is true for another Fully Protected species not even mentioned by the DEIR, the peregrine falcon. She points to recent

12-R2

[118] Exhibit A, p. 17
[119] DEIR p. 4.4-36
[120] Exhibit A, p. 28.

documentation of this species on eBird in the Project's vicinity and to the fact it is a regular resident of the western Mojave / greater Antelope Valley, and like other raptors is at risk of strikes and electrocution by wires.[121]

12-R2 (cont.)

C. The DEIR Relies on Unenforceable and Ineffective Mitigation Measures

MM 4.4-6 proposes to reduce construction impacts to below significant by, among other things, requiring construction workers to attend Environmental Awareness Training and Education Program that will be presented by an authorized biologist.[122]

Ms. Owens explains that the effectiveness of this measure is not supported by evidence. She also states that in her professional experience as an environmental consultant, having personally observed these trainings dozens of times, she has "not observed these presentations for enhanced worker awareness translate into measurable actions that have been determined to significantly reduce project impacts to wildlife."[123]

12-S2

The DEIR states that "[t]he construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from construction activities to sensitive biological resources."[124] However, Ms. Owens explains, "there is no realistic mechanism or legal framework by which employees can be held responsible for impacts whether "unauthorized" can be clearly defined or not."[125] Therefore, MM 4.4-6 does not comply with CEQA's mandate that mitigation measures should be effective and enforceable.

[121] Exhibit A, p. 28-29.
[122] DEIR, p. 4.4-40
[123] Exhibit A, p. 35.
[124] DEIR, p. 4.4-41
[125] Exhibit A, p. 35.

VII. CONCLUSION

The DEIR is inadequate as an environmental document because it lacks a legally adequate project description, it fails to establish the existing setting for biological resources and hazards, and it fails to properly disclose, analyze and mitigate the Project's significant impacts on biological resources, air quality and from GHG emissions. The County cannot certify the EIR or approve the Project until it prepares a revised DEIR that resolves these issues and complies with CEQA. 12-T2

Thank you for your consideration of these comments.

Sincerely,

Nirit Lotan

NL:acp
Attachments

EXHIBIT A

Renee Owens, M.S. - Biologist and Independent Environmental Consultant

August 16, 2020

Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
(650) 589-1660

Subject: Comments on the Draft Environmental Impact Report for RB Inyokern Solar

SCH# 2017071020

Dear Ms. Lotan,

This letter contains my comments on the Draft Environmental Impact Report (DEIR) for the RB Inyokern Project (Project) proposed by R&L Capital, Inc. (Applicant).

The Applicant proposes to develop a solar photovoltaic energy (PV) generating facility with battery energy storage on 166.5 acres of privately owned land located in the eastern high desert region of Kern County in the unincorporated community of Inyokern. The site is approximately 5.5 miles west of the City of Ridgecrest, 3 miles east of the community of Indian Wells, and 8 miles west of the China Lake Naval Air Weapons Station. The project proposes to generate a total of 26.6 MW of renewable electrical energy for delivery to the Statewide grid. As proposed the Project would interconnect to an existing Southern California Edison (SCE) 33 kV electrical distribution line to an existing SCE Inyokern Substation approximately 0.5 miles to the east. The Project has been proposed in two phases "dependent upon market conditions"[1] where the first phase will approximately include 124.6 acres of approximately 74,424 single-axis tracker panels, and the second 42 acres of approximately 24,556 single-axis tracker panels. The proposed project would involve constructing 150 feet of a new gen-tie line that would connect with an existing SCE 33 kV electrical distribution line and existing SCE Inyokern Substation located about 0.5 miles to the east of the project site.

12-U2

[1] DEIR 1-1

I. THE DEIR FAILS TO ADEQUATELY DISCLOSE AND ANALYZE THE BIOLOGICAL BASELINE

A. Minimal Surveys Not Representative of the Current Ecosystem

According to the DEIR and associated biological technical report, the only focused surveys for any species or taxon – specifically, the desert tortoise and Mohave ground squirrel - were conducted in 2015. These surveys are now five years old, a time span during which much can change drastically in a desert habitat, especially considering the fact that other recent years (i.e. 2017 and 2019) were comparably much wetter rainy season. For this reason a concerted effort should have been made to conduct focused surveys for rare plants, special status fauna, and certain taxa, such as the desert tortoise, migratory and resident birds, raptors, and reptiles, during both dry and wet years, thus providing data representative of a more accurate, more comprehensive analysis regarding the on-the-ground reality of the site. To conduct such surveys is standard protocol for all kinds of other development project impact analyses, and not a prohibitive burden on the Applicant.

12-V2

This is supported by the CNPS's survey guidelines that state, in respect to rare plant survey protocols, "The number of visits and the timing between visits must be determined by geographic location, the plant communities present, and the weather patterns of the years in which the surveys are conducted."[2] The same statement is also repeated on the California Department of Fish and Wildlife's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities".[3] In respect to methodologies, CDFW also states that, "Additional botanical field surveys may be necessary for one or more of the fol-

[2] CNPS 2001. CNPS Botanical Survey Guidelines. https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf p. 2

[3] CDFW. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline

lowing reasons: Botanical field surveys are not current;…Botanical field surveys were not conducted for a sufficient number of years to detect plants that are not evident and identifiable every year (e.g. geophytes, annuals and some short-lived plants)."[4] Even satellite imagery can be illustrative of how one year in the Antelope Valley desert can vary drastically from another regarding what plant species are emergent and thus detectable.[5]

It is important to note that a survey for only one year, for various floral and faunal species, may not be adequate to construct even a simplified but relatively representative baseline simply based on the scientific reality that ecosystems are not static. This is why peer-reviewed observational ecosystem studies are usually multi-year studies. To gain a relevantly comprehensive, scientifically accurate baseline necessary to analyze successful impact mitigation methods that will reduce environmental harm incurred throughout three decades, one cannot rely on a theoretical construct, e.g. a snapshot in time that amounts to one survey conducted during one year.

12-V2 (cont.)

B. Desert Tortoise

Throughout my surveys in arid scrub and desert habitats in southern California during and after 2017 and 2019 (which had demonstrably wetter rainy seasons), I observed annual and perennial plants emergent and flowering in exponentially higher numbers than in previous years, and in locations where they had not been observed in years. I also observed various reptile and butterfly individuals where the species had not observed previously for over a decade. This is of particular significance to the movement and resultant detection of the desert tortoise in areas where they may have been absent in years prior due to limited rainfall and reduced foraging microhabitats. Research of DT in the Mojave desert shows that much of the variation in ener-

12-W2

[4] *Ibid*. p. 6
[5] Macdonald, C. April 14, 2017. Stunning satellite images reveal California's wildflower 'superbloom' seen from SPACE. *DailyMail*. https://www.dailymail.co.uk/sciencetech/article-4412816/California-s-wildflower-superbloom-SPACE.html

getic variables, including movement and dispersal, was associated with one single climatic variable, rainfall. Seasonal, annual, and interpopulation differences in foraging rates were a response to differences in availability of free-standing water from rainstorms, concluding that energy expenditure in desert tortoises are strongly constrained by the contingencies of rainfall.[6] Other studies in Kern county in the western Mojave revealed that tortoises traveled widely throughout their home ranges to locate these 'rare' preferred food plants.[7] They also determined that drought years had significantly higher number of invasive weedy plants even in DT designated critical habitat (91% biomass), while during a high rainfall season invasive plant species were less (66% biomass) and thus the native species that comprise the DT preferred food plants were more abundant.[8] This research supports the fact that desert tortoise could have been detected onsite more recently – particularly during a wetter year - as does the fact that previous studies detected 40 scat and a subadult within 3.25 miles of the Project site.[9]

12-W2 (cont.)

The analysis by the DEIR regarding current DT status is not only incomplete due to insufficient surveys, it is incorrect. The biotechnical report of the DEIR claims, "That only a carcass was observed is evidence that this site is currently unoccupied by tortoises."[10] This is an illogical conclusion, indeed the fact that a carcass was found indicates the potential for live adults as well. This is reinforced by the U.S. Fish and Wildlife Service (USFWS) protocol for "Preparing For Any Action That May Occur Within The Range Of The Mojave Desert Tortoise (*Gopherus agassizii*)" that states, "Occurrence of *either* live tortoises or tortoise sign (burrows, scats, and carcasses)

[6] Peterson, C. C. (1996). Ecological energetics of the desert tortoise (*Gopherus agassizii*): Effects of rainfall and drought. *Ecology, 77*(6), 1831
[7] Jennings, W. B., & Berry, K. H. (2015). Desert tortoises (gopherus agassizii) are selective herbivores that track the flowering phenology of their preferred food plants. *PLoS One, 10*(1) doi:http://dx.doi.org.jerome.stjohns.edu:81/10.1371/journal.pone.0116716
[8] Brooks ML, Berry KH (2006) Dominance and environmental correlates of alien annual plants in the Mojave Desert, USA. *J Arid Environ* 67: 100–124.
[9] DEIR Volume 2 Appendix D p. 6
[10] *Ibid.*

in the action area indicates desert tortoise presence"[11] and "determining whether desert tortoises are present does not rely on finding live animals".[12] The Applicant needs to conduct new DT surveys, and script mitigation appropriately according to what would comprise more comprehensive findings of both past and recent surveys.

12-W2 (cont.)

C. Special Status Species Surveys

The DEIR fails to conduct focused surveys for any species other than the desert tortoise and Mohave ground squirrel. This is inadequate; protocol or focused surveys are necessary to establish an accurate and comprehensive biological baseline regardless of the project footprint size or nature of the habitat onsite. Conducting protocol surveys for protected species, and focused surveys for taxa (birds, reptiles, bats) is standard practice for impact analysis for all kinds of construction projects. They need not be scientifically exhaustive, but a good faith effort to comprehensively describe the baseline that is the basis for all biological resource mitigation analysis must include methodologies established to detect species and their regional status beyond anecdotal data; anecdotal being the most species-specific that can be expected from assessment or reconnaissance surveys.

12-X2

While databases and literature searches are a standard part of the process for gathering information on a site, they cannot replace focused, protocol surveys when it comes to determining the presence, status, or scope of a particular species at a project site. The special-status species that could be expected to occur onsite for this Project include over a dozen bird species, only a few of which are mentioned in the DEIR. Some of these should be analyzed by conducting entirely separate, focused avian surveys to detect migrants, raptors, and breeding birds to note occurrence of special status species in winter and summer, including the Swainson's hawk (a CESA listed species). (For more on special status avian species see discussion below.)

[11] USFWS 2010. p. 6 https://www.fws.gov/carlsbad/PalmSprings/DesertTortoise/DT%20Pre-project%20Survey%20Protocol_2010%20Field%20Season.pdf
[12] USFWS 2017. P. 10 https://www.fws.gov/nevada/desert_tortoise/documents/manuals/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2017.pdf

A review of standard technical reports analyzing biological resource impacts for CEQA and other analyses of development projects will show that focused surveys are common and conducted literally as such, where the biologist "focuses" on the species for which the protocol has been designated. A focused survey avoids splitting the biologist's time attempting a protocol, habitat, or reconnaissance survey, while attempting to observe the ground, vegetation, underground (denning and burrowing species) and skies all at once for any vertebrate, invertebrate, and plant species that may also be present at any given time on and near the site. The demonstrated need for species-intensive focus is why agencies require protocol surveys to be conducted for one focal species at a time.[13] By definition, a focused protocol survey serves the purpose of detecting elusive, cryptic, rare or endangered species and requires a particular degree of intensive "focus" and species-specific search methodology by the surveying biologist. Not only is the search intensive, but concurrent reporting is also required for certain species (like the desert tortoise) while in the field. Concurrent reporting while conducting a field survey is equally time-intensive and precludes adequate attention necessary for thorough detection of other animals at the same time.[14] Reconnaissance surveys and habitat assessments, like those conducted by the Applicant's consultant, serve the purpose of generating an overall picture of what habitats exist on site. They do not and cannot replace data representative of comprehensive, accurate species-specific or taxa-specific surveys.

12-X2 (cont.)

It is common knowledge that it is the rare species that require greater protection, and thus are most important to detect. By definition rare species occur in lower densities, and/or have lower occurrences on average for any given occupied territory, and thus require even greater attention, focus, and time dedicated to accurate observation. By conducting concurrent surveys for almost all species with the potential to occur onsite, it is only logical to conclude that the likeli-

[13] USFWS. 2017. Preparing for Any Action That May Occur Within the Range of The Mojave Desert Tortoise (*Gopherus agassizii).* https://www.fws.gov/nevada/desert_tortoise/documents/manuals/Mojave%20Desert%20Tortoise_Pre-project%20Survey%20Protocol_2017.pdf
[14] *Ibid*.

hood that biologists miss key individuals of sensitive species significantly increases. It is especially likely that species flying overhead will be missed while the biologist is busy scouring the ground for tortoise scat or a tiny rare plant. Finally, it is common sense that nocturnal, crepuscular, and fossorial species (i.e. bats, foxes, lizards, rodents) will not be detected when the appropriate methodology is not applied to observe them. To conclude certain species are not present, or have a low potential to occur, without conducting any focused surveys, is scientifically unfounded and results in the Project baseline being incomplete.

Studies of Mojave Desert species show that not only the presence but abundance and density of species can be highly variable from year to year based upon factors such as drought, disturbance from large scale renewable energy projects, and related ecosystem functions, including prey-predator cycles, gene flow, and responses to herbivory, to name a few.[15, 16, 17] This underscores the importance of project-wide focused surveys, which go beyond noting presence/absence of sensitive wildlife species, and include data informing the degree to which specific details (i.e. performance and success criteria) of mitigation strategies may successfully reduce impacts to less than significant. For instance, mitigation for one vs. several pairs of resident burrowing owls would require significantly different scope of compensatory mitigation.

12-X2
(cont.)

The DEIR referred to habitat assessments via reconnaissance surveys and limited databases to make protected species status determinations, and resultant assumptions regarding adequate mitigation measures. This is an oversight. Focused ground-truthing is not a backup required

[15] Reynolds, J. F., Kemp, P. R., Ogle, K., & Fernández, R. J. 2004. Modifying the "pulse-reserve" paradigm for deserts of North America: precipitation pulses, soil water, and plant responses. *Oecologia*, 141(2), 194–210. http://proxy.greenmtn.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cmedm&AN=15042457&site=eds-live

[16] Charles C. Peterson. 1996. Ecological Energetics of the Desert Tortoise (*Gopherus agassizii*): Effects of Rainfall and Drought. *Ecology*, (6), 1831. https://doi.org/10.2307/2265787

[17] Bare, L., Bernhardt, T., Chu, T., Noddings, C., Gomez, M., Viljoen, M. 2009. Cumulative Impacts of Large-scale Renewable Energy Development in the West Mojave: effects on habitat quality, physical movement of species, and gene flow. *Group Project Brief*, Donald Bren School of Environmental Science and Management. UCSB.

only for ESA or CESA species. It is warranted to determine essential details required for adequate mitigation analyses, including ecological variables that cannot be derived from any given database or presence/absence list. Protocol surveys are also conducted to collect data on some important variables regarding subpopulations, including species richness, density, breeding status, corridor use, and occasionally even presence of disease or other problems – including niche-related variables that are being impacted by global warming of the Mojave desert - reducing individual survival, fecundity, or subpopulation viability and thus compounding impacts that would be derived from habitat loss.[18, 19,20] Experienced biologists with species-specific survey permits not only have the responsibility of reporting all such observations to USFWS, but also to ensure harassment of species during surveys is minimized by default of their specialized knowledge and training, including being aware of unique or significant threats to the species such as invasive species competition and predation, and disease.[21]

12-X2 (cont.)

Review of the literature and databases are an important part of gathering regional presence/absence data, but they cannot replace focused or protocol surveys in terms of site-specific specificity or accuracy. The sources identified by the DEIR for such review to determine biological impacts[22] do not describe or list species detected (recently otherwise) on the Project site except for the CNDDB. In fact, the DEIR relies heavily upon the CNDDB to make determinations about the potential for species to occur. However, the CNDDB is limited in its ability to predict species currently present at any given locale; instead, it presents at best a conservative description of what may or may not be present onsite, and thus reveals little about details related to populations as a whole. Many species sightings are not actually reported on the public

[18] Daniel, A. Sept 27, 2015. Deadly Skin Disease Threatens Endangered Kit Foxes in Bakersfield. *KQED.* https://www.kqed.org/news/10666076/deadly-skin-disease-threatens-endangered-kit-foxes-in-bakersfield
[19] Iknayan, K. and Beissinger, S. 2018. Collapse of a desert bird community over the past century driven by climate change**.** *PNAS*. 115 (34) 8597-8602; https://doi.org/10.1073/pnas.1805123115
[20] National park Service. 2013. Disease Outbreak in Desert Bighorn Sheep. https://www.nps.gov/moja/learn/nature/desert-bighorn-sheep.htm
[21] Berry, M. and Christopher, M. 2001. Guidelines For The Field Evaluation Of Desert Tortoise Health And Disease. *Journal of Wildlife Diseases*, 37(3), pp. 427–4 https://doi.org/10.7589/0090-3558-37.3.427
[22] DEIR p. 4.4-1

CNDDB. For instance, according to CDFW's CNDDB coordinator, for most birds the CNDDB maps only those occurrences that can be associated with "evidence of nesting." Observations of flyovers or foraging are generally not mapped into CNDDB as an "Element Occurrence," the standard mapping unit based on NatureServe natural heritage program methodology.[23] CNDDB biologists also state that the database represents summaries of species occurrences; not individual detections. "Given limited resources to map submissions, the CNDDB tries at best to map occurrences that relate to an important aspect of life history (*pers. comm,* P. McIntyre, CDFW, June 6, 2015)".

As importantly, CNDDB records are voluntarily reported and only exist for locations that have been surveyed to a greater extent than others. As a result, the lack of CNDDB records, or records from any other database or report (i.e. the DRECP) does not mean a species is absent. In short, lack of evidence is not evidence. To reinforce this fact the CDFW posts a disclaimer on its CNDDB website: "We work very hard to keep the CNDDB [...] as current and up-to-date as possible given our capabilities and resources. However, we cannot and do not portray the CNDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers."[24]

In light of the paucity of evidence and resultant lack of appropriate analysis for special status species that have potential to occur onsite, the DEIR must revisit its baseline presentation and conduct appropriate focused surveys for the species and/or their representative taxa (i.e. bats, reptiles, raptors, nesting/migratory birds).

12-X2 (cont.)

II. THE DEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE IMPACTS TO BIRDS

12-Y2

[23] http://www.natureserve.org/conservation-tools/standards-methods.
[24] https://www.wildlife.ca.gov/Data/CNDDB/About (emphasis added).

The DEIR states, "Direct impacts to special-status species are unlikely to result from project operation and maintenance activities because implementation of the project onsite would remove habitat for special-status species on the project site and restrict sensitive wildlife species movement into the project site…"[25] This statement is disingenuous as presented because it is scientifically erroneous; so much so that it brings into question the logic of other arguments in the document regarding lack of impacts. To say that there will be minimal impacts to species because their habitat will be removed and thus be less attractive is illogical. First, second only to direct injury or death of an individual, removal of habitat is a primary cause of significant ecological impacts.

Second, as noted above the Applicant cannot say which special status birds may use the site for breeding, foraging, or a migratory stopover due to lack of baseline ground-truthing. Third, most if not all bird species (and many other animals) have high natal site fidelity – an evolutionary trait developed over millions of years - and will return to their specific location of birth regardless of the addition of anthropogenic activities and constructs. Because birds fly and thus are not especially restricted by fencing or an "awareness" program presented for employees, mitigation measures involving fencing and habitat removal do not result in actual mitigation of harm or injury to birds, and cannot be included as methods that guarantee reduced impacts. As importantly, birds are known to take advantage of these constructs for perching, shade, nesting, or attraction as a stopover due to the lake effect (more, below) thus exposing themselves to injury, harm, and reduced fecundity over time (Photos 1- 3).

12-Y2 (cont.)

The DEIR also states that, "Mitigation Measures MM 4.4-1 through MM 4.4-12 would require methods designed to reduce wildlife mortality and impacts, promote long-term project site suitability, and educate onsite personnel." As written this statement is confusing: The phrase "promote long-term project site suitability" is meaningless in this context, since it does not define suitability in respect to mitigation.

[25] DEIR 4.4-34

The DEIR erroneously analyzes impacts of resident and migratory birds that will occur throughout the thirty or more years of operation of the Project. It states that the "fake lake effect does not have a significant direct or indirect impact on migratory birds including foraging raptors"[26] and "The program will monitor avian mortality at the project site during operations and maintenance, and provide quarterly reporting and adaptive management recommendations to reduce the level of avian mortality to less-than-significant levels."[27]

The phenomenon the DEIR refers to is not called "fake", it is referred to as the "lake effect", defined as the potential for birds to be attracted to solar panels that may appear as bodies of water, the result being injury, death, or stranding from strikes to panels and associated structures (wires). The DEIR's alteration of the term appears to be one of several attempts in the discussion to support a conclusion based on unfounded assumptions, not evidence. The DEIR does acknowledge that "it is apparent that solar energy facilities present a risk of fatality for birds..."[28], however then attempts to argue, erroneously, that the degree of existing data of bird strikes to solar panels and related is so "uncertain" as to not indicate there will be significant measurable impacts. This argument is not supported by the evidence, specifically:

12-Y2 (cont.)

1. The DEIR claims, "the mortality data from the other projects has been collected over a relatively short period of time and still is being evaluated". This is simply incorrect; mortality monitoring has been conducted as long as the commercial industry of solar panel-powered energy has existed; for example one peer reviewed article discusses impacts in detail published in 1986.[29] More to the point, the data are abundant, methodologies standardized, and thus can be statistically evaluated to generate predictions for injury / death throughout the life of a given project in respect to size and/or MW power. This point is further discussed with evidence, below.

12-Z2

[26] DEIR 4.4-35
[27] DEIR 4.4-36
[28] DEIR 4.4-35
[29] McCrary, M. Mckernan, Schreiber, R., Wagner, W., and Sciarrotta, T. 1986. Avian Mortality at A Solar Energy Power Plant. *J. Field Ornithology*, 57(2), 135-141.

2. The DEIR states that in respect to avian strikes, "in most cases, the cause of death is not clear".[30] This is also incorrect. The data presented clearly distinguish if the bird was harmed by a strike to a panel, a wire, or if cause is unknown. A review of the data presented to the agencies from monitoring reports (i.e. Table 1) show that the avian mortalities are readily described in part based on cause of death.[31] As importantly, I have personally conducted mortality monitoring at several industrial solar sites in the Mojave and Sonoran desert throughout the last 10 years for energy companies, including NextEra, First Solar, and others. As the photos help illustrate, strikes that cause injury and death are often readily interpreted due not only to the condition of the bird but the evidence on the solar panels themselves (Photos 4-6). 12-A3

3. The DEIR attempts to support its uncertainty argument by also claiming the data do not exist to confirm water birds are more susceptible to lake effect mortality. This is contrary to the evidence. When one considers the many hundreds of migrant species of all types – passerines, raptors, water birds - that fly over these facilities along their migratory routes within the Pacific flyway, in addition to the prevalence of desert residents that are typically not water birds, one can see a non-random preponderance of water loving species among those that strike the panels. This reality is underscored by the fact that less than four miles west of the Project is part of the Pacific Flyway that is also a designated Important Bird Area, comprising an area of 55 miles north to south and over 18 miles at its widest.[32] Not surprisingly, water birds of many species have been detected bordering and just south of the Project on eBird,[33] including a sighting in September, 2018 of over 900 migratory American white pelicans.[34] EBird data of water-loving species observed bordering and flying over the Project just within the past three years include the snow goose, Ross's goose, Canada 12-B3

[30] DEIR p. 4.4-35
[31] Walston, L. et. al. 2016. A preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States. *Renewable Energy*. 92: 404-414. doi:10.1016/j.renene.2016.02.041
[32] Audubon Important Bid Area map: https://www.audubon.org/important-bird-areas
[33] EBird Inyokern hotspots https://ebird.org/hotspots?hs=L803734&yr=all&m=
[34] EBird Inyokern hotspot: https://ebird.org/hotspot/L803734

goose, gadwall, American wigeon, mallard, black-crowned night heron, white-faced ibis, great egret, green heron, and the belted kingfisher, among others. It is of particular concern that the DEIR not only dismisses the evidence for water-loving birds to incur higher than random mortalities at solar installations, but it did not conduct any baseline surveys to comprehensively inform their analysis of direct and cumulative impact the Project may have to these many species of water-loving birds. In my personal experience conducting industrial solar site mortality monitoring the majority of birds that I observed to have died from strikes were wading and water birds including grebes, sora, coots, and in one incidence even a tropical seabird, the blue-footed booby, was killed by a strike to a solar panel. If strikes were random across all species of birds, the most abundant species that reside in proximity to the solar sites would be expected statistically to suffer higher rates of mortality, and those common desert residents are not water-loving birds. This reality further provides evidence of the existence of the lake effect as a significant attractant to migrants including special status species detected in the region.

12-B3 (cont.)

4. The DEIR commits a major error by inferring that lack of evidence *is* evidence. Even if its erroneous statements regarding uncertainty were accurate, to draw the conclusion that such uncertainty results in impacts being reduced to less than significant given some unscripted, yet to be determined "adaptive management measures" is not based in science or evidence. It is also hypocritical to argue that one cannot draw any conclusions of degree of impacts from purported "uncertainty", and then insist that such "uncertainty" can and will be adequately minimized to less than significant impacts with "adaptive management measures".

12-C3

5. The DEIR inappropriately defers description of mitigation to the future, stating that, "In order to determine if the operational phase of the project is resulting in a significant amount of avian mortality, a monitoring program would be implemented as described in Mitigation Measure MM 4.4-12. The program will monitor avian mortality at the project site during op-

12-D3

erations and maintenance and provide quarterly reporting and adaptive management recommendations to reduce the level of avian mortality to less-than-significant levels." This is inadequate. First, using the precautionary principle one must estimate degree of impacts via avian mortality *prior* to permitting, not afterwards when the oversight, methods, and enforcement of mitigation for mortalities is undetermined, and for which essential details are undefined, including performance and success criteria. Without such the reviewing public is not able to make any determination of efficacy of mitigation as proposed.

12-D3 (cont.)

6. MM 4.4-12 states, "Appropriate performance standards for mitigation of impacts to any species regulated by the Bald and Golden Eagle Protection Act, the Endangered Species Act, and the California Endangered Species Act exist through required consultation with the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife under their respective regulatory and permitting frameworks. If, after 2 years of mortality monitoring, project impacts to any other avian species caused by the project are shown to result in a substantial, long-term reduction in the demographic viability of the population of the species in question, then adaptive management must be implemented to reduce impacts to below this threshold. Adaptive management measures may include but not be limited to passive avian diverter installations, the use of sound, light or other means to discourage site use consistent with legal requirements, onsite habitat management or pre control measures consistent with applicable legal requirements, or modification to support structures to exclude nesting birds."

12-E3

This is insufficient. First, as iterated herein, regardless of whether it is deemed "lake effect" or not, the significance of injury and mortality to birds from panel strikes is real, measurable, and enough data have been collected over the years to statistically estimate loss per acre of panels and/or per MW. Second, to infer that two years of mortality data will provide adequate information to predict impact significance for the next 28 or more years of operation is specious. Much about any given species' population viability can change over the next few decades due to impacts from climate change, development, and other pressures,

and this will not be reflected predictively in two years. It is an inadequate scope of data upon which to extrapolate a meaningful plan that will reduce strikes while informing the monitors about which special status species are being impacted; such impacts must be reduced by offering compensatory mitigation that accounts for injury and death of many different avian species, some special-status species with precarious population viability. Third, and as importantly, there are no "adaptive management" measures, including diverters, sound, or light, that have been scientifically demonstrated to reduce strikes by birds to solar panels. In fact, it is extremely uncommon that such techniques are ever used in industrial solar projects in an attempt to reduce strikes, even less commonly measured and researched, and there is virtually no peer reviewed research by independent researchers showing any such "adaptive management" to have successfully reduced strikes. The DEIR fails to describe peer reviewed evidence of "adaptive management" actions that have resulted in reduced strikes.

12-E3 (cont.)

Fourth, the DEIR is misleading in stating that "Appropriate performance standards for mitigation of impacts to any species…exist through required consultation." Consultation with agencies about industrial solar site mitigation to birds may result in site-specific, Project-specific, and species-specific decisions about mitigation that are highly discretionary because such mitigation measures for operational impacts are not standardized whatsoever, largely untested, and are dependent upon the final EIR mitigation determinations as permitted. There is no species-specific "standard" for species harmed by solar Projects infrastructure, and there is no threshold defined as the DEIR infers. This is simply not accurate, and the statement and its underlying assumptions must be retracted. If not, the DEIR must present the actual standards and thresholds they are alluding to for avian species that may be impacted by the Project. Without such the DEIR is lacking in substantial evidence for MM 4.4-12 to be effective.

7. By offering mostly undescribed mitigation measures (i.e. M.M 4.4-12) relevant to operational impacts, concurrent with an incorrect argument about the degree of harm to birds

12-F3

from strikes, the DEIR also omits appropriate analysis of impacts to entire bird populations, not just individuals. As noted, the evidence (Table 1) on the significance of bird strikes to solar panels is more than preliminary, and demonstrates that panels, although an attractant to water loving birds especially, and is an attractant to special status birds as well (Photo 3, 7), and can cause injury and death to birds of many species, including protected ones (e.g. Swainson's hawk, burrowing owl, tricolored blackbird) via strikes not only to panels but also associated nearby wires and power line electrocution. For these and other rare and endangered species, loss of even a few breeding adults can significantly reduce the population's regional population stability.[35,36]

12-F3 (cont.)

8. The DEIR states, "The residual effects on migratory birds of the project were determined to be less-than-significant. This cumulative analysis analyzes the potential for these incremental impacts of the project to combine with other past, present, and reasonably foreseeable projects to cause or contribute to a significant cumulative effects within the Central Valley portion of the Pacific Flyway for the duration of the project. Identified cumulative projects that involve the installation of PV panels have the potential to cause impacts to migratory birds associated with collisions…**evidence suggests that significant impacts to migratory birds could occur even after mitigation**. Further, as take authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA. Therefore, the proposed project, in combination with all identified cumulative projects, could result in a cumulatively considerable contribution to a significant cumulative impact (emphasis added)." First, the term "residual" is not supported by a scientific definition or evidence, and therefore meaningless here. Second, the statement in bold contradicts the DEIR's entire discussion claiming insignificant operational impacts to birds from the

12-G3

[35] Sæther, B., Engen, S., Møller, A., Visser, M., Matthysen, E., Fiedler, W., Török, J. (2005). Time to Extinction of Bird Populations. *Ecology,* 86(3), 693-700.

[36] Abstracts From The 2014 Annual Meeting Of The Society For Northwestern Vertebrate Biology, In Cooperation With The Washington Chapter Of The Wildlife Society, Northwest Partners In Amphibian And Reptile Conservation, Researchers Implementing Conservation Action, And The Global Owl Project, Held At The Red Lion Hotel, Pasco, Washington, 3-7 February 2014 4 Th. *Northwestern Naturalist*, vol. 95, no. 2, 2014, pp. 129–171. www.jstor.org/stable/43286691

lake effect. Third, significant impacts could be potentially mitigated with appropriate compensatory mitigation that contributes to a conservation grant, trust, or other relevant entity that has demonstrated successful conservation of regional migratory birds.

12-G3 (cont.)

9. In its discussion regarding birds and operational impact mitigation, the DEIR states, "In addition, solar photovoltaic panels consist of non-reflective glass that minimizes the "fake lake-effect."[37] This claim is contrary to the DEIR's previous assertion that the lake effect is largely untested and theoretical. As importantly, the theory of glare minimization from non-reflective glass is based on human aesthetics and related perceptions. The DEIR provides no substantial evidence to support the idea that any sort of non-reflective coating can, or does, serve to reduce impacts to birds from a solar array. To assume a coating manufactured to reduce glare as perceived by humans will do the same for an entirely different species that often occupies a dimension rarely used by humans, (i.e. overhead, between ground level and many hundred feet, as seen when reflecting sunlight and moonlight) is unsupported.

12-H3

While conducting mortality monitoring at several solar arrays in the Sonoran and Mojave desert I documented bird collisions that illustrate how birds have died from direct strikes the panels despite being covered with dust, where the point of impact is readily detectable due to the feather and wing marks the bird left in the dust on the panels (Photos 4-6). Therefore, a thick layer of dust has not deterred birds from documented strikes. Although the lake effect theory is based upon the idea that birds may perceive solar industrial sites as water bodies, it makes no assumptions regarding what actual physical characteristics may contribute to different species. The cues may be due to albedo, reflectivity, or the appearance of a large mass of flat, uniformly dark expanse as the project site may appear for day and/or night flying birds, or a combination of such factors that may vary depending upon the species in question.

[37] DEIR 4.4-35

10. The DEIR's oversight of Project impacts by way of bird strikes throughout the life of the project is flawed in its omission due to the plethora of evidence that such strikes knowingly contribute to bird deaths and injuries on every industrial-scale solar facility. The following is a compilation of evidence supporting the fact that the project will result in potentially significant direct, indirect, and cumulative impacts to migratory and resident birds, breeding and non-breeding. As iterated above, the DEIR fails to adequately describe and mitigate such impacts:

    a. Table 1 summarizes a partial review of avian mortality reports for solar desert facilities submitted to the state and federal Fish and Wildlife agencies between 2011 and 2016, (depending on the report). Table 1 shows just a partial summary that lists species that are protected under the Federal ESA, California ESA, California Species of Special Concern, and Migratory Bird Treaty Act, and have been killed by collision deaths at Southern California desert solar facilities, including burrowing owls, loggerhead shrikes, red-tailed hawk, horned lark, Say's phoebe, long-eared owl, American white pelican, prairie falcon, all of which were identified on or near (from 0.6 to 2.5 miles) of the Project site. The table provides undeniable evidence that solar facilities specifically attract and kill birds across many groups including migrants; resident birds are not the only ones affected. Table 1 shows that protected, endemic, and unusual desert migrants of all sizes succumb; including marine and freshwater species such as the blue-footed booby, surf scoter, Virginia rail, common gallinule, common loon, pelicans, jaeger, various ducks, grebes, surf scoter, and other birds native to marine and freshwater habitats that utilize wetland stopovers – or what may appear to be wetlands but are vast solar arrays - while migrating through desert regions.

    b. The California Valley Solar Ranch Project (CVSRP) is located in the California desert region primarily on land designated largely as formerly 'disturbed' habitat and thus arguably of equivalent and lower overall quality habitat than this Project site. The

12-I3

CVSRP development footprint that contains the PV solar arrays and operating facilities is approximately 1,475 acres.[38] Despite what was deemed lower quality habitat, 703 bird mortalities were reported at CVSRP over the course of just two years, including three burrowing owls, despite burrowing owl mitigation measures described in the EIR. At this rate of mortality, a reasonable prediction amounts to approximately 10,545 birds killed or injured for the life of a 30-year facility, including 45 burrowing owls. One can use data from this and other desert facilities in California to extrapolate the impact of a project from acreage alone to begin to estimate bird mortality from strikes to solar arrays and associated infrastructure. Assuming a 30 year operational life, throughout the life of this Project strikes could thus total an average of 1,194 birds, including an unknown number of rare, SSC, and ESA listed species, and would thus pose a high risk of significantly impacting an entire population or a resident or migratory species that uses this site for nesting, foraging, or a migratory flyway.

12-I3 (cont.)

c. In a peer reviewed study McCrary et al. reported, "We studied avian mortality at an operating solar central receiver power plant in the Mojave Desert of southern California. During 40 weeks of study we documented the deaths of 70 birds (26 species). The estimated mortality rate was 1.9-2.2 birds per week. 81% of birds of 20 species died from collisions with Solar One structures, mainly the mirrored surfaces of heliostats."[39] The study goes on to further distinguish collision deaths with reflective panels as separate from other collision deaths, "Avian Collisions are an inevitable by-product of almost all man-made structures (see Avery et al., FWS/OBS-80/54, 1980). Reflective surfaces are especially prone to collisions (Klem, Ph.D. thesis, Southern Illinois Univ., Carbondale, 1979), and it is not surprising that collisions with mirrored

[38] H.T. Harvey and Associates. 2010. Biological Assessment for the California Valley Solar Ranch Project https://www.energy.gov/sites/prod/files/2014/04/f14/CVSR_BA_11_08_10_Final.pdf
[39] McCrary, M. Mckernan, Schreiber, R., Wagner, W., and Sciarrotta, T. 1986. Avian Mortality at A Solar Energy Power Plant. *J. Field Ornithology*, 57(2), 135-141. https://sora.unm.edu/sites/default/files/journals/jfo/v057n02/p0135-p0141.pdf

heliostats occur on a somewhat regular basis considering the reflective surface area of Solar One."[40]

d. Research on solar array and power line collisions demonstrates that impacts can be influenced by many variables, including proximity to developed areas and wetlands, degree of fencing, proximity to roads or roosts, wind conditions, and migration micro-pathways.[41] USGS biologists point out that numerous animal species use polarized light for orientation and navigation purposes (Horváth and Varjú 2004). As such, the potential exists for polarized light pollution (PLP) to disrupt the orientation and migration abilities of desert wildlife, including those of sensitive species. In the review by Horváth and colleagues (2009), they highlighted the fact that anthropogenic structures that produce PLP "can appear to be water bodies to wildlife and can become ecological traps for avian species. Therefore, utility-scale solar energy facilities at which photovoltaic technology is used in the desert Southwest could have profound effects on the ecological community surrounding the solar facility." [42] This is of particular relevance here due to the fact there are filtration ponds located at the north end of the Project, which will serve to further attract birds looking for water along this arid section of the Pacific flyway. This is also illustrated by the eBird observations of various water birds mentioned above at a location on the north end of the Project.

12-I3 (cont.)

e. In their preliminary assessment of avian mortality at utility-scale solar energy facilities in the United States, Walston et. al.[43] summarize their findings on impacts to

[40] *Ibid.*
[41] Brown, W. M., & Drewien, R. C. 1995. Evaluation of Two Power Line Markers to Reduce Crane and Waterfowl Collision Mortality. *Wildlife Society Bulletin* (1973-2006). 23(2): 217–227. https://pdfs.semanticscholar.org/323a/fc509a4f1605c5ebf32c60c593204e31c02c.pdf
[42] Lovich, J. E., & Ennen, J. R. 2011. Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States. *Bioscience*, 61(12): 982–992. https://academic.oup.com/bioscience/article/61/12/982/392612
[43] Walston, L. et. al. 2016. A Preliminary Assessment Of Avian Mortality At Utility-Scale Solar Energy Facilities In The United States. *Renewable Energy*. 92: 404-414. doi:10.1016/j.renene.2016.02.041

birds as follows, "Utility-scale solar energy facilities in the United States require large spatial footprints (between 1.4 and 6.2 ha of land per MW of electric production) and are projected to require a total of 370,000 - 1,100,000 ha of land by 2030, mostly in the arid regions of the southwestern states [11]...Recent studies have suggested that utility-scale solar developments may represent a source of mortality for wildlife such as birds [12]. There are currently 2 known types of direct solar energy-related bird mortality [9,12,13]: 1. Collision-related mortality - mortality resulting from the direct contact of the bird with a solar project structure(s). This type of mortality has been documented at solar projects of all technology types…different solar technologies and project designs may influence avian mortality risk. For example, project designs that utilize solar collectors that reflect polarized sunlight in such a way to be perceived as waterbodies, may attract birds and their prey (e.g., insects), thereby increasing the risk of bird collisions with project structures [10,12,14,20]."

12-I3 (cont.)

This summary underscores the cumulative impacts that current and proposed desert solar projects will have on birds in the California desert southwest, including in Kern County. Using Fesnock et al.'s conservative findings on bird deaths per acre at California desert solar facilities, [44] and the projected acreage slated for development by 2030, bird deaths in the region would number between 548,000 and over 4,347,000.

f. The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy and the U.S. Department of the Interior's Bureau of Land Management published their Solar Energy Development Programmatic EIS PEIS, which concluded that "Since birds are prone to collisions with reflective surfaces, it would be expected that a utility-scale solar energy project could cause significant bird mortality. Glare could pos-

[44] Fesnock, A., Huso, M., and Allison, L. (2016). Background Avian Mortality across the California Desert Region: A Pilot Study. *BLM Avian Solar Symposium,* August 2017. http://blmsolar.anl.gov/program/avian-solar/symposium/doc/Fesnock_Background_Mortality.pdf

sibly disorientate a bird in flight and cause it to collide with solar energy project facilities or other objects."[45] This conclusion by the federal government agencies responsible for overseeing wildlife impact mitigation on public lands further exemplifies the accepted reality that significant bird collision risks are created and enhanced by the presence of reflective solar arrays at solar industrial projects, regardless of differences in design of the panels between projects, and locations of these industrial sites.

g. In their comments to the Palo Verde Solar DEIR, the USFWS confirms that there is growing evidence of the impacts from what is known as the "lake effect," especially for water-associated birds and other species seeking migratory stopover habitat, and that projects in proximity to this project's site are among those reporting the highest mortality of water-associated birds.[46] They conclude that cumulative impacts to birds could be significant for various species and would warrant project-specific systematic monitoring and mitigation via a bird and bat conservation plan. They suggest some strategies that should be incorporated into such a plan, while emphasizing that any such Plan should provide enough detail to demonstrate standard scientific rigor, appropriate methodology, and consistency with other similarly approved plans.

12-I3 (cont.)

h. In the 2015 National Renewable Energy Laboratory's review of avian monitoring and mitigation information at existing utility-scale solar facilities, the report summarized their findings of 7 solar sites by stating, "There are currently two known types of direct solar-related bird fatalities (McCrary et. al.1986; Hernandez et al. 2014; Kagan et al. 2014): 1. Collision-related fatality—fatality resulting from the direct contact of

[45] DOE, DOI. Final Solar Programmatic Environmental Impact Statement. 2012. http://solareis.anl.gov/index.cfm pp. 5- 82.
[46] County of Riverside. 2017. Palo Verde Solar Project FEIR. p. 2-66 https://planning.rctlma.org/Portals/14/Postings/CUP3684EIR532/Volume%201%20-%202%20Response%20to%20Comments.pdf?ver=2017-08-18-095828-407

> the bird with a project structure(s). This type of fatality has been documented at solar projects of all technology types."[47] The review further summarizes, "Collisions may occur at any facility (solar or otherwise) with aboveground structures. In the case of solar plants these may include transmission lines, cooling towers, PV panels and poles, trough systems, heliostats, fencing, and buildings. At PV and CSP facilities, collision hazards to birds are greatest among the solar field arrays…PV facilities may attract some species of birds through what has been called the "lake effect" (Kagan et al. 2014), whereby migrating birds perceive the reflective surfaces of PV panels as bodies of water and collide with project structures as they attempt to land on the panels."[48] All project sites were characterized by presence of various types of desert scrub habitats native to California desert systems in the Mojave and Sonoran deserts.

12-I3 (cont.)

The evidence presented above clearly demonstrates that the risks of PV panel avian collisions are considerable, recognized by oversight agencies, measurable using scientific protocols, and quantifiable to the extent required for estimating compensatory mitigation needs. The DEIR fails to provide a comprehensive baseline of avian species that may use the facility for breeding, foraging, or as a stopover, and has failed to provide substantial evidence that impacts to birds from operation of the Project for up to 3 decades will be adequately mitigated.

As such, the Applicant must conduct focused avian surveys and offer compensatory mitigation for the injury and death to breeding birds and migrants. Such mitigation should be accompanied by a timeline, performance and success criteria, and remedial actions to be taken if such criteria are not met, including how they will be funded.

III. THE DEIR FAILS TO ADEQUATELY MITIGATE IMPACTS TO SPECIAL STATUS SPECIES

12-J3

[47] Walston, L., Rollins, K., Smith, K., LaGory, K. 2015. Review of Avian Monitoring and Mitigation Information at Existing Utility-Scale Solar Facilities. http://www.evs.anl.gov/downloads/ANL-EVS_15-2.pdf p. 10

[48] *Ibid.* p.30

A. Swainson's Hawk (SWHA)

The Project and surrounding habitat were not surveyed for the presence of SWHA using standard methods described in the Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (CEC and CDFW 2010)."[49] And yet the DIER's biological technical report erroneously states that, "Based on the field survey and habitat assessment, CMBC concludes that none of the following special status species reported from the region will be adversely affected by site development: Swainson's hawk, Cooper's hawk, sharp-shinned hawk, prairie falcon, loggerhead shrike, or LeConte's thrasher. As such, no adverse impacts have been identified and no mitigation measures are recommended."[50]

Adequate analysis and mitigation of direct, indirect, and cumulative impacts from loss of foraging habitat to the Swainson's hawk (SWHA) is lacking. The DEIR claims that there is a low potential for nesting Swainson's hawks to occur but makes no analysis of the impact of operations from strikes to panels and power lines, and loss of habitat. Therefore, its claim is not supported by the evidence:

12-J3 (cont.)

1. The DEIR acknowledges that the SWHA (a threatened species under the California ESA) were actually observed onsite during "the current survey", despite no focused avian surveys.[51] The DEIR states, "Although Swainson's hawk would not nest onsite and probably not forage there (they tend to prefer fallow agricultural fields and other open areas in the desert), LaRue has observed them resting in similar desert scrub habitats as they migrate through the region." The DEIR is misleading by inferring that the SWHA only forages on and near agricultural lands. This is not supported by research of the SWHA. The California Department of Fish and Wildlife's *Swainson's Hawk Survey Protocols, Impact Avoidance, and*

[49] DEIR Vol 2 Appendix D p. 28
[50] DEIR Vol 2 Appendix D p. vii
[51] *Ibid*. p. 7

Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties (CDFW and CEC 2010) states, "Foraging habitat includes dry land and irrigated pasture, alfalfa, fallow fields, low-growing row or field crops, new orchards, and cereal grain crops. Swainson's hawks may also forage in grasslands, Joshua tree woodlands, and other desert scrub habitats that support a suitable prey base. Gophers dominate the prey base of agriculturally based pairs while Swainson's hawks nesting in natural desert habitats consume a wider variety of prey species."[52] Nor is it supported by my personal experience studying SWHA migrations within a major flyway and stopover corridor in Anza Borrego; and for three years conducting raptor surveys 3 days a week, throughout a 15,000 acre project site (Ocotillo Wind Express) that was directly in the SWHA migratory flight path. To mitigate in part the loss of foraging habitat on a desert migratory flyway.[53] The 15,000-acre Ocotillo wind site was not agricultural habitat nor did it border such, but almost entirely natural desert scrub. While surveying I observed SWHA stopping to forage on resident grasshoppers and flying ants in natural habitats that were typically dominated by creosote and burrobush, similar to that of the Project site.[54]

12-J3 (cont.)

Impacts to SWHA as a result of loss of foraging habitat is further ignored by the DEIR since loss of invertebrate prey species is not discussed at all; another omission considering invertebrates are the pillars of ecosystem energy trophic levels directly above autotrophs (e.g. plants). While conducting mortality monitoring surveys on large solar arrays in the Sonoran desert, I observed employees using pesticides on and bordering the site to kill native ants, an additional factor that compounds the impact of loss of foraging habitat to SWHA (and other species that prey on invertebrates).

[52] CDFW and CEC. 2010. Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California. p.1 https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83991&inline
[53] Ocotillo Express Avian and Bat Protection Plan. 2012. Ocotillo Express LLC. https://tethys.pnnl.gov/sites/default/files/publications/Ocotillo_Express_2012.pdf
[54] See: https://borregohawkwatch.blogspot.com/2017/03/march-5-8-2017-aerial-feeding-continues.html

2. The high likelihood that SWHAs may use the Project site for foraging or a stopover is also supported by the evidence available from recent historical sightings of SWHAs within several miles of the Project area: EBird notes observations of SWHA in proximity to the Project, including a hotspot 0.7 miles[55] from the site: a likely breeding pair in April 22, 2020,[56] on April 11, 2020,[57] on April 7, 2018,[58] on May 2, 2014. Approximately 8 miles from the Project a SWHA was observed ion March 20, 2016, and 6.2 miles from the Project a SWHA was observed on April 27, 2017.[59] A thorough raptor survey may reveal an even high incidence of occurrence on and near the Project.

3. The DEIR refers to the SWHA impact analysis under the heading "uncommon biological resources." Uncommon, however, does not indicate low Project impact, in fact often it is the opposite. The CDFW reinforces this reality in respect to the low population numbers in the region, namely, "The small number of breeding Swainson's hawks in the Antelope Valley and the potential isolation from other Swainson's hawk populations makes the Antelope Valley population particularly susceptible to extirpation. Swainson's hawks have high nest site fidelity, meaning they return to the same site year after year (Estep 1989, Woodbridge et al. 1995) This may limit exchange of individual birds between distant breeding groups (Hull et al. 2007). Hull et al. (2007) found evidence suggesting that the Central Valley population has had little recent genetic exchange with other populations east of the Sierra Nevada. Due to the geographical isolation of the Antelope Valley Swainson's hawk population from other breeding populations, together with the species' high site fidelity, it is reasonable to infer that rapid re-colonization of the Antelope Valley would be unlikely if nesting pairs were lost. Given these facts, the California Department of Fish and Game (Department) would consider impacts to breeding pairs to be potentially significant because they may cause the population to become less than self-sustaining."

12-J3 (cont.)

[55] EBird hotspots map https://ebird.org/hotspots?hs=L803734&yr=all&m=
[56] EBird hotspot https://ebird.org/checklist/S67654057
[57] EBird https://ebird.org/checklist/S67227745
[58] EBird https://ebird.org/checklist/S44401426
[59] EBird hotspot https://ebird.org/hotspot/L786005

The CDFW continues by stating that, in regard to the SWHA, "a reduction in numbers or habitat of a rare, threatened, or endangered species would be considered a significant impact under CEQA. Potentially significant impacts may result from activities that cause nest abandonment, loss of nest trees, loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), or direct mortality. Due to the Swainson's hawk's known preference for areas of low vegetation that support abundant prey, **the Department considers conversion of foraging areas to renewable energy power plant facility sites to be habitat loss. For example, solar panel arrays are expected to eliminate most or all foraging potential. Significant habitat loss may result from individual projects and cumulatively, from multiple projects.** Each project which contributes to a significant cumulative effect must offset its contribution to that effect in order to determine that the cumulative impacts have been avoided (emphasis added)."[60]

12-J3 (cont.)

In short, even the loss of one breeding individual could significantly impact the region's population. In summary the DEIR does not adequately describe and analyze the impacts to the SWHA. The Applicant must conduct thorough surveys with all methodology and survey data mapped and reported, revise the impact analysis, and respond with appropriately detailed construction *and* operational mitigation recommendations for the SWHA. The Swainson's hawk should garner all necessary protections as a species listed as Threatened under the California Endangered Species Act, including compensatory mitigation for loss of foraging habitat and risk of strikes or electrocution from the addition of more power lines that cannot necessarily be mitigated by "adaptive management" or Avian Power Line Interaction Committee (APLIC guidelines as referenced by the DEIR. Indeed, research has revealed that even with applied mitiga-

[60] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83991&inline p. 2

tion actions (including those of APLIC) to reduce raptor electrocution, "overall, the incidence of electrocution does not appear to have decreased despite over 3 decades of research and mitigation procedures."[61]

12-J3 (cont.)

B. Fully Protected Species

The DEIR acknowledges that the golden eagle, a California Fully Protected species, may forage onsite, and that impacts from electrocution are a reality.[62] Additionally, there are various eBird observations of the golden eagle in proximity to the Project, including on the border of the Project site,[63] and within 0.7 miles of the Project at a birding hotspot.[64] The DEIR's proposal to mitigate impacts amount to following Avian Power Line Interaction Committee Guidelines specifications, and creating a monitoring program, specifically: "after 2 years of mortality monitoring, project impacts to any other avian species caused by the project are shown to result in a substantial, long-term reduction in the demographic viability of the population of the species in question, then adaptive management must be implemented to reduce impacts to below this threshold."[65] However, if a golden eagle is injured or killed by any aspect of the Project infrastructure at any time, this amounts to "take", which is prohibited and cannot permitted for Fully Protected species without a detailed, approved habitat conservation plan, which does not exist for this Project . As such, the applicant must explain, specifically, how death or injury to any golden eagles will be avoided for the life of the Project. This explanation must also be provided for another Fully Protected species not even mentioned by the DEIR, the peregrine falcon. This species has also been noted on eBird on the border of the Project site,[66] within 0.7 miles of the Project,[67] is a regular resident of the western Mojave / greater Antelope Valley, and

12-K3

[61] Kagan, R.A. 2016. Electrocution of Raptors on Power Lines: A Review of Necropsy Methods and Findings. *Veterinary Pathology*.Vol. 53(5) pp 1030-1036 https://journals.sagepub.com/doi/full/10.1177/0300985816646431
[62] DEIR p. 4.4-36
[63] EBird https://ebird.org/hotspot/L837239
[64] EBird hotpsot https://ebird.org/hotspot/L1123153
[65] DEIR p. 4.4-50
[66] EBird https://ebird.org/hotspot/L837239
[67] https://ebird.org/hotspot/L1123153

like other raptors is at risk of strikes and electrocution by wires (Photo 8). As such the DEIR must describe exactly how the project will avoid take and resultant impacts to this species, especially in light of the fact that APLIC recommended mitigation has not proven to be highly effective in reducing eagle mortality.[68]

12-K3 (cont.)

C. Other Special Status Avian Species

The DEIR states, "CMBC concludes that none of the following special status species reported from the region will be adversely affected by site development: Swainson's hawk, Cooper's hawk, sharp-shinned hawk, prairie falcon, loggerhead shrike, or LeConte's thrasher. **As such, no adverse impacts have been identified and no mitigation measures are recommended**."[69] As iterated above, without adequate surveys to establish the current baseline of these species' presence and use of the Project site, such a conclusion is not based in any evidence, regardless of preferred habitat onsite, since all of these species are widely accepted as breeding residents of the region and thus could use the site for breeding, foraging, or moving between territories. As importantly, several of these species garner special protection under the CESA (Swainson's Hawk, as discussed above), or are California Species of Special Concern (SSC), namely the LeConte's thrasher and loggerhead shrike, which have been noted on eBird and the CNDDB. However, there are other SSC not even mentioned by the DEIR that are known regional residents and migrants, and have been observed and reported on eBird bordering the site as well as less than one mile from the site, including the yellow warbler, Vaux's swift, Summer tanager, least bittern, mountain plover, purple martin, northern harrier, long-eared owl, and short-eared owl. The CESA threatened tricolored blackbird is also on record as present at a hotspot less than a mile from the site. This species is attracted to water sources near agricultural lands, thus the filtration ponds bordering the Project – also located just south and west of agricultural fields -

12-L3

[68] Kagan, R.A. 2016. Electrocution of Raptors on Power Lines: A Review of Necropsy Methods and Findings. *Veterinary Pathology*.Vol. 53(5) pp 1030-1036 https://journals.sagepub.com/doi/full/10.1177/0300985816646431

[69] DEIR Volume 2 Appendix D p. vii

may be an attractant for this species for a migration stopover or foraging. Due to the high potential of operational impacts from strikes to panels, wires, and other anthropogenic constructs (detailed extensively above) of this Project, the DEIR has failed to provide adequate analysis and mitigation for these species.

It is clear the evidence for significant operational direct and indirect impacts to birds by this Project exists as presented above and will not be mitigated by the proposed mitigation measures as discussed. As such the DEIR needs to:

(1) Conduct appropriate resident, nesting, and migratory bird surveys to establish a comprehensive baseline of existing conditions. "Incidental" observations are anecdotal and thus inadequate, they do not present even minimally comprehensive data on nesting, abundance, density, seasonality, etc. required to analyze appropriate mitigation measures.

(2) Establish mitigation measures that will minimize the injury and death of potentially thousands of birds throughout the life of the Project, including how impacts to all of the special-status birds observed onsite will be reduced to less than significant.

(3) Describe, with details including performance and success criteria, any relevant enforcement, and a bond or other type of payment guarantee, for compensatory mitigation of the impacts discussed above, and for cumulative impacts that the DEIR states are significant and unavoidable.

12-L3 (cont.)

IV. The DEIR FAILS TO ADEQUATELY ANALYZE AND MITIGATE IMPACTS TO REPTILES

As iterated above, the DEIR's reconnaissance surveys are inadequate to establish a thorough or comprehensive baseline for an entire taxon of species. There was no attempt by this Applicant to conduct any focused surveys for any reptiles by way of methodical observations, scat, tracks, trapping, day or nighttime surveys; all standard protocols necessary to establish the presence

12-M3

and abundance of reptiles are observed in a given location. It is widely accepted in the scientific community that reptiles represent a key taxon in desert habitats and are highly sensitive to anthropogenic ground disturbances. They are also impossible to detect comprehensively via incidental observations. Many are nocturnal, fossorial, or crepuscular, and often highly secretive; most desert reptile species do not lend themselves to daytime, incidental observations as the DEIR infers is adequate by making conclusions about impacts without conducting a thorough survey for onsite species. Neither can habitat type alone be a reliable or comprehensive indicator of potential for species to occur, and in what abundance, etc. Countless records of species occurrences demonstrate that many species of reptiles, while having a habitat preference, are known to occur in a variety of habitats within their known range, including disturbed habitat in the western Mojave Desert.[70, 71, 72]

12-M3 (cont.)

The U.S. Geological Service (USGS) recently completed a detailed study of reptile species found in arid alluvial sand habitat, in a 500 acre site that they characterized as "highly disturbed" due to the predominance of non-native, invasive plant species and disturbed scrub habitat, not unlike some parts of the Project site. The study findings resulted in 1,208 total captures, revealing a "high species richness and diversity" and "despite the relatively limited 12-month sampling period, a longstanding drought, and severe habitat disturbance, our study demonstrates that [this area] harbors a rich herpetofauna that includes many sensitive species."[73] One of the researchers said that their results were "completely unexpected" and revealed an abundance and

[70] Vera, P., Sasa, M., Encabo, S. I., Barba, E., Belda, E. J., & Monrós, J. S. 2011. Land use and biodiversity congruences at local scale: applications to conservation strategies. *Biodiversity & Conservation*, *20*(6), 1287–1317. https://doi.org/10.1007/s10531-011-0028-x

[71] Dutcher, K. E. 2009. *Microhabitat patch use and movement patterns in Uta stansburiana populations fragmented by a 2005 wildfire in the Mojave national preserve, California* (Order No. 1466162). Available from ProQuest Dissertations & Theses Global. (305177324).

[72] Heaton, J. S. 2002. *The LizLand model: Geomorphic landform and surface composition analysis of lizard habitat in the California Mojave desert* (Order No. 3029564). Available from ProQuest Dissertations & Theses Global. (305504439).

[73] Richmond, J. Q., Rochester, C. J., Smith, N. W., Nordland, J. A., & Fisher, R. N. 2016. Rare Alluvial Sands Of El Monte Valley, California Support High Herpetofaunal Species Richness and Diversity, Despite Severe Habitat Disturbance. *The Southwestern Naturalist,* 61(4), 294-306. https://pubs.er.usgs.gov/publication/70185229

diversity "beyond what we ever would have imagined based on the habitat alone" (C. Rochester, *pers. comm*., Dec 2016). These results underscore the need for focused, scientific surveys to truly establish the necessary faunal data to create an accurate impact assessment. Due to their cryptic nature and difficulty to detect, many species of reptiles are historically underserved in conservation management plans, including those dependent on environmental impact analyses. [74, 75, 76, 77]

New roads and access driveways constructed to create access to solar development sites increase the risk of direct morality of lizards and snakes by vehicles, cause habitat fragmentation and potential barriers to gene flow, and make previously inaccessible areas available to vehicles including off-road vehicles. Solar sites are inevitably surrounded by fencing during and post-construction, which may serve to exclude some individual animals, but also serves to trap or funnel other small species - including reptiles - within a construction site. Additionally, industrial scale solar projects are known to alter the microclimate of a region, where herpetologists conducting analyses of solar facilities in desert habitats in Southern California concluded, "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."[78] Large industrial 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.[79]

12-M3 (cont.)

Additionally, there is a phenomenon that occurs on desert development sites not addressed by the DEIR that has been demonstrated to increase the mortality of various species of lizards:

[74] Gerson, M. M. 2004. Aspects of the ecology of a desert lizard, *Callisaurus draconoides* (blainville 1835), in Joshua Tree National Park with an emphasis on home range and diet (Order No. 3146172).
[75] Heaton, J. S. 2002. The LizLand model: Geomorphic landform and surface composition analysis of lizard habitat in the California Mojave Desert (Order No. 3029564).
[76] Williams, A. K. 2004. The influence of probability of detection when modeling species occurrence using GIS and survey data (Order No. 3123715).
[77] Rosen, P. C. 2000. A monitoring study of vertebrate community ecology in the northern Sonoran Desert, Arizona (Order No. 9965915).
[78] *Ibid.* p. 98.
[79] *Ibid.*

Working in the desert I have witnessed an important phenomenon on solar and wind energy project construction sites in the Sonoran and Mojave Desert regions where lizard species are present. I and my colleagues noticed this phenomenon during required construction monitoring along roads and within construction zones. Specifically, we observed that lizards are directly and immediately attracted to roads on and around construction sites where trucks spraying water (and other erosion control liquids) several times a day are used to reduce airborne dust, as is the case with every desert development project's dust minimization protocols. This practice attracts lizards to higher moisture levels on the roads, resulting in increased mortality and injury from construction site traffic on the roads subsequent to the water trucks passing.

This phenomenon was reported on one solar construction site in the Sonoran Desert during the summer of 2014. Within the course of one month, there was mortality of over 20 flat-tailed horned lizards (*Phrynosoma mcallii*) (a special status species) (FTHL) and over an additional 100 FTHLs were relocated to avoid mortality from vehicle impacts during several weeks of the construction phase.[80] During the construction of the Sunrise Powerlink gen-tie line in the Sonoran Desert, from just April to November, 25 FTHL mortalities were recorded and 103 flat-tailed horned lizards were relocated.[81] It is key to note that these solar industrial projects failed to anticipate these significant impacts to lizards due to this phenomenon, and as a result one facility had to completely stop work for at least a week. Because the relocation measure was an emergency response that the Applicant failed to recognize would be significant, relocation protocols and results were not tested, measured, or evaluated for survival success. Therefore, the efficacy of these last-minute mitigation measures remains unknown.

In summary, observations during the construction phase of a solar industrial site facility in Southern California desert revealed that lizards of varying species and sizes appear to be opportunistically attracted to the added moisture on the roads from water trucks. Such behavior was not restricted to any lizard species in particular. However, the reason for under-reporting this

12-M3 (cont.)

[80] Wilton, Ben. Tenaska, Personal communication, March 19, 2015; Hord, P. pers. comm., Aug 27, 2017.
[81] 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.

phenomenon is that these construction sites do not task biologists with searching for at-risk lizards when the mitigation measures do not require such an effort. When this phenomenon was officially noted as impacting sensitive species, additional on-site biologists and mitigation 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.[82] It must be noted that mortalities from even one Project such as this could have a population level effect, especially if a species sub-population is isolated or part of a Distinct Population Segment.[83]

12-M3 (cont.)

In order to adequately mitigate for such high potential impacts to lizards, the Applicant must take into consideration the risks iterated above, and that onsite reptiles will be impacted by loss of foraging and breeding habitat and directly from Project construction. As such the DEIR should not only conduct appropriate surveys for reptiles, but also propose detailed mitigation measures to reduce resultant impacts, including additional biologists present onsite during all hours of construction, enhanced traffic restrictions, and a reptile relocation Plan and Monitoring Strategy during the construction phase.

V. OTHER MITIGATION MEASURES FAIL TO REDUCE IMPACTS TO LESS THAN SIGNIFICANT

Mm 4.4-6 proposes to reduce construction impacts to below significant by hosting an Environmental Awareness Training Program. The problem with this measure is that there exists no evidence that worker environmental awareness training programs (WEAP) actually serve to mitigate any impacts. Employees are tasked with completing the program, upon which they sign a form and receive a sticker. Providing such training is common and may enhance some ecological knowledge of some species for some workers. As an environmental consultant I have personally observed these trainings dozens of times for various development projects in a variety

12-N3

[82] P. Hord, pers. comm., Sage Wildlife Biology. Aug 27, 2017.
[83] Murphy, R., Trepanier, T., Morafka, D. Conservation genetics, evolution and distinct population segments of the Mojave fringe-toed lizard, *Uma scoparia*. *Journal of Arid Environments.* Volume 67, Supplement, 2006, pp 226-247. https://doi.org/10.1016/j.jaridenv.2006.09.023

of locations and working environments, including energy projects in desert habitats in California. However, throughout my decades of consulting I have not observed these presentations for enhanced worker awareness translate into measurable actions that have been determined to significantly reduce project impacts to wildlife.

The DEIR states that "The construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from construction activities to sensitive biological resources."[84] However, there is no realistic mechanism or legal framework by which employees can be held responsible for impacts whether "unauthorized" can be clearly defined or not. Workers cannot be expected to become naturalists after a lecture, no matter how astute the training may be. Moreover, there is no structured way to enforce or guarantee any learning, or resultant responsible action taken, to an educational program where learning and retention by definition are subjective, and workers' defined roles per their employment contracts do not include such required actions based upon education about biology. Not only is retention and subsequent action difficult to measure, its efficacy of mitigation is never measured for construction projects. For instance, if upon completion of training, a worker fails a mitigation action due to being unable to recall key wildlife regulations, or remains unable to distinguish a protected species from others, how will such a shortfall be tested, remedied, or enforced to meet mitigation criteria?

12-N3 (cont.)

There is no empirical evidence, and few anecdotes, that demonstrate that these "awareness" trainings about wildlife measurably or reliably reduce significant impacts to wildlife species to less than significant. Additionally, many measures described by a biological training program rely on the absolute authority of onsite biologists who are (a) hired by the project applicant, (b) not independent and are invariably required to sign highly restrictive nondisclosure agreements (of questionable legality) for employment that preclude most kinds of problem reporting or whistleblowing if rules are not followed by any parties involved, and (c) often not given the necessary on-the-ground authority to oversee enforcement, including stopping work or removing a

[84] DEIR Vol. 1 4.4-41

worker who may be deemed non-compliant.[85, 86] I have observed construction workers with an abundance of training stickers on their hard hats avoid taking action to address or avoid a biological resource protection problem onsite when such a scenario was presented, where no remedial action was enforced, and certainly no rubric existed for measuring efficacy of the WEAP.

If the Applicant requires the workers take specific actions to reduce potential construction impacts that relate directly to their job responsibilities (i.e. maintaining a speed limit, hazardous spill containment, fire prevention measures, maintaining garbage-free working spaces, or keeping potential animal pitfalls covered), it is appropriate that each such action should be identified as a construction regulation necessary for safety or reducing overall impacts to the environment. Beyond that, no evidence exists to support the presumption that providing information to workers about the species, habitats, or protective laws will translate into actual, enforceable impact mitigation. Since the DEIR posits that such a training contributes to mitigation of impacts to the Project for a host of sensitive species with potential to occur onsite, it should provide some empirical evidence demonstrating such for similar solar developments with similar workforce scenarios. Otherwise, it is impossible to quantify the degree of mitigation, if any, such program contributes to reduce impacts to below significant, and thus MM 4.4-6 fails in its intent.

12-N3 (cont.)

MM 4.4-12 proposes to develop at some time in the future an Avian Mortality Monitoring Program. However, mitigation measures deferred to the future fail to meet the requirements necessary for public review. As important as monitoring is for data collection and to inform future actions, in and of itself monitoring does not reduce any actual impacts whether direct, indirect, or cumulative. The DEIR states that "adaptive management measures" will be implemented to reduce impacts, however no such measures exist that have been proven to reduce strikes from the lake effect.

[85] Clarke, C. Feb 8, 2013. Ocotillo Wind Employee Arrested After Alleged Threat. *KECT Rewire*. https://www.kcet.org/redefine/ocotillo-wind-employee-arrested-after-alleged-threat
[86] Raftery, M. April 6, 2011. SDG&E Removes Pilot for Flying Too Close to Eagle Nests. *East County Magazine*. https://www.eastcountymagazine.org/sdge-removes-pilot-flying-too-close-eagle-nests

For mitigation actions to be successful the devil is in the details, without such there can be no thorough or informative review of their potential for success. As an environmental consultant I have observed many times the failure of many mitigation measures, when due to the lack of appropriate performance and success criteria, are not implemented, defined, or otherwise analyzed prior to project approval, followed by failures of mitigation success and enforcement. When details are almost entirely deferred to the future, as they are here, mitigation actions become highly indeterminate and unspecified. Further, stating that a plan intends to follow guidelines or agency recommendations does not reveal or address the specific and sometimes unprecedented requirements for mitigation for a specific location, including the unique characteristics of a specific project and its impact on a specific sensitive, rare, or otherwise at-risk population, including the long term, indirect, and cumulative impacts unique to every development.

12-N3 (cont.)

Details are essential to understand and address the characteristics of a site and its unique species cohort and their relevant ecological status, and should include necessary distinctions in compensatory mitigation; i.e. revegetation or restoration that must rely on factors including types of habitat not just onsite but nearby, as well as other variables like population densities located on and near the site, and cumulative impacts to the Project.[87, 88]

Deferring mitigation plans to a future date is also inadequate because the unscripted details are based largely upon anticipation of a future direction by various unnamed and presumed experts – or administrators – yet to be determined. This has two inherent problems: (a) It disallows reviewers to adequately analyze efficacy of mitigation measures as required by CEQA, and (b) It leaves the process vulnerable to the whims, bias, political digressions, employee changes, financial shortfalls, and conflicts of the Applicant as well as to litigation and other unsolicited actions

[87] Keeley. J., Baer-Keeley, M. C.J. Fotheringham (eds). (2000). 2nd lnterface Between Ecology and Lard Development in California U.S. Geological Survey Open_file Report00-62. https://pubs.usgs.gov/of/2000/of00-062/

[88] Newton, G. and Claassen, V. (2003). Rehabilitation of Disturbed Lands In California: A Manual For Decision-Making. *California Geological Survey.* https://www.conservation.ca.gov/dmr/SMARA%20Mines/Documents/sp123.pdf

that are known to lead to mitigation failure and overall disruptions post-project approval. Resource experts on measuring effectiveness of mitigation measures, especially ones regarding compensatory tradeoffs as pivotal to mitigation success (as is likely the case with this Project), state that, "**Public choice theory profoundly suggests officials and traders have more incentive to facilitate barter than to ensure biodiversity protection**. Thus, given the option of saying to developers "yes, with conditions" or "no," officials will prefer "yes, with conditions"— particularly when compliance with conditions cannot be credibly measured and officials can avoid accountability for outcomes. Legitimized bartering can thus create a policy situation "obscure enough to please all parties and so ill-defined that failures will be difficult to detect not to mention rarely measured (emphasis added)."[89] When asked about the success of compensatory mitigation for wetland restoration, Dr. Joy Zedler, chair of the 2001 NRC Compensatory Mitigation Study Committee, said, "It could be the best of all worlds…or it could be the same old same old . . . It's all in the implementation."[90]

12-N3 (cont.)

These statements underscore why so many compensatory and other mitigation plans fail to meet the goals of mitigation for projects over the years and is something I have observed repeatedly as an environmental consultant working in the public and private energy, residential, and transportation development sectors. If the permitting authorities and enforcement agencies are seriously committed to their role in ensuring adequate mitigation of all of the significant impacts imposed by this development – to both resident and migratory species - they will require detailed descriptions allowing for review and discussion of the adequacy of mitigation plans by independent experts for each protected species and habitat in question, prior to issuance of a development permit.[91]

[89] Walker, S.; Brower, A.; Stephens, R,T.; and Lee, W. 2009. Why Bartering Biodiversity Fails. *Conservation Letters* 2:149–157. http://www.azoresbioportal.angra.uac.pt/files/publicacoes_Walker%20et%20al%202009.pdf
[90] Alice Kenny, April 27,2008. *Environmentalists Sound Off on EPA Wetland Regs*, Ecosystem Marketplace. http://staging.ecosystemmarketplace.com/articles/environmentalists-sound-off-on-epa-wetland-regs/.
[91] https://caselaw.findlaw.com/ca-court-of-appeal/1614349.html

As such, the DEIR should revisit its mitigation measures and provide definitive, detailed descriptions that include success criteria, performance standards and timelines that follow the best available science, and specifics on enforcement, cost, and related funding source for each plan.

12-N3 (cont.)

VI. CONCLUSION

For the reasons outlined above, the Project DEIR fails to meet the requirements of impact analysis and mitigation under the California Environmental Quality Act (CEQA). Based on my responses in this letter, and my extensive experience as a biologist and environmental consultant, it is my professional opinion that the DEIR has not met the obligations of CEQA and that the Project would result in significant and unmitigated impacts to several sensitive biological resources. The DEIR must be revised and resubmitted to disclose, adequately analyze, and mitigate the significant impacts. If the impacts cannot be reduced to less than significant, they are unavoidable. No further consideration should be given to the proposed Project until a complete DEIR is prepared and circulated that addresses the omissions and errors discussed herein.

12-O3

Sincerely,

Renée Owens
Conservation Ecologist
M.S. Ecology, M.S. Environmental Science

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Table 1

Avian Mortality Summary

This table provides a partial summary of avian mortalities documented at select solar facilities in desert regions of California between January 2012 and March 2016. This summary is not comprehensive for any category, is limited to projects that have provided mortality data, and is from data provided by the CDFW and USFWS in July 2016 in response to a Freedom of Information Act request. Blank cells indicate a lack of data provided in the report.

Doc No.	Monitoring Dates	Facility	Developer	MW / Type (PV or Solar thermal)	Location	Lead Agency	Deaths	Species
2H	4/21/2014 - 9/10/2014	Stateline Solar Project	First Solar	300 / PV	San Bernardino County	BLM	13	Rock Pigeon Orange-crowned Warbler Yellow-rumped Warbler Brewer's Blackbird Black-throated Sparrow Orange-crowned Warbler Wilson's Warbler Red-tailed Hawk California Myotis Sora Western Tanager Lesser Nighthawk
1Q	Q4 2013 10/2013 – 12/2013	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	36	Specific species not identified
1A	Q1 2014 01/2014 – 03/2014	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	17	Mourning Dove Sora American Kestrel Snowy egret Indian peafowl American Coot Red-tailed Hawk Burrowing Owl
1O	Q2 2014 04/2014 – 06/2014	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	10	Mourning Dove Sora Lesser Nighthawk Dove sp. Unknown
1P	Q3 2014	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	30	Mourning Dove Sora Lesser Nighthawk

	07/2014 – 09/2014							Dove sp. American Coot Burrowing Owl Eurasian Collared Dove Common Ground Dove Unknown
1RA 1RB 1RC	Q4 2014 10/2014 – 12/2014	Campo Verde So-lar	First Solar	123-139 / PV	Imperial County	Imperial County	34	Sora American Kestrel Mourning Dove Dove sp. Eurasian Collared Dove American Coot White-winged Dove Savannah Sparrow Common Gallinule Rock Dove Unknown
1SA 1SB 1SC	Q1 2015 01/2015 – 03/2015	Campo Verde So-lar	First Solar	123-139 / PV	Imperial County	Imperial County	24	Eurasian Collared Dove American Coot Burrowing Owl (2) Horned Lark *Icteridae* sp. Mourning Dove Cattle Egret Sora Unknown bird
1TA 1TB 1TC	Q2 2015 04/2015 – 06/2015	Campo Verde So-lar	First Solar	123-139 / PV	Imperial County	Imperial County	22	Virginia Rail White-crowned Sparrow Western Meadowlark Common Gallinule Sora Eurasian Collared Dove American Coot *Parulidae* sp. Common Grackle Cliff Swallow *Trochilidae* sp. Lesser Nighthawk Pacific Loon Mourning Dove Say's Phoebe Unknown bird
1UA	Q3 2015	Campo Verde So-lar	First Solar	123-139 / PV	Imperial County	Imperial County	45+ missing	Lesser Nighthawk Horned Lark Mourning Dove

Missing August 1UC	07/2015 – 09/2015						August data	Western Grebe Eurasian Collared Dove Mexican Free-tailed Bat Sora *Columbidae* sp. Common Gallinule California Towhee
1VA 1VB 1VC	Q4 2015 10/2015 – 12/2015	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	69	Sora *Columbidae* sp. Eurasian Collared Dove Common Gallinule White-winged Dove Virginia Rail *Ardeidae* sp. American Coot Western Meadowlark Mourning Dove Black Phoebe Say's Phoebe Burrowing Owl (3) Greater Roadrunner Mallard Vesper Sparrow Blue-footed Booby European Starling Unknown bird
1WA 1WB 1WC	Q1 2016 01/2016 – 03/2016	Campo Verde Solar	First Solar	123-139 / PV	Imperial County	Imperial County	35	Mourning Dove Sora Dove Sp. Western Meadowlark Black Phoebe Rock Pigeon American Coot Red-tailed Hawk *Emberizidae* sp. Eurasian Collared Dove White-faced Ibis Savannah Sparrow Surf Scoter Barn Owl Le Conte's thrasher
1J	Quarterly Report	Topaz Solar Farm	First Solar	550 / PV	San Luis Obispo County	San Luis Obispo County	6	

	07/2013 – 09/2013							
1K	Quarterly Report 01/2014 – 03/2014	Topaz Solar Farm	First Solar	550 / PV	San Luis Obispo County	San Luis Obispo County	11	
1L	Quarterly Report 04/2014 – 06/2014	Topaz Solar Farm	First Solar	550 / PV	San Luis Obispo County	San Luis Obispo County	5	
1M	Quarterly Report 07/2014 – 09/2014	Topaz Solar Farm	First Solar	550 / PV	San Luis Obispo County	San Luis Obispo County	8	
1N	Quarterly Report 01/2015 – 03/2014	Topaz Solar Farm	First Solar	550 / PV	San Luis Obispo County	San Luis Obispo County	5	
1B	1st Quarterly Post-Construction Report 08/2012 – 11/2012	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	53	Short-eared Owl (2) Burrowing Owl (3) Blackbird sp. Savannah Sparrow Western Meadowlark Red-tailed Hawk Mourning Dove Fox Sparrow Common Raven CA Horned Lark Northern Flicker Lincoln's Sparrow Long-eared Owl American Crow
1C	2nd Quarterly Post-Construction Report 11/2012 – 02/2013	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	144	

1D	3rd Quarterly Post-Construction Report 02/2013 – 05/2013	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	84	
1E	4th Quarterly Post-Construction Report 05/2013 – 08/2013	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	89	
1F	5th Quarterly Post-Construction Report 08/2013 – 11/2013	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	103	
1G	6th Quarterly Post-Construction Report 11/2013 – 02/2014	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	152	
1H	7th Quarterly Post-Construction Report 02/2014 – 05/2014	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	54	
1I	8th Quarterly Post-Construction Report 05/2014 – 08/2014	California Valley Solar Ranch Project	SunPower	250 / PV	San Luis Obispo County	San Luis Obispo County	24	

1X	08/2011 – 12/2011	Desert Sunlight	NextEra	550 / PV	Riverside County	Bureau of Land Man-agement (BLM)	8	Burrowing Owl Western Grebe Eared Grebe American Coot
1X	Q1 2012 01/2012 – 03/2012	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	3	American Avocet Loggerhead Shrike (6) Mourning Dove Common Loon (5)
1X	Q2 2012 04/2012 – 06/2012	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	3	Sora Wilson's Warbler Brown Pelican Common Raven
1X	Q3 2012 07/2012 – 09/2012	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	10	Double-crested Cormorant Great-Tailed Grackle Ruddy Duck Ash-throated Flycatcher
1X	Q4 2012 10/2012 – 12/2012	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	10	Brown-headed Cowbird Common Poorwill Horned Lark Sagebrush Sparrow
1X	Q1 2013 01/2013 – 03/2013	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	3	Townsend's Warbler Western Tanager White Crowned Sparrow Yellow Headed Blackbird
1X	Q2 2013 04/2013 – 06/2013	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	20	Black Headed Grosbeak Brewer's Blackbird Common Yellowthroat Costa's Hummingbird
1X	Q3 2013 07/2013 – 09/2013	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	25	House Finch Lesser Nighthawk Pied-billed Grebe Say's Phoebe
1X	Q4 2013 10/2013 – 12/2013	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	26	Sparrow Sp. Virginia Rail Yellow-rumped Warbler American Kestrel
1X	Q1 2014 01/2014 – 03/2014	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	4	American White Pelican (1) Barn Owl Black-crowned Night-Heron
1X	Q2 2014 04/2014 – 06/2014	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	18	Black-tailed Gnatcatcher Blue-winged Teal Clapper Rail Common Merganser

1X	Q3 2014 07/2014 – 09/2014	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	15	Great Egret Lesser Scaup Long-eared Owl Mallard
1X	Q4 2014 10/2014 – 12/2014	Desert Sunlight	NextEra	550 / PV	Riverside County	BLM	10	Northern Mockingbird Prairie Falcon Red-breasted Merganser Redhead Red-necked Phalarope Red-winged Blackbird Savannah Sparrow Surf Scoter Tree Swallow Blackbird sp. Duck sp. Empidonax Flycatcher sp. Hummingbird sp. Jaeger sp. Verdin Western Meadowlark White-faced Ibis White-winged Dove Wilson's Snipe Yellow Warbler
2A	1st Quarterly Report 08/2014 – 10/2014	Centinela Solar		170 / PV	Imperial County	Imperial County / BLM	21	American Coot Mallard Buteo Sp. American Kestrel Heron/Egret Sp. Tern Sp. Savannah Sparrow Dove Sp. Unknown bird
1Y	2nd Quarterly Report 11/2014 – 01/2015	Centinela Solar		170 / PV	Imperial County	Imperial County / BLM	27	Burrowing Owl (5) American Coot Mourning Dove Eurasian Collared Dove White-winged Dove Rock Pigeon Dove Sp. Heron/Egret Sp. Greater Roadrunner Dove Sp.
1Z	3rd Quarterly Report	Centinela Solar		170 / PV	Imperial County	Imperial County / BLM	13	Lesser Nighthawk Common Gallinule Mourning Dove

	02/2015 – 04/2015							White-winged Dove Rock Pigeon Mallard Black-crowned Night Heron Unknown
2B A 2BB 2BC	4th Quarterly Report 05/2015 – 07/2015	Centinela Solar		170 / PV	Imperial County	Imperial County / BLM	9	Brant (1) Mourning Dove *Columbidae* sp. Eurasian Collared Dove Black-crowned Night-heron American Kestrel Unknown
2C A 2CB	11/2013 - 12/2013	Imperial Solar Energy Center South	Tenaska	130 / PV	Imperial County	Imperial County	5	American Coot
2D A 2D B 2D C	01/2014 – 03/2014	Imperial Solar Energy Center South	Tenaska	130 / PV	Imperial County	Imperial County	5	Mourning Dove Cattle Egrets Sora
2EA 2EB 2EC	07/2015 – 09/2015	McCoy	NextEra	750 / PV	Riverside County	BLM	29	
2FA 2FB 2FC	10/2015 – 12/2015	McCoy	NextEra	750 / PV	Riverside County	BLM	91	
2G	01/01/16	McCoy	NextEra	750 / PV	Riverside County	BLM	10	

Photo 1: Mourning dove nest built on solar project electrical box in Sonoran Desert

Photo 2: Kingbirds nesting on solar facility infrastructure in Sonoran Desert

Photo 3: Burrowing owls nesting in solar facility infrastructure In Mojave Desert

Photo 4: Western grebe killed by impact to dusty PV panel in Sonoran Desert

Photo 5: American coot killed by impact to solar panel

Photo 6: Wing marks on PV panel (same pictured above) from impact by American coot

Photo 7: Burrowing owl perched on PV panel at industrial solar site in Mojave Desert

Photo 8: Peregrine falcon perched on power line next to industrial solar array in Sonoran Desert

Professional Background

I am a conservation biologist and environmental consultant with over 27 years of professional experience in wildlife ecology and natural resource management. I hold a Masters of Science degree in Environmental Science and one in Ecology; my teaching experience includes college instruction since 1991 at various colleges and universities. I taught field courses in Tropical Ecology in Ecuador and the Galapagos for Boston University, and was a Visiting Full Time Professor in Environmental Science and Biology at Imperial Valley College.

I have managed an independent environmental consultancy I founded in 1993, contracted for work in the U.S. and Latin America, including in California, Tennessee, Oregon, New York, and Massachusetts. Since 1994 have and currently maintain U.S. Fish and Wildlife (FWS) Recovery permits for listed species under the federal Endangered Species Act (ESA). I hold several state and federal certifications for surveys and monitoring of protected and special status species. I have extensive experience monitoring and studying many species across several taxa, including herpetofauna, terrestrial invertebrates, passerines and raptors, and marine and terrestrial mammals. I have served as a biological resource expert on over 150 projects involving pipelines, water, urban and rural residential developments, mines, and industrial scale energy projects; on private, public, and military lands. I have experience observing the species and habitats discussed in the DEIR.

The scope of work I have conducted as an independent environmental contractor, supervisor, and employee has included assisting clients to evaluate and achieve environmental compliance, restoration, mitigation, and research as related to biological resources; as well as submitting analytical reports and comments for such work to oversight agencies. This work includes analyzing actions pursuant to the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), the Endangered Species Act, the Clean Water Act (CWA), the Migratory Bird Treaty Act (MBTA), and other regulations, along with surveying for and preparing Biological Technical Reports and Assessments. I have been contracted as an environmental consultant by the FWS, the USDA Forest Service, Ultrasystems, ICF, Helix Environmental, URS, AECOM, AMEC, GeomorphIS, Dudek, ESA, Tetra Tech, among others.

My conservation and natural history research on endangered species in Latin America have received awards including the National Geographic Research and Exploration Award and the National Commission for Scientific and Technological Research Award. My research has been featured on National Geographic Television and Discovery Channel documentaries, and I have

served as technical consultant for wildlife documentaries filmed by National Geographic Television, Discovery Channel, BBC, and Animal Planet. In 2017 I received a Special Commendation for contributions to environmental conservation from the City of San Diego.

I have gained particular knowledge of the biological resource issues associated with the Project through my extensive work on numerous research and consulting projects throughout California. My comments are based upon first-hand observations, review of the environmental documents prepared for the Project, 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 almost 30 years of working in the field of natural resources research and management.

_____

RENÉE OWENS

Curriculum Vitae

- College Instruction in Biology and Environmental Science; Boston U, SDSU, Palomar College, Imperial Valley College
- Non-profit management
- National Geographic Research and Exploration Award
- Wildlife Conservation Society International Research Grant
- Endangered species Federal Recovery permits
- ESA, CEQA, NEPA, MMPA impact analyses
- Mitigation, Restoration, Project monitoring, HCP planning / implementation
- San Diego City, County, USFWS, BLM approved biologist
- U.S. National Championships Olympic Distance Triathlon
- Special Commendation for Contributions to Environmental Conservation, City of San Diego

Ms. Owens has been a college instructor, environmental consultant and biologist, non-profit manager, writer, and public speaker for over 30 years. Her experience includes work and research in the United States, Venezuela, Ecuador, Belize, Panama, and Honduras.

College Instruction of various courses includes teaching in the broad fields of Environmental Science and Biology at Boston University, Palomar College, Imperial Valley College, and San Diego State University. She has certification in Community College Instruction from the University of California San Diego.

Award winning conservation research by Ms. Owens has been featured by National Geographic, Discovery, BBC, Dateline NBC, Animal Planet, Sierra, and TIME magazine.

Sage Wildlife Biology consultancy co-founded by Ms. Owens in 1993 has provided services for projects involving endangered species, ethology, ecology, and conservation research, mitigation management, impact analysis, Habitat Conservation Plan design and implementation, and analytical reporting. Projects incorporate monitoring and regulatory compliance from the local to federal level with clients in the private, public, and government sectors, and include energy, housing, transportation projects. Contracts encompass many species, including but not limited to carnivores, passerines, raptors, shorebirds, herpetofauna, cetaceans, butterflies, and pinnipeds, and their associated habitats. She is an approved biologist for San Diego City and County, USFWS, and BLM.

The Wild Zone Conservation League is a wildlife conservation, education, and research non-profit. As Executive Director Ms. Owens applies her non-profit experience acquired over 30 years of volunteering to management of citizen science, environmental education, wildlife rescue, and advocacy training to promote conservation, stewardship, and land preserve acquisition.

Ms. Owens gives lectures enhanced by her nature photography and international experiences on endangered species conservation, advocacy, predator co-existence, animal behavior, ornithology, and the cognitive science of environmental leadership and communication.

EDUCATION

- MS Environmental Science, Concentration in Education. Green Mountain College, Poulsbo, VT.
- Community College Instruction Certification. University of California San Diego, La Jolla, CA.
- Advanced Statistical Programming Certification. U of Tennessee, Knoxville.
- MS Biology (Ecology and Evolution ABD). SDSU, San Diego, CA.

- BS Biology (Minor in Environmental Studies). State University of New York, Geneseo, NY.

LANGUAGE SKILLS Native English speaker, fluent in Spanish

WORK EXPERIENCE

TEACHING

Adjunct Professor, Instructor in Environmental Science, Biology. Department of Math, Science, and Engineering, Imperial Valley College, Imperial, CA. 2012 – 2018.

Director/Instructor, Wildlife Conservationist Certification Training Program, created by Ms. Owens with a San Diego Foundation Environmental Vision Fund grant. Provided education and training of adult volunteers for naturalist interpretive and conservation organizations. Wild Zone Conservation League, San Diego, CA. 2009-2011.

Visiting Assistant Professor, Department of Math, Science, and Engineering. Lecture, laboratory, and field trip instruction in Biology, Environmental Science, Botany. Imperial Valley College, Imperial, CA. 2008-2009.

Environmental Education Instructor, Outdoor instructor for educational youth program "Outdoor Explore" investigating Nearby Nature, grades k – 12. San Diego Audubon Society, CA. 2009 - 2010.

Teaching Fellow, Tropical Ecology Program, based at Universidad de San Francisco, Ecuador. Lecture and field instruction in advanced coursework on tropical habitats included cloud and mangrove forest, Pacific intertidal zones, inland rainforest, Galapagos Islands, and high elevation paramo. Boston University. 1999 –2000.

Adjunct, Instructor in General Biology lecture and laboratory. Palomar College, San Marcos, CA. 1994 - 1996.

Teaching Assistant, Instruction for laboratories in General Biology, Zoology, and Invertebrate Biology included creation of additions and updates to General Biology laboratory (with live marine specimens), adopted by the Biology Department for all General Biology laboratories. San Diego State University, San Diego, CA. 1990 – 1992.

Instructional Tutor, for classes in psychology, biology, ecology, anthropology, oceanography, and human fertility. SUNY Geneseo, Geneseo, NY. 1983 – 1987.

PROFESSIONAL CONSULTING

Co-Founder, Sage Wildlife Biology LLC. Biological consultant for over 200 hundred projects, specializing in wildlife biology of for environmental compliance, impact analysis, research, and conservation in California and South America. 1993 – present.

Representative Projects:

Wind Turbine System Research. Created and implemented a Bird and Bat Monitoring program and analysis for patent-pending turbine system, Primo Wind renewable energy design. San Diego Naval Base, CA. 2016-2017.

Endangered Species. Protocol surveys, monitoring, and reporting for federally threatened and endangered species, HELIX Environmental Planning Inc., San Diego, CA.

CEQA/NEPA/ESA Consultant. Provide expert biological testimony regarding impact analyses (i.e. MND/EIR/EIS) on conventional energy, renewable energy, residential development, and coastal development projects in California.

Satellite Communications System LA-RICS. Los Angeles Regional Interoperable Communications System county-wide project, federally funded to create broadband wireless network using Long-Term Evolution (LTE) technology while minimizing impacts to native habitats and ecosystems. Contributed to Biological Assessment for PEIR/ PEIS, 218-site project with coastal, mountain, and desert habitats. Management recommendations included maximizing use of existing structures while avoiding impacts to watersheds and other sensitive biological resources. Los Angeles County, CA.

Habitat Conservation Planning. Included federally permitted surveys and reporting for various endangered species; Migratory Bird Treaty Act nesting bird surveys; herptile surveys; population assessments; and concurrent development of Critical Habitat components of Habitat Conservation Plans including the San Diego Multiple Species Conservation Plan. San Diego, Los Angeles, Riverside, San Bernardino Counties, CA.

Mitigation and Restoration. Principal biologist, prepared biological Assessment plus mitigation and monitoring plan for 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. San Diego, CA.

Wildfire Habitat Management. Principal investigator for California Fire Safe Council responsible for habitat management projects in areas adjacent to U.S. Forest Service land. Included habitat mapping, sensitive species surveys, GIS, management of work teams (5 to 50 individuals), and preparation of the Biological Assessment for the Bureau of Land Management. Project development included consultation and coordination with private landowners, scientists, San Diego County Fire Authority, Homeowners Associations, USDA Forest Service and BLM. San Diego County, CA.

Wind Energy Project. Year-round monitoring and research contributed to Biological and Environmental Assessments, incorporating focused wildlife surveys throughout 15,000 acres of Bureau of Land Management land in Imperial County. Provided management recommendations for avoidance of impacts to sensitive habitats and species including golden eagles, Peninsular bighorn sheep, burrowing owls, and flat-tailed horned lizards, and post-construction monitoring and mortality surveys. Ocotillo, CA.

Mitigation Land Trust Management. Lead biologist for two Perpetual Land Management Habitat Conservation Plans managed by The Escondido Creek Land Conservancy. The Preserves incorporate 110 acres of riparian wetland, oak woodland, coastal sage scrub, and chaparral habitats; created in compliance with California Environmental Quality Act and Multiple Habitat Conservation Plan requirements, coordinated with third party trustees U.S. Fish & Wildlife Service (USFWS) and California Department of Fish and Wildlife 9CDFW). Escondido and San Marcos, CA.

California Wild Heritage Campaign. Wilderness Society contracted biologist and campaign organizer included biological surveys and mapping of proposed wilderness as well as coordination of volunteers, educational materials, and outreach with National Forest stakeholders. San Diego County, CA.

Endangered Species Biologist. Principal biologist, participated in a long-term research of the California gnatcatcher for Camp Pendleton Marine Base, including monitoring and Critical Habitat Assessment for USFWS

and data collection for 40 + pairs spanning several thousand acres of habitat. Prepared reports on habitat suitability and contributed to critical habitat assessments and recovery planning. Oceanside, CA.

Least Bell's Vireo Endangered Species Recovery Plan. Conducted breeding season nest monitoring and invasive species management as part of the USFWS Species Recovery Plan for the Least Bell's Vireo; included monitoring, banding, and reporting monthly on 30 - 70 nesting pairs while providing reports for Critical Habitat evaluation and population recovery analysis. San Diego County, CA.

Biologist, HELIX Environmental Planning Inc., San Diego, CA. Responsible for terrestrial and aquatic fauna and flora surveys, monitoring, reporting, and research; Habitat Conservation Plans for private and government entities, mitigation and restoration implementation. 2000-2001.

Biologist, Sweetwater Biological, San Diego, CA. Conducted mammalian, ornithological, and herptile surveys and monitoring; mitigation and restoration monitoring, reporting, and management; included contributions to Habitat Conservation Plans for private and government entities. 1994-1996.

RESEARCH

Representative Projects:

Pinniped Natural History, breeding research and impact analysis of human interaction on Harbor seal and sea lion rookeries in San Diego, CA. 2010 – present.

Endangered Species Conservation, South American project funded by the National Geographic Research Foundation, CITES, Wildlife Conservation Society, The Venezuelan National Council for Scientific and Technological Research (CONICIT), and PROFAUNA of Venezuela; co-lead in multi-year study of the green anaconda; the first of its kind in the wild. Research incorporated radio telemetry, mark and recapture, natural history, and mating system analysis; findings contributed to various documentaries and a conservation and ecotourism program for 175,000 acres of Llanos in Apure State, Venezuela. 1996 – 2002.

Avian Breeding System and Conservation, research included manakin lekking behavior (Tiputini Tropical Research Station, Ecuador), California gnatcatcher, least Bells' vireo nesting success, cowbird parasitism (San Diego county), passerine and *Polybia* nesting associations in flooded wetlands, resource partitioning in 5 species of Ibis. Apure State, Venezuela. 1994 – 1997, 2000 – 2007.

Predator Conservation and Ethology, natural history and conservation research for the jaguar, mountain lion, endangered giant otter, included recommendations for management and co-existence on cattle ranches in the Llanos and Orinoco tributaries. Included observations of genetically distinct giant otter population where previously considered extinct. Apure State, Venezuela. 1996-1997.

Endangered Species Reintroduction Programs, of the Orinoco crocodile, Arrau turtle, Red-footed tortoise, funded by Wildlife conservation society, Venezuelan Profauna. Research in highly remote regions to assess long term species survival post-reintroduction and related influence of local indigenous tribes. Apure State, Venezuela. 1996 – 1998.

Cetacean Bioacoustics, research of the Commerson's dolphin included audiogram data collection on hearing thresholds and related recommendations for conservation management of this species and related genera. Hubbs Research Institute, San Diego, CA. 1991 – 1992.

Primate Research, Study of social and mating behavior dynamics of Pygmy chimpanzees (Bonobos). San Diego Wild Animal Park, Escondido, CA. 1990-1991.

Avian Research Internship, research of waterbird and passerine nesting predation and parasitism; included monitoring, banding, and mapping 250 nest boxes. Genesee Country Nature Center, Mumford, NY. 1987.

Independent Study, conducted undergraduate research on navigation and orientation of long distance avian migrant passerines using a planetarium equipped with an adjustable magnetic field. Principal investigator Dr. Robert Beason. SUNY Geneseo, Geneseo, NY. 1985-1987

NON-PROFIT MANAGEMENT

Executive Director, Wild Zone Conservation League. International wildlife non-profit focused on citizen science, education, research, and community collaboration for wildlife conservation. Long term mission of land acquisition in the U.S. and Central America for preservation and educational field study programs. 2015 - present.

Latin America Assistant Director, World Society for the Protection of Animals. Responsible for project development and campaign coordination for human-wildlife interface campaigns in Latin America. Included creation and implementation of training workshops, direction of campaigns for species in biodiversity hotspots including watersheds, coral reef, Pacific coastal rainforest and coasts. Coordinated emergency disaster relief with veterinary triage, organizational and material support, rescue training and oiled network response. Boston, MA. 1998-1999.

LABORATORY

Laboratory Technician, Palomar College, San Marcos, CA. Responsible for provisioning, preparation, and maintenance of biology and chemistry laboratories and equipment. 1994.

Laboratory Assistant, Toxicology and Physiology Departments. Included research in environmental toxicology, Muscular Sclerosis, Parkinson's disease. University of Rochester Medical Center, Rochester, NY. 1988 – 1990.

AWARDS / HONORS

- San Diego Sierra Club Silver Cup Conservation Award for Lifetime Achievement, 2017.
- Special Commendation for Contributions to Environmental Conservation, City of San Diego, 2017.
- San Diego County Democrats for Environmental Action Volunteer of the Year, 2017.
- Photo display, San Diego Museum of Natural History's "Best of Nature" Exhibit, 2016.
- San Diego Foundation Vision Fund Environmental Education and Conservation Grant, 2010.
- NOAA Environmental Hero Award, 2000.
- 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.
- New York State Regents Academic Scholarship, 1983.

CERTIFICATIONS

- U.S. Fish and Wildlife Recovery Permit for the endangered Coastal California gnatcatcher, Least Bell's Vireo, Quino checkerspot butterfly. 1994 – present.
- Acoustic Monitoring of Bats, Field Techniques. Sonobat 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.

VOLUNTEERING

- National Sierra Club Marine Team Committee, 2013- present.
- National Sierra Club Wildlife and Endangered Species Committee, 2010 – 2019.
- San Diego Audubon Society Conservation Committee, 2010 – 2014.
- San Diego Sierra Club (SDSC) Executive Committee, 2008 – 2010.
- SDSC Conservation Committee, 2007 – 2010; 2014 – 2018.
- SDSC Wildlife Committee Chair 2001 – 2008, 2015 – 2018.
- Wildlife Research Institute Scientific Advisory Committee, 2005 – 2008.
- Lakeside Emergency Wildlife Rehabilitation Center, 2000 – 2005.

SOCIETY CONFERENCE PRESENTATIONS

- "From Education to Stewardship: The Cognitive Science of Environmental Communication", Environmental Summit, San Diego, 2019.
- "The Cost of Mismanagement at a Pinniped Rookery and Coastal Urban Wildlife Interface", International Urban Wildlife Conference, San Diego, CA. June 2017.
- "Consorting with Coastal Wildlife: Conservation and Advocacy in the Real World", West Coast Ocean Forum, La Jolla, CA. 2016.
- "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.
- "Bioacoustics and Conservation Implications for the Commerson's Dolphin", Biennial Conference for the Society for Marine Mammalogy, Orlando, FL, 1995.
- "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.

WORKSHOPS

- Organized CEQA and NEPA Training Workshops, San Diego, CA. Presented instructional seminar regarding biological impact assessments. 2000, 2007, 2010, 2017.
- Organized the first annual West Coast Marine Environmental Forum, La Jolla. Held seminars on the National Ocean Policy, Ecosystem Based Management, critically endangered cetacean conservation, sustainable fishery science, and coastal wildlife conservation advocacy. 2017.

PROFESSIONAL AFFILIATIONS

- Association of Field Ornithologists
- Citizen Science League
- Marine Mammal Society
- National Association of Biology Teachers
- Society for the Study of Amphibians and Reptiles
- Wildlife Society
- Wildlife and Habitat Conservation Coalition

SELECT PUBLICATIONS

- Owens, R. Y. The Unpleasant Secrets of Clean Solar Energy: The Impacts to Wildlife in the Desert. *The Desert Report,* Dec 2016: pp 1, 8-9.
- Owens, R. Y. 2014. The USDA's Dirty Secret: A Century-Old Wildlife Killing Machine, *The EcoReport* (January). http://www.theecoreport.com/green-blogs/sustainability/conservation/wildzone/the-usdas-dirty-secret-a-century-old-wildlife-killing-machine/
- Owens, R. Y. and Hord. P. L. In revision. *Conservation Biology*. Economic and costs and ecological implications of "joint use" policy management of a Harbor seal rookery in an urban wildlife interface.
- Owens, R. Y. In revision. *Journal of Field Ornithology.* Nesting associations between wasps of the genus *Polybia* and passerine birds of the Venezuelan Llanos.
- Owens, R. Y. 2012. Rebirth of Green: Resolution for 2013. *San Diego Loves Green: The Wild Zone* (December).
- Owens, R. Y. 2012. Coyotes: The Media's Modern Bogeyman. *San Diego Loves Green*: *The Wild Zone* (October).
- Rivas, J.A. and Owens, R.Y. 1999. Teaching conservation effectively: a lesson from life history strategies. *Conservation Biology*, 13 (2): 453-454.
- Rivas, J.A. and Owens, R.Y. 2002. Orinoco crocodile (*Crocodylus intermedius*): Age at First Reproduction. *Herpetological Review*. 33 (3): 203.
- Rivas, J. A., R. Y. 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. Informe técnico al Servicio de Fauna de Venezuela: Regional population assessment of the endangered giant otter (*Pteronura brasiliensis*) in Apure State, Venezuela, and conservation recommendations for a highly endangered species. Dec 1997.
- Unpublished Master's Thesis, "Bioacoustics of the Commerson's Dolphin (*Cephalorhynchus commersonii*) with Recommendations for Applied Conservation" 1993.

EXHIBIT B

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

Paul E. Rosenfeld, PhD
(310) 795-2335
prosenfeld@swape.com

July 28, 2020

Nirit Lotan
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814

Subject: Comments on the RB Inyokern Solar Project (SCH No. 2017071020)

Dear Ms. Lotan,

We have reviewed the July 2020 Draft Environmental Impact Report ("DEIR") for the RB Inyokern Solar Project ("Project") located in the unincorporated community of Inyokern ("City"). The Project proposes to construct and operate a solar photovoltaic power generating facility, including solar modules, two 9,750-SF energy storage systems, a 625-SF operations & maintenance building, switchyards, electrical collector system and inverters, gen-tie lines, telecommunication facilities, a meteorological station, security fencing, and access roads on the 166.5-acre site.

Our review concludes that the DEIR fails to adequately evaluate the Project's hazards and hazardous materials, air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential hazards and hazardous materials, air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

12-P3

Hazards and Hazardous Materials

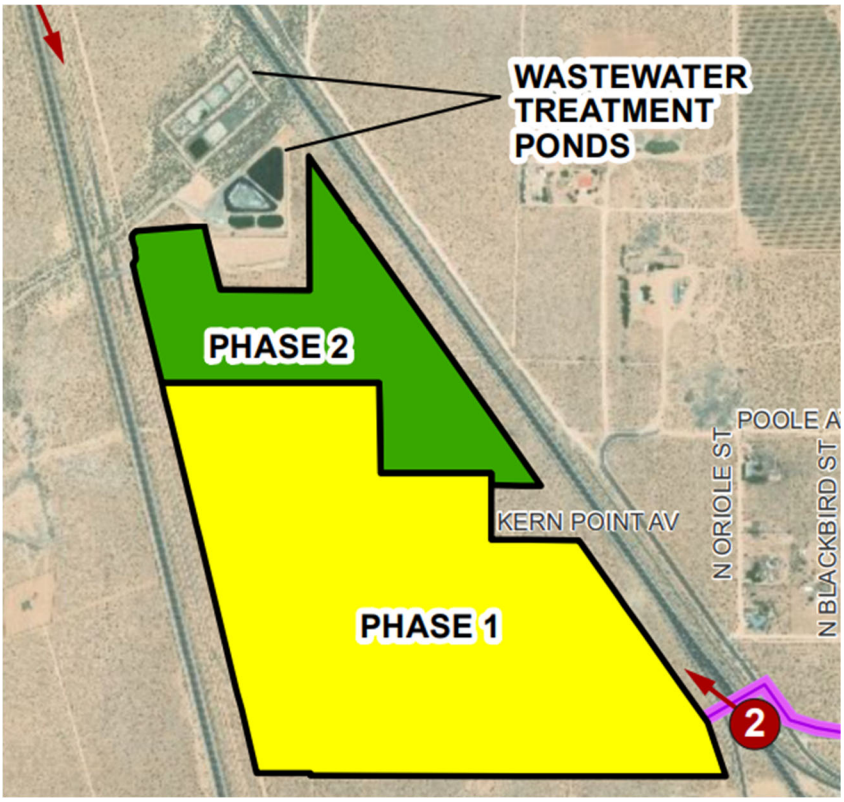
Inadequate Analysis of Impacts

Two Phase I Environmental Site Assessments (ESAs) were referenced in the Hazards and Hazardous Materials section; however, the DEIR states that only one of the Phase Is (Terracon, 2015) was prepared to include the Project site. The other Phase I (SEI, 2014) was prepared for an adjacent parcel. The DEIR states (p.4.9-21):

12-Q3

One of the Phase I reports (SEI, 2014) is actually for a site that is south of the project site when a different location was being evaluated. However, considering that Phase I reports examine a 1-mile radius of a location, it was still used as relevant to the proposed project locations.

The area of the Project site not covered by a Phase I ESA is roughly coincident with the "Phase 2" Project site as shown below.



A Phase I needs to be prepared for the northern part of the Project site not covered by the 2015 Phase I ESA. An inspection is an integral part of standards for performing a Phase I ESA established by the US EPA and the American Society for Testing and Materials Standards (ASTM). A revised DEIR is necessary to include a Phase I ESA for the area of the Project site not covered by a Phase I ESA.

12-Q3 (cont.)

The DEIR Fails to Disclose Material Facts Regarding the Energy Storage Components and Fails to Disclose, Analyze and Mitigate Potential Health Impacts from Accidents

The DEIR is short on specifics regarding the energy storage system (ESS), stating only (p. 4.9-4):

> The ESS would measure approximately 65 feet by 150 feet and would consist of battery storage modules placed in multiple prefabricated enclosures near the onsite substation. ESS would consist of battery banks housed in electrical enclosures and buried electrical conduit. The battery enclosures would have fire suppression equipment installed that automatically suppress thermal emergencies. The energy storage technology and design for the ESS has not been determined at this time, but could include any commercially

12-R3

> available battery technology, including but not limited to lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride.

The DEIR needs to disclose all ESS components and to identify impacts for whatever system might be chosen, to include:

a) A volume estimate of the number and type of chemical suppressants and water sources and water volumes that may be necessary to fight a reasonable worst case fire scenario;
b) A list of all chemical components in the batteries under consideration including chemicals in the electrolyte;
c) Plans to show that secondary containment would be adequate to handle the volume of chemicals and any water required to fight a worst-case scenario fire;
d) A list of all chemicals that are anticipated to be necessary to fight a battery fire;
e) A Spill Prevention and Response Plan to address specific hazardous materials necessary for operation; and
f) An Emergency Action Plan to include ability of local resources to fight a lithium ion battery fires and an evaluation of response times.

12-R3 (cont.)

Air Quality

Failure to Adequately Evaluate Operational Air Quality Impacts

Review of the Project documents demonstrates that the DEIR fails to consider all of the proposed Project's operational criteria air pollutant emissions. As a result, the Project's air quality impacts are inadequately addressed and mitigated. Until an updated analysis quantifies and evaluates the proposed Project's ***entire*** operational emissions to the correct Eastern Kern Air Pollution Control District ("EKAPCD") thresholds, the proposed project should not be approved.

Review of the Project's Air Quality Impact Analysis ("AQIA"), provided as Appendix C to the DEIR, demonstrates that the DEIR only considers the Project's operational emissions resulting from water trucks, maintenance trucks, and employee vehicles (Appendix C, p. 15). Specifically, according to the AQIA:

12-S3

> "Long-term emissions are caused by operational mobile sources from periodic maintenance and cleaning of the solar panels. There were three categories of mobile sources generating long-term emissions: water trucks, maintenance trucks and employee vehicles" (Appendix C, p. 15).

As you can see in the excerpt above, the DEIR only evaluates the Project's operational emissions from three sources. Thus, while the DEIR evaluates the Project's ***partial*** operational emissions, the DEIR fails to evaluate the Project's ***entire*** operational emissions. According to the CalEEMod User's Guide, a Project's operational emissions include the following sources: fugitive dust associated with roads, architectural coating activities, off-road equipment used during operation, emergency generators, fire pumps, process boilers, parking lot degreasers, fertilizers/pesticides, cleaning supplies, electricity usage in buildings, electricity usage from lighting, water usage, and solid waste disposal.[1] Thus, by only

[1] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.caleemod.com/, p. 2.

conducting an air quality analysis for the Project's *mobile-source* operational emissions, specifically from water trucks, maintenance trucks, and employee vehicles, the DEIR underestimates the Project's *total* operational emissions. As such, the DEIR underestimates the Project's operational emissions and should not be relied upon to determine Project significance. The Project should not be approved until an evaluation of the Project's *total* operational emission is prepared.

12-S3 (cont.)

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.[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 project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[3] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[4]

12-T3

Review of the Project's air modeling demonstrates that the DEIR underestimates emissions associated with Project activities. As previously stated, the DEIR's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in the Air Quality Impact Analysis ("AQIA") as Appendix C to the DEIR, we found that several of the values inputted into the model were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

Underestimated Land Use Size

According to the DEIR, "[t]he project's permanent facilities would include the solar modules, energy storage systems, operations and maintenance building, switchyards, electrical collector system and inverters, gentie lines, telecommunication facilities and meteorological station, security fencing, and access roads" (pp. 17). Furthermore, the DEIR indicates that the two battery buildings would be 65-feet by 150-feet, for a total of 19,500-SF, and the O&M building would be 25-feet by 25-feet, for a total of 625-SF. Thus, these two land uses would comprise 20,125-SF (p. 1-9 – 1-10). However, review of the CalEEMod output files reveals that only 20,750-SF *total* of "User Defined Industrial" land use space was included in the model (see excerpt below) (Appendix C, pp. 74).

12-U3

[2] CAPCOA (November 2017) CalEEMod User's Guide, caleemod.com.
[3] CAPCOA (November 2017) CalEEMod User's Guide, caleemod.com, p. 1, 9.
[4] CAPCOA (November 2017) CalEEMod User's Guide, caleemod.com, p. 11, 12 – 13. 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.

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	288.00	20,750.00	0

As you can see in the excerpt above, the model only included 20,750-SF *total* of "User Defined Industrial" land use space. While we were not provided with the approximate square footage of the proposed on-site meteorological station or any of the other proposed land uses, we can reasonably assume that these land uses would require more than the remaining 625-SF of space. This presents an issue, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts). By underestimating the square footage of the proposed Project, the model may underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

12-U3 (cont.)

Incorrect Land Use Type

According to the DEIR, "[t]he proposed project would develop a solar PV energy-generating facility with battery energy storage" (p. 1-2). However, review of the Project's CalEEMod output files demonstrates that the model incorrectly categorized the Project as "User Defined Industrial" (see excerpt below) (Appendix C, pp. 74).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	288.00	20,750.00	0

As you can see, the model categorized the entire Project as "User Defined Industrial" land use space. According to the CalEEMod User's Guide:

> "The user-defined land use does not have any default information and *the user is required to enter all of the necessary information*. The program currently places a value of 0 for all areas where user defined values would be required for a blank land use" (emphasis added).[5]

12-V3

As you can see in the excerpt above, "User-Defined" land use types are only to be used when all necessary information is available to be inputted manually. However, review of the CalEEMod output files for the proposed Project demonstrate that none of the operational information, including the Project's vehicle fleet mix, energy intensity values, indoor and outdoor water use rates, wastewater treatment system percentages, and solid waste generation rates, is provided in the model. As previously stated, the land use type and size features are used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations.[6] Thus, without inputting the necessary user-defined values for the Project's activities or providing this information in the Project documents, the Project should not be modeled as "User Defined." As a result, the model may underestimate the Project's emissions and should not be relied upon to determine the Project's significance.

[5] CAPCOA (November 2017) CalEEMod User's Guide, caleemod.com, p. 5.
[6] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 18.

Use of an Incorrect Construction Schedule

According to the DEIR, the Project would be constructed according to the following schedule (see excerpt below) (p. 3-26, Table 3-4).

TABLE 3-4: SOLAR PV CONSTRUCTION ACTIVITY, DURATION, EQUIPMENT, AND WORKERS

Activity	Duration (est.)	Equipment	Workers (est.)
Phase 1: Mobilization and Site Preparation	42 days	1 Backhoe 4 Bulldozers 1 FE Loader 4 Graders 2 Instrument/Signal Boards 1 Roller 1 Skid Steer 1 Trencher 9 Water Trucks	10
Phase 2: PV System Installation	132 days	11 Forklifts 5 Pile Driver 5 Skid Steers 5 Trenchers 4 Water Trucks 11 Welders	8
Phase 3: Inverters and Substation	21 days	4 Aerial Lifts 1 Backhoe 1 Bulldozer 3 Cranes 1 FE Loader 1 Grader 2 Pile Drivers 1 Roller 1 Skid Steer 3 Trencher 1 Water Truck	8
Gen-tie Connection	21 days	4 Aerial Lifts 1 Crane 1 Bulldozer 1 Bull wheel Puller 1 Compressor Trailer 1 Grader 1 HD Truck (poles) 1 HD Truck (wire truck) 1 HD Truck (static truck) 1 HD Truck (line puller)	8

NOTE: Some activities occur concurrently.

12-W3

As you can see in the excerpt above, the DEIR proposes a construction schedule including 42 days of "Mobilization and Site Preparation" (assumed to be "Grading"), 132 days of "PV System Installation" (assumed to be "Trenching/Electrical"), 21 days of "Inverters and Substation" (assumed to be "Building Construction"), and 21 days of "Gen-tie Connection" (assumed to be "Paving"). However, review of the Project's CalEEMod output files demonstrates that the construction schedule inputted into the model is inconsistent with the schedule provided by the DEIR (see excerpt below) (Appendix C, pp. 81).

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Grading	Grading	4/1/2019	4/29/2019	5	21
2	Trenching/Electrical	Trenching	4/30/2019	5/28/2019	5	21
3	Pile Driving/Panel Assembly	Building Construction	5/29/2019	11/28/2019	5	132
4	Gravel Roads	Paving	8/24/2019	9/23/2019	5	21

As you can see in the excerpt above, the first phase of construction, "Mobilization and Site Preparation," or "Grading," was underestimated by approximately 21 days, or 50%. Thus, the construction schedule utilized in the model is inconsistent with the information provided in the DEIR. As a result, the model may underestimate the Project's construction-related emission and should not be relied upon to determine Project significance.

12-B3 (cont.)

Failure to Include Operational Vehicle Trips

The model fails to include the total amount of anticipated vehicle trips for the Project, and as a result, the Project's operational emissions may be underestimated.

According to the Traffic Study, provided as Appendix K to the DEIR, the Project is anticipated to generate approximately 50 trips per day (see excerpt below) (Appendix K, p. 4, Table 2).

Table 2
Project Trip Generation – Operation & Maintenance Phase

			AM Peak Hour Trips		PM Peak Hour Trips	
Traffic Type	Variable	ADT	In Trips	Out Trips	In Trips	Out Trips
Personnel	50 (per day)	50[1]	100% 25[1]	0% 0	0% 0	100% 25[1]
Heavy Trucks	4 (per year)	1	100% 1[3]	0% 0	0% 0	100% 1[3]
	Total Trips	50	26	0	0	26

[1] Using 2 personnel per vehicle
[2] Represents passenger-car equivalent for heavy truck traffic using a factor of 1.7
[3] Represents quarterly trip

12-B3

As you can see in the excerpt above, the proposed Project is anticipated to generate approximately 50 trips per day. However, review of the Project's CalEEMod output files demonstrates that the model failed to include ***any*** operational vehicle trips, instead including manual reductions from the default trip rates to ***zero (0)*** (see excerpt below) (Appendix C, pp. 91).

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

As you can see in the excerpt above, ***no*** trips were included in the model. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[7] However, no justification was provided in the "User Entered Comments & Non-Default Data" table (Appendix C, pp. 74). As ***zero*** trips were included, the model is inconsistent with the Traffic Study and the Project's mobile-source operational emissions are underestimated. As a result, the model should not be relied upon to determine Project significance.

[7] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9.

Failure to Model Required Parking Spaces

The model fails to include the total amount of required parking for the Project, and as a result, the Project's construction and operational emissions may be underestimated.

According to the Kern County Zoning Ordinance § 19.82.020(F)(3), warehouse land use space has the following parking requirements:

> "One (1) per one thousand (1,000) square feet of storage area for the first ten thousand (10,000) square feet, one (1) per three thousand (3,000) square feet thereafter plus one (1) per two hundred and fifty (250) square feet of office area"[8]

Thus, the proposed Project should include a total of 14 parking spaces in the model.[9] However, review of the Project's CalEEMod output files demonstrates that the model completely failed to include any amount of parking (see excerpt below) (Appendix C, pp. 74).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	288.00	20,750.00	0

12-Y3

As you can see in the excerpt above, the model failed to include any parking in the model. This presents an issue, as the land use type is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations.[10] Furthermore, CalEEMod assigns each land use type with its own set of energy usage emission factors.[11] Specifically, parking land use types affect construction activities, including site preparation, grading, building, coating, and paving from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities, including painting/striping. In addition, parking land use types affect operational activities, including on-road mobile vehicle traffic, fugitive dust associated with vehicle movement, continued and periodic coating activities, off-road equipment as needed, fire pumps, consumer products (including parking lot degreasers, etc.), electricity usage from lighting, water usage, and solid waste disposal.[12] Thus, by failing to include the proposed Project's required parking space, the model underestimates the Project's construction and operational emissions. As a result, the model should not be relied upon to determine Project significance.

[8] Kern County Zoning Ordinance § 19.82.020(F)(3), *available at:* https://library.municode.com/ca/kern_county/codes/code_of_ordinances?nodeId=TIT19ZO_CH19.82OREPA_19.82.020REPASP.
[9] Calculated: [(1 space / 1,000-SF) x 10,000-SF] + [(1 space / 3,000-SF) x 10,750-SF] = 13.58 = roughly 14 spaces.
[10] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* caleemod.com, p. 17.
[11] "CalEEMod User's Guide, Appendix D." CAPCOA, September 2016, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2
[12] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* caleemod.com, p. 2.

Unsubstantiated Changes to Off-Road Construction Equipment Horsepower Values, Load Factor Values, and Usage Hours

Review of the Project's CalEEMod output files demonstrates that several manual changes were made to the Project's anticipated off-road construction equipment horsepower values, load factor values, and usage hours (see excerpt below) (Appendix C, pp. 75-76).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	HorsePower	231.00	250.00
tblOffRoadEquipment	HorsePower	158.00	168.00
tblOffRoadEquipment	HorsePower	187.00	174.00
tblOffRoadEquipment	HorsePower	247.00	357.00
tblOffRoadEquipment	HorsePower	367.00	313.00
tblOffRoadEquipment	HorsePower	97.00	108.00
tblOffRoadEquipment	HorsePower	9.00	291.00
tblOffRoadEquipment	HorsePower	212.00	147.00
tblOffRoadEquipment	HorsePower	212.00	147.00
tblOffRoadEquipment	HorsePower	158.00	168.00
tblOffRoadEquipment	HorsePower	89.00	93.00
tblOffRoadEquipment	HorsePower	402.00	189.00
tblOffRoadEquipment	HorsePower	402.00	189.00
tblOffRoadEquipment	LoadFactor	0.43	0.38
tblOffRoadEquipment	UsageHours	7.00	6.40
tblOffRoadEquipment	UsageHours	8.00	6.40
tblOffRoadEquipment	UsageHours	8.00	6.40
tblOffRoadEquipment	UsageHours	8.00	6.40
tblOffRoadEquipment	UsageHours	8.00	6.40
tblOffRoadEquipment	UsageHours	8.00	6.40

12-Z3

As you can see in the excerpt above, several manual changes were made to the Project's anticipated off-road construction equipment horsepower values, load factor values, and usage hours. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[13] According to the "User Entered Comments & Non-Default Data" table, the justifications provided for these changes are: "Off Highway truck represents water truck," "District-provided equipment listing," "See Construction Equipment Operational," "District-provided hp and equipment list," and "District-provided construction equipment" (Appendix C, pp. 74). However, these justifications are insufficient, as the DEIR fails to mention the proposed Project's construction equipment horsepower values or usage hours. Contradictorily, regarding the load factors, the DEIR states: "CalEEMod default load factors were used for all construction equipment" (Appendix C, p. 14). As a result, we cannot verify any changes to the Project's anticipated off-road equipment horsepower values, load factors, or unit amounts.

[13] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

Failure to Model Proposed Off-Road Construction Equipment List

According to the DEIR, the Project's construction would require the following equipment (see excerpt below) (p. 3-26, Table 3-4).

TABLE 3-4: SOLAR PV CONSTRUCTION ACTIVITY, DURATION, EQUIPMENT, AND WORKERS

Activity	Duration (est.)	Equipment	Workers (est.)
Phase 1: Mobilization and Site Preparation	42 days	1 Backhoe 4 Bulldozers 1 FE Loader 4 Graders 2 Instrument/Signal Boards 1 Roller 1 Skid Steer 1 Trencher 9 Water Trucks	10
Phase 2: PV System Installation	132 days	11 Forklifts 5 Pile Driver 5 Skid Steers 5 Trenchers 4 Water Trucks 11 Welders	8
Phase 3: Inverters and Substation	21 days	4 Aerial Lifts 1 Backhoe 1 Bulldozer 3 Cranes 1 FE Loader 1 Grader 2 Pile Drivers 1 Roller 1 Skid Steer 3 Trencher 1 Water Truck	8
Gen-tie Connection	21 days	4 Aerial Lifts 1 Crane 1 Bulldozer 1 Bull wheel Puller 1 Compressor Trailer 1 Grader 1 HD Truck (poles) 1 HD Truck (wire truck) 1 HD Truck (static truck) 1 HD Truck (line puller)	8

NOTE: Some activities occur concurrently.

However, review of the Project's CalEEMod output files demonstrates that the off-road construction equipment list inputted into the model is inconsistent with the list provided by the DEIR (see excerpt below) (Appendix C, pp. 81).

12-A4

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	6.40	168	0.38
Grading	Graders	2	6.40	174	0.41
Grading	Off-Highway Trucks	1	6.40	189	0.38
Grading	Rubber Tired Dozers	2	6.40	357	0.40
Grading	Scrapers	2	6.40	313	0.48
Grading	Tractors/Loaders/Backhoes	2	6.40	108	0.37
Trenching/Electrical	Crawler Tractors	2	6.40	147	0.38
Trenching/Electrical	Excavators	2	6.40	168	0.42
Trenching/Electrical	Forklifts	2	6.40	93	0.36
Trenching/Electrical	Off-Highway Trucks	1	6.40	189	0.38
Pile Driving/Panel Assembly	Bore/Drill Rigs	2	6.40	221	0.50
Pile Driving/Panel Assembly	Cement and Mortar Mixers	2	6.40	291	0.56
Pile Driving/Panel Assembly	Cranes	2	6.40	250	0.29
Gravel Roads	Crawler Tractors	2	6.40	147	0.43

12-A4 (cont.)

As you can see in the excerpt above, the model included in the Project's CalEEMod model both underestimates the pieces of equipment and fails to include the types of equipment indicated by the equipment list included in the DEIR. Thus, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Underestimated Number of Hauling, Vendor, and Worker Trips Required for Construction

Furthermore, the overall amount of worker and vendor trips included in the model were underestimated based on the values provided in the Traffic Study. According to the Traffic Study, provided as Appendix K to the DEIR, the Project is anticipated to generate an average of 75 personnel trips and 10 heavy truck trips per day, throughout Project construction (see excerpt below) (Appendix K, p. 3, Table 1).

			AM Peak Hour Trips		PM Peak Hour Trips	
Traffic Type	Variable	ADT	In Trips	Out Trips	In Trips	Out Trips
Personnel	75 (per day)	75[1]	100% 38[1]	0% 0	0% 0	100% 38[1]
Heavy Trucks	10 (per day)	34[2]	100% 3[3]	0% 0	0% 0	100% 3[3]
	Total Trips	109	41	0	0	41

12-B4

As you can see in the excerpt above, the Traffic Study estimates that the Project's construction would result in approximately 75 "Personnel" trips per day and 10 "Heavy Trucks" trips per day. Therefore, the Project's CalEEMod model should have included inputs of 75 worker trips and 10 vendor trips, as indicated. However, review of the Project's CalEEMod output files demonstrates that the model included only 49 total daily worker trips[14] and 3 daily vendor trips (see excerpt below) (Appendix C, pp. 82).

[14] Calculated: 20 + 15 + 9 + 5 = 49.

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length
Grading	11	20.00	0.00	0.00	16.80	6.60	20.00
Trenching/Electrical	7	15.00	0.00	0.00	16.80	6.60	20.00
Pile Driving/Panel Assembly	6	9.00	3.00	0.00	16.80	6.60	20.00
Gravel Roads	2	5.00	0.00	0.00	16.80	6.60	20.00

12-B4 (cont.)

As you can see in the excerpt above, the worker and vendor trip numbers were underestimated according to the DEIR's Traffic Study. As a result, the model underestimates the Project's construction-related emissions and should not be relied upon to determine Project significance.

Incorrect Application of Construction-Related Mitigation Measure

Review of the Project's CalEEMod output files demonstrates that the model includes a construction-related mitigation measure without sufficient justification. As a result, the Project's construction-related emissions may be underestimated.

The CalEEMod output files reveal that the model includes the "Reduce Vehicle Speed on Unpaved Road" construction-related mitigation measure (see excerpt below) (Appendix C, pp. 75).

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Furthermore, the unpaved road vehicle speed was changed to 15 miles per hour ("MPH") in the model (see excerpt below) (Appendix C, pp. 82).

12-C4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15

As you can see in the excerpt above, the model includes the "Reduce Vehicle Speed on Unpaved Roads" construction mitigation measure with a reduced vehicle speed of 15 MPH. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[15] However, the "User Entered Comments & Non-Default Data" table fails to provide a justification for these changes. According to the DEIR:

> "Onsite vehicle speed shall be limited to *10 miles per hour* on unpaved areas within the project site. Vehicles may travel up to *25 miles per hour* on stabilized unpaved roads (application of palliatives, gravel, etc. that reduces the erosion potential of the soil) as long as such speeds do not create visible dust emissions" (emphasis added) (Appendix C, p. I-36 - I-37).

As such, the model's reduction of the vehicle speed to 15 MPH is inconsistent with the information provided in the DEIR, as vehicles may travel up to 25 MPH. As CEQA requires the most conservative

[15] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9.

analysis, the model should have instead included a conservative vehicle speed of 25 MPH in the model. As a result, we cannot verify the inclusion of this reduced 15 MPH vehicle speed, and the model may underestimate the Project's construction-related emissions.

12-C4 (cont.)

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR concludes that the proposed Project would result in amortized construction and operational greenhouse gas ("GHG") emissions of 16 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year"), which would not exceed the EKAPCD threshold of 25,000 MT CO_2e/year (p. 4.8-18, Table 4.8-2). Furthermore, the DEIR concludes that the Project would result in a less than significant GHG impact based on the Project's renewable energy generation, which would offset any GHG emissions associated with the proposed Project (p. 4.8-26).

12-D4

However, the DEIR's GHG analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect, as the EKAPCD threshold of 25,000 MT CO_2e/year is not applicable and cannot be relied upon to determine the significance of the Project's GHG emissions.

Incorrect Reliance on the EKAPCD threshold of 25,000 MT CO2e/year

As discussed above, the DEIR relies upon the EKAPCD adopted threshold of 25,000 MT CO_2e/year to determine significance of GHG emissions from the Project (p. 4.8-18). However, as explained below, the EKAPCD threshold does not apply to this Project.

First, in adopting the 2012 Addendum to its CEQA Guidelines ("Addendum"), [16] EKAPCD staff anticipated the applicable projects to be "large industrial projects or modifications to existing industrial projects that do not require conditional use permits from a land-use agency or a permit from the California Energy Commission."[17] This Project does not require EKAPCD to be the lead agency and, in fact, requires conditional use permits from Kern County as the land-use lead agency (pp. 15).

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Second, the Addendum notes that the 25,000 MT CO_2e/year limit is appropriate for determining significance, in part because "ARB and EPA determined that this threshold would be appropriate for facilities whose GHG emissions may be subject to regulation."[18] It cites to the EPA's Final Rule for Mandatory Reporting of Greenhouse Gases for certain types of facilities.[19] According to the Final Rule, the types of regulated categories and entities include "general stationary fuel combustion sources," "fossil-fuel fired electric generating units," manufacturing of "mobile sources," and facilities that manufacture, process, refine or supply a variety of products and chemicals.[20] The Project does not fit into any of these categories.

[16] "Addendum to CEQA Guidelines Addressing GHG Emission Impacts for Stationary Source Projects When Serving as Lead CEQA Agency." EKAPCD, March 8, 2012, ("Addendum") *available at:* http://www.kernair.org/Documents/CEQA/EKAPCD%20CEQA%20GHG%20Policy%20Adopted%203-8-12.pdf

[17] Addendum, p. 3.

[18] Addendum, p. 4.

[19] 74 Fed. Reg. 56260, 56273 (Oct. 30, 2009), Mandatory Reporting of Greenhouse Gases; Final Rule ("2009 Federal Register"), *available at*: https://www.govinfo.gov/content/pkg/FR-2009-10-30/pdf/E9-23315.pdf

[20] 2009 Federal Register, p. 56260-56261.

In sum, EKAPCD's threshold was developed for specific categories of projects which do not include the proposed Project. As such, EKAPCD's quantitative threshold of 25,000 MT CO_2e/yr does not apply and should not be used in determining the Project's GHG significant impacts.

12-E4 (cont.)

Feasible Mitigation Measures Available to Reduce Emissions

As discussed above, the Project's hazards and hazardous materials and air quality emissions may result in potentially significant impacts. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project.

In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project from NEDC's *Diesel Emission Controls in Construction Projects.*[21] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

NEDC's *Diesel Emission Controls in Construction Projects*[22]
Measures – Diesel Emission Control Technology
a. Diesel Onroad Vehicles All diesel nonroad vehicles on site for more than 10 total days must have either (1) engines that meet EPA onroad emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
b. Diesel Generators All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
c. Diesel Nonroad Construction Equipment i. All nonroad diesel engines on site must be Tier 2 or higher. Tier 0 and Tier 1 engines are not allowed on site ii. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 50hp and greater and by a minimum of 20% for engines less than 50hp.
d. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 non road emission standards or emission control technology, as specified above, installed and functioning, the developer will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the developer.
e. Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.

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[21] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

[22] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

f. All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend[23] approved by the original engine manufacturer with sulfur content of 15 ppm or less.
Measures – Idling Requirements
During periods of inactivity, idling of diesel onroad vehicles and nonroad equipment shall be minimized and shall not exceed the time allowed under state and local laws.
Measures – Additional Diesel Requirements
a. Construction shall not proceed until the contractor submits a certified list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following: i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment. ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions and provide information.
c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.
d. The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
Reporting
a. For each onroad diesel vehicle, nonroad construction equipment, or generator, the contractor shall submit to the developer's representative a report prior to bringing said equipment on site that includes: i. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number. ii. The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level. iii. The Certification Statement signed and printed on the contractor's letterhead.
b. The contractor shall submit to the developer's representative a monthly report that, for each onroad diesel vehicle, nonroad construction equipment, or generator onsite, includes: i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date. ii. Any problems with the equipment or emission controls. iii. Certified copies of fuel deliveries for the time period that identify: 1. Source of supply 2. Quantity of fuel 3. Quality of fuel, including sulfur content (percent by weight)

12-F4 (cont.)

[23] Biodiesel blends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements: http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf.

Finally, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project from the Sacramento Metropolitan Air Quality Management District's ("SMAQMD") *Basic Construction Emission Control Practices (Best Management Practices)* and *Enhanced Exhaust Control Practices*.[24, 25] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

SMAQMD's *Basic Construction Emission Control Practices*[26]
The following Basic Construction Emissions Control Practices are considered feasible for controlling fugitive dust from a construction site. The practices also serve as best management practices (BMPs), allowing the use of the non-zero particulate matter significance thresholds. Lead agencies should add these emission control practices as Conditions of Approval (COA) or include in a Mitigation Monitoring and Reporting Program (MMRP).
Control of fugitive dust is required by District Rule 403 and enforced by District staff.
Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
The following practices describe exhaust emission control from diesel powered fleets working at a construction site. California regulations limit idling from both on-road and offroad diesel-powered equipment. The California Air Resources Board (CARB) enforces idling limitations and compliance with diesel fleet regulations.
Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
Provide current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1].
Although not required by local or state regulation, many construction companies have equipment inspection and maintenance programs to ensure work and fuel efficiencies

12-F4 (cont.)

[24] "Basic Construction Emission Control Practices (Best Management Practices)." Sacramento Metropolitan Air Quality Management District (SMAQMD), July 2019, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.
[25] "Enhanced Exhaust Control Practices." Sacramento Metropolitan Air Quality Management District (SMAQMD)October 2013, *available at:* http://www.airquality.org/LandUseTransportation/Documents/Ch3EnhancedExhaustControlFINAL10-2013.pdf.
[26] "Basic Construction Emission Control Practices (Best Management Practices)." Sacramento Metropolitan Air Quality Management District (SMAQMD), July 2019, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.
SMAQMD's *Enhanced Exhaust Control Practices*[27]
1. The project representative shall submit to the lead agency and District a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. • The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. • The project representative shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. • This information shall be submitted at least 4 business days prior to the use of subject heavy-duty off-road equipment. • The District's Equipment List Form can be used to submit this information. • The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The project representative shall provide a plan for approval by the lead agency and District demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a project wide fleet-average 20% NOX reduction and 45% particulate reduction compared to the most recent California Air Resources Board (ARB) fleet average. • This plan shall be submitted in conjunction with the equipment inventory. • Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. • The District's Construction Mitigation Calculator can be used to identify an equipment fleet that achieves this reduction.
3. The project representative shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40% opacity for more than three minutes in any one hour. • Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. • Non-compliant equipment will be documented and a summary provided to the lead agency and District monthly. • A visual survey of all in-operation equipment shall be made at least weekly. • A monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey.
4. The District and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this mitigation shall supersede other District, state or federal rules or regulations.

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[27] "Enhanced Exhaust Control Practices." Sacramento Metropolitan Air Quality Management District (SMAQMD)October 2013, *available at:* http://www.airquality.org/LandUseTransportation/Documents/Ch3EnhancedExhaustControlFINAL10-2013.pdf.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An updated EIR should be prepared to include all feasible mitigation measures, as well as include an updated air quality and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The updated EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

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SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

12-G4

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

Tel: (949) 887-9013
Email: mhagemann@swape.com

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

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
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 Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. 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) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- 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 over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- 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.

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.
- 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 discharge 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.

- 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.

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 is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

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.

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.

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.

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 examinations, 2009-2011.

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

SOIL WATER AIR PROTECTION ENTERPRISE
1640 Fifth Street, Suite 204
Santa Monica, California 90401
Attn: Paul Rosenfeld, Ph.D.
Mobil: (310) 795-2335
Office: (310) 434-0110
Fax: (310) 434-0011
Email: prosenfeld@swape.com

Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on VOC filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld is the Co-Founder and Principal Environmental Chemist at Soil Water Air Protection Enterprise (SWAPE). His focus is the fate and transport of environmental contaminants, risk assessment, and ecological restoration. His project experience ranges from monitoring and modeling of pollution sources as they relate to human and ecological health. Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing, petroleum, MtBE and fuel oxygenates, chlorinated solvents, pesticides, radioactive waste, PCBs, PAHs, dioxins, furans, volatile organics, semi-volatile organics, perchlorate, heavy metals, asbestos, PFOA, unusual polymers, and odor. Significant projects performed by Dr. Rosenfeld include the following:

Litigation Support

Client: Missouri Department of Natural Resources (Jefferson City, Missouri)
Serving as an expert in evaluating air pollution and odor emissions from a Republic Landfill in St. Louis, Missouri. Conducted. Project manager overseeing daily, weekly and comprehensive sampling of odor and chemicals.

Client: Louisiana Department of Transportation and Development (Baton Rouge, Louisiana)
Serving as an expert witness, conducting groundwater modeling of an ethylene dichloride DNAPL and soluble plume resulting from spill caused by Conoco Phillips.

Client: Missouri Department of Natural Resources (St. Louis, Missouri)
Serving as a consulting expert and potential testifying expert regarding a landfill fire directly adjacent to another landfill containing radioactive waste. Implemented an air monitoring program testing for over 100 different compounds using approximately 12 different analytical methods.

Client: Baron & Budd, P.C. (Dallas, Texas) and Weitz & Luxeinberg (New York, New York)
Served as a consulting expert in MTBE Federal Multi District Litigation (MDL) in New York. Consolidated ground water data, created maps for test cases, constructed damage model, evaluated taste and odor threshold levels. Resulted in a settlement of over $440 million.

Client: The Buzbee Law Firm (Houston, Texas)
Served as a as an expert in ongoing litigation involving over 50,000+ plaintiffs who are seeking compensation for chemical exposure and reduction in property value resulting from chemicals released from the BP facility.

Client: Environmental Litigation Group (Birmingham, Alabama)
Serving as an expert on property damage, medical monitoring and toxic tort claims that have been filed on behalf of over 13,000 plaintiffs who were exposed to PCBs and dioxins/furans resulting from emissions from Monsanto and Cerro Copper's operations in Sauget, Illinois. Developed AERMOD models to demonstrate plaintiff's exposure.

Client: Baron & Budd P.C. (Dallas Texas) and Korein Tillery (St. Louis, Missouri)
Served as a consulting expert for a Class Action defective product claim filed in Madison County, Illinois against Syngenta and five other manufacturers for atrazine. Evaluated health issues associated with atrazine and deterimied treatment cost for filtration of public drinking water supplies. Resulted in $105 million dollar settlement.

Client: The Buzbee Law Firm (Houston, Texas)
Served as a consulting expert in catalyst release and refinery emissions cases against the BP Refinery in Texas City. A jury verdict for 10 employees exposed to catalyst via BP's irresponsible behavior.

Client: Baron & Budd, P.C. (Dallas, Texas)
Served as a consulting expert to calculate the Maximum Allowable Dose Level (MADL) and No Significant Risk Level (NSRL), based on Cal EPA and OEHHA guidelines, for Polychlorinated Biphenyls (PCBs) in fish oil dietary supplements.

Client: Girardi Keese (Los Angeles, California)
Served as an expert testifying on hydrocarbon exposure of a woman who worked on a fuel barge operated by Chevron. Demonstrated that the plaintiff was exposed to excessive amounts of benzene.

Client: Mason & Cawood (Annapolis, Maryland) and Girardi & Keese (Los Angeles, California)
Serving as an expert consultant on the Battlefield Golf Club fly ash disposal site in Chesapeake, VA, where arsenic, other metals and radionuclides are leaching into groundwater, and ash is blowing off-site onto the surrounding communities.

Client: California Earth Mineral Corporation (Culver City, California)
Evaluating the montmorillonite clay deposit located near El Centro, California. Working as a Defense Expert representing an individual who owns a 2,500 acre parcel that will potentially be seized by the United States Navy via eminent domain.

Client: Matthews & Associates (Houston, Texas)
Serving as an expert witness, preparing air model demonstrating residential exposure via emissions from fracking in natural gas wells in Duncan, Texas.

Client: Baron & Budd P.C. (Dallas, Texas) and Korein Tillery (St. Louis, Missouri)
Served as a consulting expert for analysis of private wells relating to litigation regarding compensation of private well owners for MTBE testing. Coordinated data acquisition and GIS analysis evaluating private well proximity to leaking underground storage tanks.

Client: Lurie & Park LLP (Los Angeles, California)
Served as an expert witness evaluating a vapor intrusion toxic tort case that resulted in a settlement. The Superfund site is a 4 ½ mile groundwater plume of chlorinated solvents in Whittier, California.

Client: Mason & Cawood (Annapolis, Maryland)
Evaluated data from the Hess Gasoline Station in northern Baltimore, Maryland that had a release resulting in flooding of plaintiff's homes with gasoline-contaminated water, foul odor, and biofilm growth.

Client: The Buzbee Law Firm (Houston, Texas)
Evaluated air quality resulting from grain processing emissions in Muscatine, Iowa.

Client: Anderson Kill & Olick, P.C. (Ventura, California)
Evaluated historical exposure and lateral and vertical extent of contamination resulting from a ~150 million gallon Exxon Mobil tank farm located near Watts, California.

Client: Packard Law Firm (Petaluma, California)
Served as an expert witness, evaluated lead in Proposition 65 Case where various products were found to have elevated lead levels.

Client: The Buzbee Law Firm (Houston, Texas)
Evaluated data resulting from an oil spill in Port Arthur, Texas.

Client: Nexsen Pruet, LLC (Charleston, South Carolina)
Serving as expert in chlorine exposure in a railroad tank car accident where approximately 120,000 pounds of chlorine were released.

Client: Girardi & Keese (Los Angeles, California)
Serving as an expert investigating hydrocarbon exposure and property damage for ~600 individuals and ~280 properties in Carson, California where homes were constructed above a large tank farm formerly owned by Shell.

Client: Brent Coon Law Firm (Cleveland, Ohio)
Served as an expert, calculating an environmental exposure to benzene, PAHs, and VOCs from a Chevron Refinery in Hooven, Ohio. Conducted AERMOD modeling to determine cumulative dose.

Client: Lundy Davis (Lake Charles, Louisiana)
Served as consulting expert on an oil field case representing the lease holder of a contaminated oil field. Conducted field work evaluating oil field contamination in Sulphur, Louisiana. Property is owned by Conoco Phillips, but leased by Yellow Rock, a small oil firm.

Client: Cox Cox Filo (Lake Charles, Louisiana)
Served as testifying expert on a multimillion gallon oil spill in Lake Charles which occurred on June 19, 2006, resulting in hydrocarbon vapor exposure to hundreds of workers and residents. Prepared air model and calculated exposure concentration. Demonstrated that petroleum odor alone can result in significant health harms.

Client: Cotchett Pitre & McCarthy (San Francisco, California)
Served as testifying expert representing homeowners who unknowingly purchased homes built on an old oil field in Santa Maria, California. Properties have high concentrations of petroleum hydrocarbons in subsurface soils resulting in diminished property value.

Client: Law Offices Of Anthony Liberatore P.C. (Los Angeles, California)
Served as testifying expert representing individuals who rented homes on the Inglewood Oil Field in California. Plaintiffs were exposed to hydrocarbon contaminated water and air, and experienced health harms associated with the petroleum exposure.

Client: Orange County District Attorney (Orange County, California)
Coordinated a review of 143 ARCO gas stations in Orange County to assist the District Attorney's prosecution of CCR Title 23 and California Health and Safety Code violators.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as a testifying expert in a health effects case against ABC Coke/Drummond Company for polluting a community with PAHs, benzene, particulate matter, heavy metals, and coke oven emissions. Created air dispersion models and conducted attic dust sampling, exposure modeling, and risk assessment for plaintiffs.

Client: Masry & Vitatoe (Westlake Village, California), Engstrom Lipscomb Lack (Los Angeles, Califronia) and Baron & Budd P.C. (Dallas, Texas)
Served as a consulting expert in Proposition 65 lawsuit filed against major oil companies for benzene and toluene releases from gas stations and refineries resulting in contaminated groundwater. Settlement included over $110 million dollars in injunctive relief.

Client: Tommy Franks Law Firm (Austin, Texas)
Served as expert evaluating groundwater contamination which resulted from the hazardous waste injection program and negligent actions of Morton Thiokol and Rohm Hass. Evaluated drinking water contamination and community exposure.

Client: Baron & Budd P.C. (Dallas, Texas) and Sher Leff (San Francisco, California)
Served as consulting expert for several California cities that filed defective product cases against Dow Chemical and Shell for 1,2,3-trichloropropane groundwater contamination. Generated maps showing capture zones of impacted wells for various municipalities.

Client: Weitz & Luxenberg (New York, New York)
Served as expert on Property Damage and Nuisance claims resulting from emissions from the Countywide Landfill in Ohio. The landfill had an exothermic reaction or fire resulting from aluminum dross dumping, and the EPA fined the landfill $10,000,000 dollars.

Client: Baron & Budd P.C. (Dallas, Texas)
Served as a consulting expert for a groundwater contamination case in Pensacola, Florida where fluorinated compounds contaminated wells operated by Escambia County.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as an expert on groundwater case where Exxon Mobil and Helena Chemical released ethylene dichloride into groundwater resulting in a large plume. Prepared report on the appropriate treatment technology and cost, and flaws with the proposed on-site remediation.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as an expert on air emissions released when a Bartlo Packaging Incorporated facility in West Helena, Arkansas exploded resulting in community exposure to pesticides and smoke from combustion of pesticides.

Client: Omara & Padilla (San Diego, California)
Served as a testifying expert on nuisance case against Nutro Dogfood Company that constructed a large dog food processing facility in the middle of a residential community in Victorville, California with no odor control devices. The facility has undergone significant modifications, including installation of a regenerative thermal oxidizer.

Client: Environmental Litigation Group (Birmingham, Alabama)
Serving as an expert on property damage and medical monitoring claims that have been filed against International Paper resulting from chemical emissions from facilities located in Bastrop, Louisiana; Prattville, Alabama; and Georgetown, South Carolina.

Client: Estep and Shafer L.C. (Kingwood, West Virginia)
Served as expert calculating acid emissions doses to residents resulting from coal-fired power plant emissions in West V
irginia using various air models.

Client: Watts Law Firm (Austin, Texas), Woodfill & Pressler (Houston, Texas) and Woska & Associates (Oklahoma City, Oklahoma)
Served as testifying expert on community and worker exposure to CCA, creosote, PAHs, and dioxins/furans from a BNSF and Koppers Facility in Somerville, Texas. Conducted field sampling, risk assessment, dose assessment and air modeling to quantify exposure to workers and community members.

Client: Environmental Litigation Group (Birmingham, Alabama)
Served as expert regarding community exposure to CCA, creosote, PAHs, and dioxins/furans from a Louisiana Pacific wood treatment facility in Florala, Alabama. Conducted blood sampling and environmental sampling to determine environmental exposure to dioxins/furans and PAHs.

Client: Sanders Law Firm (Colorado Springs, Colorado) and Vamvoras & Schwartzberg (Lake Charles, Louisiana)
Served as an expert calculating chemical exposure to over 500 workers from large ethylene dichloride spill in Lake Charles, Louisiana at the Conoco Phillips Refinery.

Client: Baron & Budd P.C. (Dallas, Texas)
Served as consulting expert in a defective product lawsuit against Dow Agroscience focusing on Clopyralid, a recalcitrant herbicide that damaged numerous compost facilities across the United States.

Client: Sullivan Papain Block McGrath & Cannavo (New York, New York) and The Cochran Firm (Dothan, Mississippi)

Served as an expert regarding community exposure to metals, PAHs PCBs, and dioxins/furans from the burning of Ford paint sludge and municipal solid waste in Ringwood, New Jersey.

Client: Rose, Klein & Marias LLP (Los Angeles, California)
Served as an expert in 55 Proposition 65 cases against individual facilities in the Port of Los Angeles and Port of Long Beach. Prepared air dispersion and risk models to demonstrate that each facility emits diesel particulate matter that results in risks exceeding 1/100,000, hence violating the Proposition 65 Statute.

Client: Rose, Klein & Marias LLP (Los Angeles, California) and Environmental Law Foundation (San Francisco, California)
Served as an expert in a Proposition 65 case against potato chip manufacturers. Conducted an analysis of several brands of potato chips for acrylamide concentrations and found that all samples exceeded Proposition 65 No Significant Risk Levels.

Client: Gonzales & Robinson (Westlake Village, California)
Served as a testifying expert in a toxic tort case against Chevron (Ortho) for allowing a community to be contaminated with lead arsenate pesticide. Created air dispersion and soil vadose zone transport models, and evaluated bioaccumulation of lead arsenate in food.

Client: Environment Now (Santa Monica, California)
Served as expert for Environment Now to convince the State of California to file a nuisance claim against automobile manufactures to recover MediCal damages from expenditures on asthma-related health care costs.

Client: Trutanich Michell (Long Beach, California)
Served as expert representing San Pedro Boat Works in the Port of Los Angeles. Prepared air dispersion, particulate air dispersion, and storm water discharge models to demonstrate that Kaiser Bulk Loading is responsible for copper concentrate accumulating in the bay sediment.

Client: Azurix of North America (Fort Myers, Florida)
Provided expert opinions, reports and research pertaining to a proposed County Ordinance requiring biosolids applicators to measure VOC and odor concentrations at application sites' boundaries.

Client: MCP Polyurethane (Pittsburg, Kansas)
Provided expert opinions and reports regarding metal-laden landfill runoff that damaged a running track by causing the reversion of the polyurethane due to its catalytic properties.

Risk Assessment And Air Modeling

Client: Hager, Dewick & Zuengler, S.C. (Green Bay, Wisconsin)
Conducted odor audit of rendering facility in Green Bay, Wisconsin.

Client: ABT-Haskell (San Bernardino, California)
Prepared air dispersion model for a proposed state-of-the-art enclosed compost facility. Prepared a traffic analysis and developed odor detection limits to predict 1, 8, and 24-hour off-site concentrations of sulfur, ammonia, and amine.

Client: Jefferson PRP Group (Los Angeles, California)
Evaluated exposure pathways for chlorinated solvents and hexavalent chromium for human health risk assessment of Los Angeles Academy (formerly Jefferson New Middle School) operated by Los Angeles Unified School District.

Client: Covanta (Susanville, California)
Prepared human health risk assessment for Covanta Energy focusing on agricultural worker exposure to caustic fertilizer.

Client: CIWMB (Sacramento, California)
Used dispersion models to estimate traveling distance and VOC concentrations downwind from a composting facility for the California Integrated Waste Management Board.

Client: Carboquimeca (Bogotá, Columbia)
Evaluated exposure pathways for human health risk assessment for a confidential client focusing on significant concentrations of arsenic and chlorinated solvents present in groundwater used for drinking water.

Client: Navy Base Realignment and Closure Team (Treasure Island, California)
Used Johnson-Ettinger model to estimate indoor air PCB concentrations and compared estimated values with empirical data collected in homes.

Client: San Diego State University (San Diego, California)
Measured CO_2 flux from soils amended with different quantities of biosolids compost at Camp Pendleton to determine CO_2 credit values for coastal sage under fertilized and non-fertilized conditions.

Client: Navy Base Realignment and Closure Team (MCAS Tustin, California)
Evaluated cumulative risk of a multiple pathway scenario for a child resident and a construction worker. Evaluated exposure to air and soil via particulate and vapor inhalation, incidental soil ingestion, and dermal contact with soil.

Client: MCAS Miramar (San Diego, California)
Evaluated exposure pathways of metals in soil by comparing site data to background data. Risk assessment incorporated multiple pathway scenarios assuming child resident and construction worker particulate and vapor inhalation, soil ingestion, and dermal soil contact.

Client: Naval Weapons Station (Seal Beach, California)
Used a multiple pathway model to generate dust emission factors from automobiles driving on dirt roads. Calculated bioaccumulation of metals, PCBs, dioxin congeners and pesticides to estimate human and ecological risk.

Client: King County, Douglas County (Washington State)
Measured PM_{10} and $PM_{2.5}$ emissions from windblown soil treated with biosolids and a polyacrylamide polymer in Douglas County, Washington. Used Pilat Mark V impactor for measurement and compared data to EPA particulate regulations.

Client: King County (Seattle, Washington)
Created emission inventory for several compost and wastewater facilities comparing VOC, particulate, and fungi concentrations to NIOSH values estimating risk to workers and individuals at neighboring facilities.

Air Pollution Investigation and Remediation

Client: Republic Landfill (Santa Clarita, California)
Managed a field investigation of odor around a landfill during 30+ events. Used hedonic tone, butanol scale, dilution-to-threshold values, and odor character to evaluate odor sources and character and intensity.

Client: California Biomass (Victorville, California)
Managed a field investigation of odor around landfill during 9+ events. Used hedonic tone, butanol scale, dilution-to-threshold values, and odor character to evaluate odor sources, character and intensity.

Client: ABT-Haskell (Redlands, California)
Assisted in permitting a compost facility that will be completely enclosed with a complex scrubbing system using acid scrubbers, base scrubbers, biofilters, heat exchangers and chlorine to reduce VOC emissions by 99 percent.

Client: Synagro (Corona, California)
Designed and monitored 30-foot by 20-foot by 6-foot biofilter for VOC control at an industrial composting facility in Corona, California to reduce VOC emissions by 99 percent.

Client: Jeff Gage (Tacoma, Washington)
Conducted emission inventory at industrial compost facility using GC/MS analyses for VOCs. Evaluated effectiveness of VOC and odor control systems and estimated human health risk.

Client: Daishowa America (Port Angeles Mill, Washington)
Analyzed industrial paper sludge and ash for VOCs, heavy metals and nutrients to develop a land application program. Metals were compared to federal guidelines to determine maximum allowable land application rates.

Client: Jeff Gage (Puyallup, Washington)
Measured effectiveness of biofilters at composting facility and conducted EPA dispersion models to estimate traveling distance of odor and human health risk from exposure to volatile organics.

Surface Water, Groundwater, and Wastewater Investigation/Remediation

Client: Confidential (Downey, California)
Managed groundwater investigation to determine horizontal extent of 1,000 foot TCE plume associated with a metal finishing shop.

Client: Confidential (West Hollywood, California)
Designing soil vapor extraction system that is currently being installed for confidential client. Managing groundwater investigation to determine horizontal extent of TCE plume associated with dry cleaning.

Client: Synagro Technologies (Sacramento, California)
Managed groundwater investigation to determine if biosolids application impacted salinity and nutrient concentrations in groundwater.

Client: Navy Base Realignment and Closure Team (Treasure Island, California)
Assisted in the design and remediation of PCB, chlorinated solvent, hydrocarbon and lead contaminated groundwater and soil on Treasure Island. Negotiated screening levels with DTSC and Water Board. Assisted in the preparation of FSP/QAPP, RI/FS, and RAP documents and assisted in CEQA document preparation.

Client: Navy Base Realignment and Closure Team (MCAS Tustin, California)
Assisted in the design of groundwater monitoring systems for chlorinated solvents at Tustin MCAS. Contributed to the preparation of FS for groundwater treatment.

Client: Mission Cleaning Facility (Salinas, California)
Prepared a RAP and cost estimate for using an oxygen releasing compound (ORC) and molasses to oxidize diesel fuel in soil and groundwater at Mission Cleaning in Salinas.

Client: King County (Washington)
Established and monitored experimental plots at a US EPA Superfund Site in wetland and upland mine tailings contaminated with zinc and lead in Smelterville, Idaho. Used organic matter and pH adjustment for wetland remediation and erosion control.

Client: City of Redmond (Richmond, Washington)
Collected storm water from compost-amended and fertilized turf to measure nutrients in urban runoff. Evaluated effectiveness of organic matter-lined detention ponds on reduction of peak flow during storm events. Drafted compost amended landscape installation guidelines to promote storm water detention and nutrient runoff reduction.

Client: City of Seattle (Seattle, Washington)
Measured VOC emissions from Renton wastewater treatment plant in Washington. Ran GC/MS, dispersion models, and sensory panels to characterize, quantify, control and estimate risk from VOCs.

Client: Plumas County (Quincy, California)

Installed wetland to treat contaminated water containing 1% copper in an EPA Superfund site. Revegetated 10 acres of acidic and metal laden sand dunes resulting from hydraulic mining. Installed and monitored piezometers in wetland estimating metal loading.

Client: Adams Egg Farm (St. Kitts, West Indies)
Designed, constructed, and maintained 3 anaerobic digesters at Springfield Egg Farm, St. Kitts. Digesters treated chicken excrement before effluent discharged into sea. Chicken waste was converted into methane cooking gas.

Client: BLM (Kremmling, Colorado)
Collected water samples for monitoring program along upper stretch of the Colorado River. Rafted along river and protected water quality by digging and repairing latrines.

Soil Science and Restoration Projects

Client: Hefner, Stark & Marois, LLP (Sacramento, California)
Facilitated in assisting Hefner, Stark & Marois, LLP in working with the Regional Water Quality board to determine how to utilize Calcium Participate as a by-product of processing sugar beets.

Client: Kinder Morgan (San Diego County, California)
Designed and monitored the restoration of a 110-acre project on Camp Pendleton along a 26-mile pipeline. Managed crew of 20, planting coastal sage, riparian, wetland, native grassland, and marsh ecosystems. Negotiated with the CDFW concerning species planting list and success standards.

Client: NAVY BRAC (Orote Landfill, Guam)
Designed and monitored pilot landfill cap mimicking limestone forest. Measured different species' root-penetration into landfill cap. Plants were used to evapotranspirate water, reducing water leaching through soil profile.

Client: LA Sanitation District Puente Hills Landfill (Whittier, California)
Monitored success of upland and wetland mitigation at Puente Hills Landfill operated by Sanitation Districts of Los Angeles. Negotiated with the Army Corps of Engineers and CDFG to obtain an early sign-off.

Client: City of Escondido (Escondido, California)
Designed, managed, installed, and monitored a 20-acre coastal sage scrub restoration project at Kit Carson Park, Escondido, California.

Client: Home Depot (Encinitas, California)
Designed, managed, installed and monitored a 15-acre coastal sage scrub and wetland restoration project at Home Depot in Encinitas, California.

Client: Alvarado Water Filtration Plant (San Diego, California)
Planned, installed and monitored 2-acre riparian and coastal sage scrub mitigation in San Diego California.

Client: Monsanto and James River Corporation (Clatskanie, Oregon)
Served as a soil scientist on a 50,000-acre hybrid poplar farm. Worked on genetically engineering study of Poplar trees to see if glyphosate resistant poplar clones were economically viable.

Client: World Wildlife Fund (St. Kitts, West Indies)
Managed 2-year biodiversity study, quantifying and qualifying the various flora and fauna in St. Kitts' expanding volcanic rainforest. Collaborated with skilled botanists, ornithologists and herpetologists.

Publications

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Rosenfeld, P. E., M. Suffet. (2007) **"**The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment **"** Water Science & Technology 55(5): 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.,** (2007) "Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities," Elsevier Publishing, Boston Massachusetts.

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Presentations

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** "Atrazine: A Persistent Pesticide in Urban Drinking Water." Urban Environmental Pollution, Boston, MA, June 20-23, 2010.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** "Bringing Environmental Justice to East St. Louis, Illinois." Urban Environmental Pollution, Boston, MA, June 20-23, 2010.

Rosenfeld, P.E. (2009) "Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States" Presentation at the 2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting, April 19-23, 2009. Tuscon, AZ.

Rosenfeld, P.E. (2009) "Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States" Presentation at the 2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting, April 19-23, 2009. Tuscon, AZ.

Rosenfeld, P. E. (2007) "Moss Point Community Exposure To Contaminants From A Releasing Facility" Platform Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (2007) "The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant" Platform Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (2007) "Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions" Poster Presentation at the 23rd Annual International Conferences on Soils Sediment and Water, October 15-18, 2007. University of Massachusetts, Amherst MA.

Rosenfeld P. E. "Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP)" – Platform Presentation at the Association for Environmental Health and Sciences (AEHS) Annual Meeting, San Diego, CA, 3/2007.

Rosenfeld P. E. "Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama" – Platform Presentation at the AEHS Annual Meeting, San Diego, CA, 3/2007.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (2006) "Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." APHA 134 Annual Meeting & Exposition, Boston Massachusetts. November 4 to 8th, 2006.

Paul Rosenfeld Ph.D. "Fate, Transport and Persistence of PFOA and Related Chemicals." Mealey's C8/PFOA Science, Risk & Litigation Conference" October 24, 25. The Rittenhouse Hotel, Philadelphia.

Paul Rosenfeld Ph.D. "Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation PEMA Emerging Contaminant Conference. September 19. Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. "Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP." PEMA Emerging Contaminant Conference. September 19. Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. "Fate, Transport and Persistence of PDBEs." Mealey's Groundwater Conference. September 26, 27. Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. "Fate, Transport and Persistence of PFOA and Related Chemicals." International Society of Environmental Forensics: Focus On Emerging Contaminants. June 7,8. Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. "Rate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals". 2005 National Groundwater Association Ground Water And Environmental Law Conference. July 21-22, 2005. Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. "Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation." 2005 National Groundwater Association Ground Water And Environmental Law Conference. July 21-22, 2005. Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. National Groundwater Association. Environmental Law Conference. May 5-6, 2004. Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D., 2004. Perchlorate Toxicology. Presentation to a meeting of the American Groundwater Trust. March 7th, 2004. Pheonix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse, 2004. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Paul Rosenfeld, Ph.D. A National Damage Assessment Model For PCE and Dry Cleaners. Drycleaner Symposium. California Ground Water Association. Radison Hotel, Sacramento, California. April 7, 2004.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants. February 20-21, 2003. Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. Underground Storage Tank Litigation and Remediation. California CUPA Forum. Marriott Hotel. Anaheim California. February 6-7, 2003.

Paul Rosenfeld, Ph.D. Underground Storage Tank Litigation and Remediation. EPA Underground Storage Tank Roundtable. Sacramento California. October 23, 2002.

Rosenfeld, P.E. and Suffet, M. 2002. Understanding Odor from Compost, Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association. Barcelona Spain. October 7- 10.

Rosenfeld, P.E. and Suffet, M. 2002. Using High Carbon Wood Ash to Control Compost Odor. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association. Barcelona Spain. October 7- 10.

Rosenfeld, P.E. and Grey, M. A. 2002. Biocycle Composting For Coastal Sage Restoration. Northwest Biosolids Management Association. Vancouver Washington. September 22-24.

Rosenfeld, P.E. and Grey, M. A. 2002. Soil Science Society Annual Conference. Indianapolis, Maryland. November 11-14.

Rosenfeld. P.E. 2000. Two stage biofilter for biosolids composting odor control. Water Environment Federation. Anaheim California. September 16, 2000.

Rosenfeld. P. E. 2000. Wood ash and biofilter control of compost odor. Biofest. October 16, 2000.Ocean Shores, California.

Rosenfeld, P. E. 2000. Bioremediation Using Organic Soil Amendments. California Resource Recovery Association. Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. 1998. Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. 1999. An evaluation of ash incorporation with biosolids for odor reduction. Soil Science Society of America. Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. 1998. Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. Brown and Caldwell, Seattle Washington.

Rosenfeld, P.E., C.L. Henry. 1998. Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. Biofest Lake Chelan, Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. 1997. Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. Soil Science Society of America, Anaheim California.

Professional History

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Founding And Managing Partner
UCLA School of Public Health; 2007 to 2010; Lecturer (Asst Res)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist
Bureau of Land Management, Kremmling Colorado 1990; Scientist

Teaching Experience

UCLA Department of Environmental Health (Summer 2003 through 2010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focuses on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course In Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5 2002 Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993.

Cases that Dr. Rosenfeld Provided Deposition or Trial Testimony

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)

In the Court of Common Pleas for the Second Judicial Circuit, State of South Carolina, County of Aiken
David Anderson, et al., *Plaintiffs*, vs. Norfolk Southern Corporation, et al., *Defendants*.
Case Number: 2007-CP-02-1584

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil action No. CV 2008-2076

In the Ninth Judicial District Court, Parish of Rapides, State of Louisiana
Roger Price, et al., *Plaintiffs*, vs. Roy O. Martin, L.P., et al., *Defendants*.
Civil Suit Number 224,041 Division G

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052

In the United States District Court for the Southern District of Ohio
Carolyn Baker, et al., *Plaintiffs*, vs. Chevron Oil Company, et al., *Defendants*.
Case Number 1:05 CV 227

In the Fourth Judicial District Court, Parish of Calcasieu, State of Louisiana
Craig Steven Arabie, et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 07-2738 G

In the Fourteenth Judicial District Court, Parish of Calcasieu, State of Louisiana
Leon B. Brydels, *Plaintiffs*, vs. Conoco, Inc., et al., *Defendants*.
Case Number 2004-6941 Division A

In the District Court of Tarrant County, Texas, 153rd Judicial District
Linda Faust, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, Witco Chemical Corporation A/K/A Witco Corporation, Solvents and Chemicals, Inc. and Koppers Industries, Inc., *Defendants*.
Case Number 153-212928-05

In the Superior Court of the State of California in and for the County of San Bernardino
Leroy Allen, et al., *Plaintiffs*, vs. Nutro Products, Inc., a California Corporation and DOES 1 to 100, inclusive, *Defendants*.
John Loney, Plaintiff, vs. James H. Didion, Sr.; Nutro Products, Inc.; DOES 1 through 20, inclusive, *Defendants*.
Case Number VCVVS044671

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM

In the Superior Court of the State of California in and for the County of Los Angeles
Leslie Hensley and Rick Hensley, *Plaintiffs*, vs. Peter T. Hoss, as trustee on behalf of the Cone Fee Trust; Plains Exploration & Production Company, a Delaware corporation; Rayne Water Conditioning, Inc., a California corporation; and DOES 1 through 100, *Defendants.*
Case Number SC094173

In the Superior Court of the State of California in and for the County of Santa Barbara, Santa Maria Branch
Clifford and Shirley Adelhelm, et al., all individually, *Plaintiffs*, vs. Unocal Corporation, a Delaware Corporation; Union Oil Company of California, a California corporation; Chevron Corporation, a California corporation; ConocoPhillips, a Texas corporation; Kerr-McGee Corporation, an Oklahoma corporation; and DOES 1 though 100, *Defendants.*
Case Number 1229251 (Consolidated with case number 1231299)

In the United States District Court for Eastern District of Arkansas, Eastern District of Arkansas
Harry Stephens Farms, Inc, and Harry Stephens, individual and as managing partner of Stephens Partnership, *Plaintiffs*, vs. Helena Chemical Company, and Exxon Mobil Corp., successor to Mobil Chemical Co., *Defendants.*
Case Number 2:06-CV-00166 JMM (Consolidated with case number 4:07CV00278 JMM)

In the United States District Court for the Western District of Arkansas, Texarkana Division
Rhonda Brasel, et al., *Plaintiffs*, vs. Weyerhaeuser Company and DOES 1 through 100, *Defendants.*
Civil Action Number 07-4037

In The Superior Court of the State of California County of Santa Cruz
Constance Acevedo, et al. *Plaintiffs* Vs. California Spray Company, et al. *Defendants*
Case No CV 146344

In the District Court of Texas 21st Judicial District of Burleson County
Dennis Davis, *Plaintiff*, vs. Burlington Northern Santa Fe Rail Way Company, *Defendant.*
Case Number 25,151

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622

Response to Comment Letter 12: Adams, Broadwell, Joseph, and Cardozo (August 17, 2020)

12-A: The comment states they are writing on behalf of Citizens for Responsible Solar to provide comments on the Draft EIR. The comment provides a brief summary of the proposed project and the permanent facilities that would be installed with project implementation. This comment does not raise a substantive issue on the content of the EIR. The comment has been noted for the record.

12-B: The comment provides a summary of the comments discussed in the letter and lists the three reasons why it believes the Draft EIR is deficient:

- the Draft EIR fails to provide a proper project description as required under CEQA;
- the Draft EIR fails to properly establish the environmental setting for and adequately disclose, analyze and mitigate the Project's impacts on biological resources, and;
- the Draft EIR fails to adequately disclose and analyze the Project's impacts on air quality and from greenhouse gas emissions.

These issues are responded to in Response to Comments 12-G through 12-X, below. This comment does not otherwise raise a substantive issue on the content of the EIR. The comment has been noted for the record.

12-C: The comment notes that the provided comments were prepared with the assistance of Renee Owens (Exhibit A of Comment Letter 12) and Soil/Water/Air Protection Enterprise (SWAPE, Exhibit B of Comment Letter 12). The comment letter paraphrases these comments. Therefore, responses to the comments noted in Exhibit A and Exhibit B are included in this document. This comment does not otherwise raise a substantive issue on the content of the EIR. The comment has been noted for the record.

12-D: The comment further describes the individuals and labor organizations which are represented by the comment and states they have an interest in enforcing environmental laws that encourage sustainable development, ensure a safe working environment, as well as pursuing projects without providing countervailing economic benefits. Comment noted. This comment does not raise an issue related to the adequacy of the Draft EIR; therefore, no further response is necessary.

12-E: The comment summarizes some of the legal background and requirements for CEQA. Comment noted. This comment does not raise an issue related to the adequacy of the Draft EIR; therefore, no further response is necessary.

12-F: The comment offers some additional information regarding the legal background and requirements for CEQA. Comment noted. This comment does not raise an issue related to the adequacy of the Draft EIR; therefore, no further response is necessary.

12-G: This comment states that the Draft EIR fails to adequately describe the Project because it lacks an accurate, complete, and stable project description, rendering the entire environmental impacts analysis inadequate. The comment also states that it is impossible for the public to make informed comments on a project of unknown or ever-changing description. This comment provides a summary of the claims that the Draft EIR fails to adequately describe the project. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

The comment also claims that the Draft EIR fails to provide sufficient information regarding the project's energy storage system (ESS) and provides a list of information regarding the proposed ESS it believes must be disclosed. As explained in Chapter 3, *Project Description* of the Draft EIR, the project proposes up to two onsite energy storage systems (ESS) facilities and associated appurtenances (one on each of the individual sites). The ESS would measure approximately 65 feet by 150 feet and would consist of battery storage modules placed in multiple prefabricated enclosures near the on-site substation. The energy storage technology and design for the storage facility has not been determined at this time, but could include any commercially available battery technology, including but not limited to lithium iron, lead acid, sodium sulfur, and sodium or nickel hydride. The storage system would consist of battery banks housed in electrical enclosures and buried electrical conduit. The batteries enclosures have fire suppression equipment installed that automatically suppress thermal emergencies. The solar substations would include transformers, bus work, switches, breakers, and all associated equipment required to be compliant with utility grade interconnection services. The substation facilities would house the power generation control and relying equipment, station batteries, SCADA and communication systems. The power stored by the energy storage facility would be transferred by the Inyokern 33 kV electrical distribution line that connects to the existing SCE Inyokern Substation 0.5 mile east of the project site.

Section 4.9, *Hazards and Hazardous Materials*, of the Draft EIR discusses the project's use of two battery storage units. Impact 4.9-5 notes the project would include a battery energy storage system component that has a very low likelihood of producing a fire (generally a result of thermal runaway event from an internal short with cascading events) and a very low likelihood of catching fire (due to the non-flammable material that are used for the structure and absence of flammable vegetation or other materials nearby). However, battery systems still have the possibility of catching fire under the right circumstances (which are rare) or being damaged by fire and generate fumes and gases that are extremely corrosive in those instances. Dry chemical, carbon dioxide, and foam are the preferred methods for extinguishing a fire involving batteries as water is generally not effective in extinguishing battery fires. Class D extinguishers are used for lithium-metal fires only. To further increase safety, the battery units are usually low voltage, encased in a steel enclosure and are set apart from combustible materials. They are built with a thermal management system that includes coolant pumps, fans and a refrigerant system to further maintain cool temperatures within the unit.

Implementation of the project would require adherence with Mitigation Measure MM 4.14-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval. The purpose of the Fire Safety Plan would be to eliminate causes of fire, prevent loss of life and property by fire, to comply with County and County Fire Protection District standards for solar facilities, and to comply with the OSHA standard of fire prevention, 29 CFR 1910.39. The fire safety plan would address fire hazards of the different components of the project, including the battery energy storage system, and would include BMPs to reduce the potential for fire and extinguishment techniques if a fire were to occur. Impact 4.9-1 notes that battery storage would be in accordance with OSHA requirements such as inclusion of ventilation, acid resistant materials, and spill response supplies. All components would have a comprehensive SPCC plan, in accordance with all applicable federal, State, and local regulations.

With respect to the comment's request for additional specific information regarding the battery storage system, CEQA requires an EIR's project description to include only a "general description of the project's technical, economic, and environmental characteristics." (14 CCR § 15124(c)).

Exact as-built design specifications are not required, nor are they possible in the early stages of a project when an EIR is prepared. Rather, an EIR's project description may allow for flexibility and leave room for future design decisions. See *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1052-55 (upholding an EIR's project description that "provide[d] for flexibility needed to respond to changing conditions and unforeseen events that could possibly impact the Project's final design," since "courts [have not] required resolution of all hypothetical details prior to approval of an EIR"); see also City of Antioch v. City Council (1986) 187 Cal.App.3d 1325, 1336-37 (holding that it was unreasonable and unrealistic to demand that an EIR "must describe in detail each and every conceivable development scenario"). In other words, an EIR need not contain a design-level description of the project; a conceptual description of project components is permissible as long as the description contains sufficient detail to enable the public and the decisionmakers to understand the environmental impacts of the proposed project. *Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 26, 36 ("Appellants have not established that the general description of the [proposed project] in the EIR coupled with approval of final designs after the project is approved violated any CEQA mandate.").

Here, the Draft EIR contains a sufficient general description of the battery storage system as required by CEQA Guidelines § 15124(c). Final design specifications are not required in the EIR where, as here, there is sufficient information to enable the public and the decisionmakers to understand the environmental impacts of the proposed project.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-H: This comment states that the Draft EIR fails to establish the existing setting for the Project because describing the environmental setting accurately and completely for each environmental condition in the vicinity of the Project is critical to an accurate, meaningful evaluation of environmental impacts. This comment is an introduction to Comments 12-I through 12-K. Respectively, response to these specific comments are provided in Response to Comment 12-I through 12-K, below. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-I: The comment states that the Draft EIR fails to establish the existing setting for desert tortoise due to the only focused surveys being conducted in 2015. The comment states that the Draft EIR reliance on five year old data violates CEQA in two separate ways: 1) violates the CEQA mandate that Draft EIRs make impact determinations based on existing conditions at the time of the NOP is published and 2) violates CEQA mandate that existing conditions will represent the most accurate and understandable picture of the Project's impacts, because it fails to account for differences between rainy and dry years.

Here and elsewhere, assertions imply that CEQA requires new studies until all uncertainty regarding existing environmental conditions or a project's impacts thereon have been removed. This is incorrect. As the California Supreme Court has emphasized, an EIR need not achieve "technical perfection or scientific certainty." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515. Instead, CEQA requires "adequacy, completeness, and a good-faith effort at full disclosure." CEQA Guidelines § 15003(i). The appropriate degree of specificity and analysis a given issue warrants depends on "the nature of the project and the rule of reason." *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 679; *see also* CEQA Guidelines Section 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible."). The comment

also asserts that the Draft EIR should have taken into account changes between wetter and drier rainy seasons.

With respect to the comment's emphasis on focused surveys, we note additionally that "CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718; (*Laurel Heights Improvement Assoc. v. Regents of U.C.* [1988] 47 Cal.3d 376, 415) ("A project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study . . . might be helpful does not make it necessary"). Consequently, CEQA does not contain a blanket requirement that agencies conduct focused, protocol-level surveys. *Madera*, 107 Cal. App. 4th at 1396.

Here, as the comment acknowledges, the Project did conduct focused surveys for desert tortoise. But as explained in the response to comment 5-G, the Draft EIR does not rely solely on the 2015 focused surveys. In addition to focused tortoise surveys in 2015, subsequent MGS trapping in 2015, reconnaissance surveys in 2016, and biological monitoring during an unrelated pipeline project directly adjacent to the south of the project boundary in 2020 were conducted. During these surveys, no evidence of living tortoises on the subject property was observed.

Protocol surveys were conducted along transects spaced at 10-meter intervals, with transects spaced at regular intervals in adjacent areas of potential habitat. Reconnaissance surveys included additional areas to the south and meandering transects in Phase 1 and 2 areas to ascertain if conditions had changed, which they had not.

For several months in 2020 during installation of a water pipeline directly south of the project site, an authorized biologist was present, performing tortoise surveys in areas to the south, where an old tortoise carcass was found, but still no evidence of living tortoises (e.g., scat, burrows, and tracks). So, protocol surveys fully comply with Agency requirements and were sufficient as of 2015 to determine absence of tortoises. USFWS is similarly of the opinion that the species is unlikely to be found at, let alone impacted by, project implementation.

Although the then-current version of the CNDDB was reviewed in 2015, the information provided in the CNDDB is not based on comprehensive investigations and only represents records of occurrences that are voluntarily submitted by practicing biologists and others. The information cannot therefore not be considered a complete source of tortoise occurrences. An updated CNDDB search was performed in 2020 and comparisons were made to data available in 2015. There were only two additional desert tortoise records from the project vicinity, both from 2017. One of the records was from 3.1 miles west of the project site (EONDX # 114841) along SR 178. This record is of one adult and one juvenile tortoise that were mortalities from vehicle strikes. The other record (EONDX # 113877) is of an adult and a juvenile tortoise from 3.9 miles southwest of the Project site.

Protocol surveys that fully comply with Agency requirements were conducted in 2015 to determine presence/absence of tortoises. The USFWS opinion of the project is that the desert tortoise is unlikely to be found at, let alone be impacted by, the project.

Under these circumstances, additional focused surveys were not warranted because the Draft EIR provides the most accurate and realistic understanding of environmental conditions. Site conditions have been consistent since at least 2015. There is no evidence or reason to believe that use of the site or nearby areas by desert tortoises has increased since 2015. The exceedingly low numbers of desert tortoises that have been recorded in the area over many years (a total of 8 CNDDB records reported within 10 miles of the project site since 1988) reduce the potential for large seasonal or yearly fluctuations in population dynamics.

In addition, avoidance measures are provided in the Draft EIR (Mitigation Measure 4.4-4) to ensure no tortoises are injured or killed. The Draft EIR requires additional desert tortoise surveys by an Agency qualified biologist prior to construction as outlined in Mitigation Measure 4.4-4. The site will be surveyed at four times the level of protocol survey effort (i.e., two sets of transects surveyed at 5-meter intervals in the clearance survey compared to one set of transects surveyed at 10-meter intervals in presence-B2sence surveys) immediately prior to ground disturbance. That measure also outlines avoidance measures that would be implemented when any desert tortoises or tortoise burrows are located. The USFWS concluded in their response letter for the Draft EIR (Comment Letter 2, comment 2B) that issuance of an ITP for desert tortoises was not warranted based on the expectation that tortoises will be absent at the time of construction. However, as noted in Response 5- E, the Project will obtain an ITP that covers both desert tortoise and Mohave ground squirrel and if tortoises occur, be obligated to consult with USFWS about avoidance measures or permitting. The Project site is surrounded by impediments that are not conducive to desert tortoise migration, Highway 395 to the east, Hwy 178 to the south, an airport, railroad and the town of Inyokern to the west and a water treatment facility to the north.

This comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-J: This comment states that the Draft EIR fails to establish the existing setting for special status species due to no focused surveys being conducted and relying on a reconnaissance survey, database searches (i.e., California Natural Diversity Database, CNDDB), and other reports. The comment does note that focused surveys for desert tortoise and Mohave ground squirrel were the only focused surveys conducted.

Surveys were conducted for the Draft EIR to identify special-status plant and wildlife species that occur or may occur on the Project site. Long term studies of the individual species are not warranted because pre-construction surveys will occur prior to the beginning of construction activities regardless if surveys did not identify presence. Of those species identified, Mitigation Measures were developed to reduce or eliminate impacts to these species, including nesting birds. These measures (Mitigation Measures MM 4.4-1 through MM 4.4-12) are outlined in detail in regard to general or protocol surveys, avoidance measures if found on site and compensation for loss of habitat. Some of the specific surveys, though not all inclusive, are outlined in the Draft EIR mitigation measures below.

Mitigation Measures MM 4.4-1 and 4.4-2 of the Draft EIR outline surveys for rare plants that have or are expected to occur prior to issuance of a grading permit from the County. The MMMP outlines "avoidance areas" to be established around plants, defines relocation efforts and/or collection of seed to be applied during revegetation efforts upon completion of the construction phase of the Project.

Mitigation Measure MM 4.4-3 of the Draft EIR outlines surveys for Mohave ground squirrel and requires a CDFW 2081 incidental take permit and compensatory habitat-based mitigation for the loss of suitable habitat prior to construction.

The Draft EIR requires desert tortoise surveys by an Agency- authorized biologist prior to construction as outlined in Mitigation Measure MM 4.4-4. It also outlines mitigation measures if desert tortoises or their burrows are located.

Mitigation Measures MM 4.4-5 and MM 4.4-6 within the Draft EIR require that the operator retain a qualified biologist(s) approved by the CDFW to oversee compliance with protection measures for all Agency- listed and other special-status species that may be affected by construction activities to prevent impacts to these species.

The comment states in their letter that "some species (i.e. desert tortoise, MBTA nesting birds, SSC reptiles and rare plants) should be surveyed by conducting entirely separate, focused surveys" and should be conducted over a period of multiple years to reflect differing weather conditions.

Mitigation Measure MM 4.4-7 of the Draft EIR requires preconstruction surveys for special-status species present on the Project site. At the time of construction, there will be focused surveys for desert tortoises, MGS, and burrowing owls with the intent of avoiding harm or death of any of these Agency-designated animals. Mitigation Measure MM 4.4-8 requires a Raven Management Plan developed for the Project and Mitigation Measure MM 4.4-9 requires mitigation setbacks and avoidance for special-status bird species and other sensitive wildlife including burrowing owls. Mitigation Measure MM 4.4-10 of the Draft EIR requires implementation of measures in accordance with the recently updated California Department of Fish and Wildlife 2012 Staff Report on Burrowing Owl Mitigation and Mitigation Measure MM 4.4-12 requires nesting bird surveys prior to ground disturbance and describes avoidance setbacks during the nesting season nests identified during construction.

As noted above, the Draft EIR requires the protection of special-status species identified during pre-construction surveys. The assertion that the Draft EIR did not describe or analyze the Project impacts is not accurate. The database search and on-site surveys conducted for the Project predicted special-status species and analyzed the available data. "CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct focused, protocol-level surveys.

Here and elsewhere, the assertions imply that CEQA requires new studies until all uncertainty regarding existing environmental conditions or a project's impacts thereon have been removed. This is incorrect. As the California Supreme Court has emphasized, an EIR need not achieve "technical perfection or scientific certainty." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515. Instead, CEQA requires "adequacy, completeness, and a good-faith effort at full disclosure." CEQA Guidelines § 15003(i). The appropriate degree of specificity and analysis a given issue warrants depends on "the nature of the project and the rule of reason." *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 679; *see also* CEQA Guidelines Section 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.").

"CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct focused or protocol-level surveys. *See Id*. In addition, see the response to Comment 12-I for a discussion of surveys conducted at the project site.

In addition to database searches, including CNDDB and CNPS, and reconnaissance-level biological surveys, where appropriate, focused surveys were conducted for desert tortoise and Mohave ground squirrel (as detailed in the biological reports found in Appendix D of the Draft EIR). Neither these surveys nor database surveys revealed any special-status species other than desert tortoise (the road-killed carcass discussed above) or Mohave ground squirrel. It is not reasonably feasible to conduct focused surveys for every special-status species that could conceivably be found at the project site.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-K: This comment states that the Draft EIR fails to establish the existing conditions for hazards and hazardous materials because the hazard analysis information is "based primarily" on two Phase I Environmental Site Assessments (ESAs). As explained in the Draft EIR, one ESA was conducted in 2014 by SEI and the other in 2015 by Terracon. The 2014 SEI ESA was conducted for a site that is located to the south of the Project site. However, as the Draft EIR goes on to explain, "considering that Phase I reports examine a 1-mile radius of a location, [the 2014 ESA] was still used as relevant to the proposed project locations." Likewise, the 2015 Phase I ESA, which focuses on the Phase I Project site, also includes the entire Project site within its extensive database review (See Draft EIR Appendix H). Consequently, the entire Project site was effectively covered by a Phase I ESA.

In addition, please see the response to comment 12-I. As explained there, "CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera,* (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. There is no blanket CEQA requirement that a project applicant obtain a site-specific Phase I ESA.

Here, the Phase I ESAs discussed in the Draft EIR cover the entire Project site and provide no indication of recognized environmental conditions (RECs) in the area. The comment does not provide any evidence of RECs to the contrary.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-L: This comment states that the Draft EIR fails to disclose and analyze significant impacts on biological resources, air quality and greenhouse gases. The comment also states that an agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding. This comment is an introduction to Comments 12-M through 12-W. Respectively, response to these specific comments are provided in Response to Comment 12-M through 12-W, below.

CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional

studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct focused, protocol-level surveys.

Focused protocol surveys were conducted at the Project site for desert tortoise, vegetation including Joshua trees, and rare plant species, and trapping surveys for MGS. Here and elsewhere, the comment implies that biological observations during any site visit activities are not warranted or cannot be observed or used for presence or absence of a species. This is incorrect. For example, certainly burrowing owl burrows, desert kit fox and badger dens can be discovered while on a protocol level desert tortoise survey. Given that special status plants and animals reported from the region that may be resident on the subject property are associated with either burrows excavated in the ground or nests built in shrubs, the ground-centric tortoise surveys, performed along transects spaced at 10-meter intervals, are judged to be sufficient to detect all such special status species that may occur in the region. Given the mobility of birds, particularly special status raptor species, aerial surveys have limited utility to judge site characteristics.

This comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-M: This comment states that the Draft EIR fails to adequately disclose and analyze impacts on biological resources due to lack of analysis specifically for special-status birds including Swainson's hawk, and reptiles. The comment also states that the Draft EIR makes an unsupported claim that the "lake effect" impact of solar projects on birds is "uncertain."

The comment does not provide proof that Swainson's hawks nest are in the vicinity of the Project site. The nearest confirmed Swainson's hawk nests have been in the Antelope Valley, north and west of the city of Lancaster, 50 to 60 miles south southwest of the subject property. Although they may be observed in migration over the project site in the spring and fall, Swainson's hawks would not nest there, which is the primary concern with regards to potential impacts. Mitigation Measure MM 4.4-11 of the Draft EIR details avoidance to nesting Swainson's hawks identified during pre-construction surveys. Although the Project site does provide marginally suitable foraging habitat for Swainson's hawks, the general area surrounding the site provides substantially more suitable, higher quality foraging habitat. Given the acreage of the Project footprint (approximately 166 acres), it is relatively insignificant with the available acreage of nesting and foraging habitat in the region, the lead agency's position is that no compensation for Swainson's hawk is necessary. Perhaps more importantly, these 166 acres lack requisite nesting substrates (Joshua trees) and is surrounded on three sides by highways and residential and commercial developments, which are not likely to serve as foraging habitats either. Please also see the response to Comment 12-L3.

Special-status species identified by database, habitat requirements, known ranges, site visits and biological reasoning were identified for surveys. Although the comment suggests that common species of reptiles were not sought, all plants and animals, including common and uncommon reptile species, were noted when observed, and are included in biological resource inventories. This is not required for CEQA and the comment is noted for the record.

The Draft EIR acknowledges that "fake lake effect" may impact avian species. See Draft EIR pages 4.4-35, and 4.4-54. That discussion can be summarized as follows.

> Solar panels have elements thought to mimic water or suitable related habitat, at least to the human eye. As a result, some have theorized that solar panels may attract species that mistake the panels for bodies of water, potentially leading to increased collision-related

> and other risks commonly referred to as the "fake lake effect." It is thought the phenomenon could attract birds to solar project sites, thereby exposing the birds to greater risk of impacts such as potential collision with project infrastructure, the possibility of being stranded within site fencing once they land, or other forms of distress.
>
> Indeed, a recent report commissioned by the U.S. Department of Energy analyzed available avian mortality data from utility-scale solar energy facilities and concluded that, though it is apparent that solar energy facilities present a risk of fatality for birds, additional standardized and systematic fatality data would be needed to better understand and quantify the risks (County of Kern 2016). That report further noted that, based on available data, there was no consistent pattern to support or refute the hypothesis that water-dependent species were more susceptible to mortality at solar facilities.
>
> The causes of avian injuries and fatalities at commercial-scale solar projects continue to be evaluated by the USFWS, CDFW, and others. Even with monitoring data from other PV projects in California, there remains a great deal of uncertainty regarding the extent to which birds might be impacted by the project because: 1) the mortality data from the other projects has been collected over a relatively short period of time and still is being evaluated; 2) in most cases, the cause of death is not clear; and 3) mortality information from one project location is not necessarily indicative of the mortality that might be found at another project location (County of Kern 2014b).

Mitigation Measure MM4.4-12 of the Draft EIR outlines an Avian Mortality Monitoring Program that would be developed to monitor bird species mortality after construction. Specific steps may be taken if certain bird species mortality rates are affected and further modifications will be developed to decrease mortality rates. In addition, all Project related power pole placement will also be undertaken under guidance from the 2006 Avian Power Line Interaction Committee guidelines to further reduce impacts by bird species.

See the responses to Comments 12-I and 12-J regarding the level of detail and study required by CEQA. Please also see the Response to Comment 12-O.

12-N: This comment states that the Draft EIR's impact analysis relies on unsupported and illogical assumptions. Specifically, the comment states issue with the Draft EIR's statement that "direct impacts to special-status species are unlikely to result from project operation and maintenance activities because implementation of the project onsite would remove habitat for special-status species on the project site and restrict sensitive wildlife species movement into the project site." The comment claims that this statement is erroneous because (1) habitat removal is a primary cause of significant ecological impacts; (2) the conclusion lacks evidence because the Draft EIR fails to properly establish existing conditions; and (3) because most bird species have high natal site fidelity and will return to their specific location of birth regardless of the addition of anthropogenic activities and constructs.

With respect to the comment's claim that the quoted Draft EIR statement ignores habitat loss, the quoted Draft EIR language appears in the discussion of the Project's impacts during operations and maintenance impacts (Draft EIR p. 4.4-34). The Draft EIR does not ignore impacts associated with habitat loss. Instead, it addresses habitat loss, thoroughly, in the context of construction, during which habitat for certain special-status species will be removed (Draft EIR p. 4.4-32 to 4.4-43).

With respect to the comment's claim that the Draft EIR fails to properly establish existing conditions, please see the response to Comments 12-I and 12-J.

With respect to the comment's assertion that most bird species have high natal site fidelity and will return to their specific location of birth regardless of the addition of anthropogenic activities and constructs, as an initial matter, the comment provides no evidence for this assertion other than Ms. Owens' unsubstantiated assertion to the same effect. In any event, the Draft EIR thoroughly evaluates potential impacts to birds that may enter the Project site after the Project is operational (Draft EIR p. 4.4-35 to 4.4-36).

This comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-O: This comment states that the Draft EIR fails to analyze impacts on birds from the "lake effect." The Draft EIR states that "additional standardized and systematic fatality data would be needed to better understand and quantify the risks." The comment paraphrases Owens' comments that previous solar projects have conducted mortality monitoring and cites peer-reviewed articles.

See the Response to Comment 12-M and 12-R regarding the analyze impacts on birds from the "lake effect." This comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-P: The comment paraphrases Owens' comments about how the Draft EIR omits required analysis of impacts to entire bird populations not just to individuals.

The comment also cites the following passage from the Draft EIR:

> Little is known about the potential for impacts to migratory birds associated with the "fake lake effect." *However, evidence suggests that significant impacts to migratory birds could occur even after mitigation*. Further, as take authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA. Therefore, the proposed project, in combination with all identified cumulative projects, could result in a cumulatively considerable contribution to a significant cumulative impact. (emphasis by comment).

Contrary to the comment's suggestion, the Draft EIR does not contradict itself by finding that the science is not sufficiently clear to conclude that project-level lake effect will result in a significant impact while also finding, conservatively, that significant impacts to migratory birds could occur at the cumulative level. Specifically, the Draft EIR explains that the project would make a cumulatively considerable contribution to a significant cumulative impact to avian species associated with (a) loss of foraging and nesting habitat and (b) collisions (Draft EIR p. 4.4-54). It is noted, that unlike a wind project, the risk of collision is de minimis regarding PV solar projects. The very purpose of CEQA's requirement that a lead agency identify cumulative impacts is to address situations where, as here, a project might result in insignificant impacts at the project level but nevertheless make a considerable contribution to a significant impact at the cumulative level.

Finally, we note that the Draft EIR's statement that "Further, as take authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA" is in error. Simply causing any unauthorized mortality of migratory birds does not, standing alone, amount to a significant impact for CEQA purposes; the focus of the inquiry is instead whether the impact is of ecological significance. The Final EIR has been edited to add clarity to the evaluation. Page 4.4-54 of the Draft EIR has been modified to read:

> The residual effects on migratory birds of the project were determined to be less-than-significant. This cumulative analysis analyzes the potential for these incremental impacts

of the project, combined with other past, present, and reasonably foreseeable projects, to cause or contribute to a significant cumulative effects within the Mojave Desert portion of the Pacific Flyway for the duration of the project. Identified cumulative projects that involve the installation of PV panels have the potential to cause impacts to migratory birds associated with collisions. Little is known about the potential for impacts to migratory birds associated with the "fake lake effect." However, evidence suggests that significant impacts to migratory birds could occur even after mitigation. Nevertheless, accounting for the impacts of other projects in the area and acknowledging that some uncertainty remains, the cumulative impact determination in the Draft EIR was conservatively identified as significant and unavoidable. Further, as take authorization for migratory bird species is not available, any mortality of migratory birds would be considered significant under CEQA. Therefore, the proposed project, in combination with all identified cumulative projects, could result in a cumulatively considerable contribution to a significant cumulative impact.

As explained above and on p. 4.4-54 of the Draft EIR, the lead agency conservatively finds that the Project will have a cumulatively considerably contribution to a significant impact related to habitat removal and avian collisions.

While this modification adds clarity to the EIR, it does not reflect a new or substantially increase significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

Please see also Response to Comment 12-R.

12-Q: The comment states that the Draft EIR fails to disclose, analyze, and mitigate potentially significant direct and indirect impacts to migratory birds. There is not a lot of scientifically rigorous research currently available investigating the cumulative impacts of solar facility-related strikes on bird populations to help make this determination. Current Migratory Bird Treaty Act and California Fish and Game Code regulations also protects non-nesting, non-sensitive bird species. Table 1, *Avian Mortality Summary*, is misleading, as it does not appear to account for background mortality (which is high in desert environments) and also lacks Kern County data.

The comment and the associated letter from Renee Owens do not provide reliable evidence or widely available, peer reviewed scientific journal articles that analyze the potential impacts of PV solar installations to bird populations due to bird strike. As noted by researchers at the Manchester Metropolitan University published in the *Journal Natural England,* as of March 2017, there have been no experimental studies in the peer reviewed scientific literature that attempt to quantify the impact of PV solar farms on birds purely from an ecological perspective (Natural England 2017). Thus, as explained above and in the Response 12-P, based on the best available evidence and taking into account required avoidance and minimization measures, the project's impacts to migratory birds would be less than significant. Nevertheless, accounting for the impacts of other projects in the area and acknowledging that some uncertainty remains, the cumulative impact determination in the Draft EIR was conservatively identified as significant and unavoidable.

12-R: The comment summarizes Owens' comments regarding the documented lake effect and evaluated its potential impact on birds' populations. According to Owen' calculations, by 2030 bird deaths in the region would number between 548,000 and over 4,347,000, causing a significant cumulative impact.

The referenced report, Background Avian Mortality across the California Desert Region: A Pilot Study by Fesnock et al., references all projected acreage slated for development by 2030. This

report focuses on determining background avian mortalities and does not provide original data specifically for solar projects. Instead, it relies on data gathered by others on three specific solar projects that were not identified. These calculations do not necessarily accurately depict the potential avian mortality due to the RB Inyokern Solar Project. It is unknown whether those studies were for solar thermal projects or PV solar projects, or a combination of both. The trials that were conducted in this background mortality study found only 3 bird carcasses in > 35 square miles and 3 feather spots. The calculated background mortality rate across the region was determined to be 0.024 birds/acre. One study conducted by Utility Scale Solar Energy (USSE) (Walston et al 2016) found that utility scale solar projects resulted in fewer avian mortalities, but were nearly identical to mortalities from wind energy projects, but orders of magnitude lower than all other forms of mortality (including vehicle strikes, collisions with buildings and windows, collisions with communications towers, fossil fuel power plants). The report made lumped data for PV solar and Solar thermal projects but did provide data for each type of solar facility. The study acknowledged that there was a great difference in mortality rates associated with the size and location of various sites. One study (Kosciuch et al 2020) that did focus on PV solar projects have estimated avian mortalities ranging from 1.82 to 2.49 mortalities per megawatt per year. Extrapolating and applying these values to the RB Inyokern Solar Project results in an estimated annual avian mortality rate of 0.302 to 0.414 mortalities per acre. Over the 25-year life span of the RB Inyokern Solar Project, maximum avian mortalities are estimated to be approximately 66 birds per year, which is a minute number considering the millions of birds that would die of natural causes in the region over a 25-year period. In addition, the authors of that study were careful to note that "Our statements should not be interpreted as evidence there will be water-obligate bird mortality at PV USSE facilities developed in areas with concentrations of migrating or overwintering water obligates because the causal mechanism for fatality risk is unknown. Rather, additional fatality data collected can be evaluated to determine if results from a site align with or fall outside of the pattern evident in our summary." As the study concluded:

> There are consistent patterns in several aspects of our analysis that could provide insight into potential patterns of bird mortality at PV USSE outside of the Bird Conservation Regions (BCRs) where the studies occurred; however, a primary limitation of our study in reaching broader generalizations is that 77% (10 of 13) of site-years occurred in the Sonoran and Mojave Desert (SMD) BCR. Four patterns that could provide broader inference to other regions are: 1) the most widely occurring species among site-years have populations in the millions in the BCRs where studies occurred, and 3 of the top 4 species detected are ground-dwelling birds; 2) most detections occurred in fall; 3) there was no evidence of a comparatively large-scale fatality events of nocturnal migrating passerines or migrating water associates or water obligates; 4) most detections were of unknown cause feather spots. As none of the studies investigated the potential causal mechanism responsible for the occurrence of water obligates, generalizations are limited to mortality patterns in the SMD BCR where water obligates were found at 90% of site-years and 100% of PV USSE facilities. Proximity to a stop-over site for hundreds of thousands of water associates and water obligates could be a contributing factor to the variability among BCRs. The overall average annual fatality estimate can be generalized to the habitats in the BCRs where the studies occurred with more inference from the SMD BCR; however, generalizing the average annual fatality estimate in BCRs where studies did not occur is not appropriate. The intent of our summary was to provide an understanding of overarching patterns in bird mortality at PV USSE and we feel providing management recommendations is outside of the scope of our summary. Instead, we suggest that if

> fatality monitoring is conducted in areas outside of the regions where the studies occurred that researches evaluate their fatality patterns against our summary. In order to predict whether water-associated and water-obligate birds will occur at PV USSE outside of the SMD BCR, studies investigating the underlying causal mechanisms are needed. Further, a summary or additional studies of the potential contribution of background mortality to PV USSE fatality estimates could be considered to determine if suitable information exists to untangle facility-related from background mortalities.

At most, there is disagreement among experts regarding the existence of and impacts posed by "lake effect." CEQA case law allows for such disagreement, however, and supports the notion that disagreement among experts does not make an EIR inadequate. Evidence of disagreement with other agencies is not enough to show a lack of substantial evidence in support of the agency's determination.

The Lead agency conservatively finds that the Project will have a cumulatively considerably contribution to a significant impact related to habitat removal and avian collisions.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-S: The comment summarizes Owens' comments regarding the government agencies' data and reports acknowledging the lake effect impacts.

See the Response to Comment 12-M regarding the level of detail and study required by CEQA for the "fake lake effect." In this comment, the comment identifies several government sources that indicate solar PV projects may attract water-associated avian species caused by the "fake lake effect". See the Response to Comments 12-R regarding "fake lake effect."

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-T: The comment summarizes Owens' comments regarding the California Valley Solar Ranch Project (CVSRP) mortality reports.

The referenced report, Biological Assessment for the California Valley Solar Ranch Project by H.T. Harvey and Associates, does not reference any bird mortalities. The Biological Assessment discussed direct and indirect impacts to several species but none of those listed species have the potential to occur at the RB Inyokern Solar Project. None of these studies change the impact analysis of the EIR and no revisions to the Draft EIR are warranted.

12-U: This comment states that the Draft EIR fails to disclose, analyze, and mitigate impacts for the Swainson's hawk (SWHA) due to the Project and surrounding habitat not being surveyed for the presence of SWHA. Furthermore, the comment summarizes Owens' comment that the Draft EIR analysis for SWHA is flawed.

The comment states that the Draft EIR claims that there is low potential for nesting SWHA to occur but makes no analysis of the impact of operations from strikes to panels and power lines and from loss of habitat. The comment states that the Draft EIR must be revised to include a discussion of the significant impacts of foraging habitat loss from the Project and require enforceable mitigation measures to reduce those impacts.

Responses to this comment are provided in the responses to Comments 12-J, M and Q. As explained in those responses, the Draft EIR thoroughly considers impacts to Swainson's hawk (Draft EIR p.

4.4-18, 4.4-33 to 4.4-35). As explained in the Draft EIR, although the Project site does provide suitable foraging habitat for Swainson's hawk, it is less than optimal (this species prefers to forage in agricultural fields), there is no evidence that the site is actively used for foraging by this species, and there is an abundance of other foraging habitat surrounding the Project site. Indeed, there are also no documented nesting sites within 5 miles of the project site (CDFW, 1994) – as explained in the response to Comment 12-M, the nearest confirmed Swainson's hawks nests have been in the Antelope Valley, north and west of the city of Lancaster, 50 to 60 miles south southwest of the subject property. The sources cited by the comment—CDFW survey protocols that support the Draft EIR's conclusion that Swainson's hawk may forage in desert scrub habitat such as that present at the Project site, and Ms. Owens' anecdotal observations at a different project site—do not change this analysis. The comment points to sightings of Swainson's hawk reported in the eBird database as confirming a high likelihood that Swainson's hawk will forage or stop over at the Project site. In fact, they demonstrate the opposite: over the last six years, there have been only six Swainson's hawk sightings reported within eight miles of the project site, and those sightings could have been of transient migratory individuals. This supports the Draft EIR's conclusion that while it is possible Swainson's hawk will forage at the project site, it is unlikely.

With respect to the comment's assertion that the Draft EIR does not analyze impacts to Swainson's hawk from strikes to panels or power lines, the comment is incorrect. The Draft EIR analyzes both impacts (Draft EIR p. 4.4-33 to 4.4-36).

The comment's claim that the Draft EIR refers to Swainson's hawk as an "uncommon biological resource," is misplaced, as the Draft EIR does not contain such a statement.

After taking into account all evidence presented to the lead agency, the most reliable evidence, including project-specific studies, shows that this species is unlikely to use the project site and impacts to this species would be less than significant. Although the project site contains potential foraging habitat there is more suitable foraging habitat in agricultural fields to the north, and there is no evidence of Swainson's hawks foraging on the project sites. Similarly, potential nesting habitat (in Joshua trees) can be found adjacent to the Project site but these trees are typically too short and lacking in foliage cover to provide adequate nesting substrate for the species. No Joshua trees are present on the Project site. There is more suitable nesting habitat occurring approximately 3 to 6 miles to the north of the site at locations where potential nest trees exist near agricultural fields. Given the lack of nesting substrate in proximity to the project site and the vast amount of desert still undeveloped in the Indian Wells Valley, any loss of foraging habitat caused by the project would be less than significant and therefore does not warrant compensatory mitigation. The Draft EIR does, however, contain several mitigation measures designed to reduce impacts to Swainson's hawk. (See Draft EIR Mitigation Measures MM 4.4-5, MM 4.4-6, MM 4.4-7, MM 4.4-8, MM 4.4-11, and MM 4.4-12).

12-V: This comment states that the Project's Biological Technical Report concludes without evidence that the Project will not impact Swainson's hawk, Cooper's hawk, sharp-shinned hawk, prairie falcon, loggerhead shrike, or LeConte's thrasher. The comment states that no focused surveys for each other species was conducted, and that all of these species are widely accepted as breeding residents of the region and have been noted on eBird (an online public database).

As an initial matter, the technical report cited by the comment is just one of several sources on which the Lead Agency relied in preparing the Draft EIR. The comment does not allege a flaw in

the Draft EIR's analysis of Project impacts to the above-listed species, but instead only criticizes the technical report.

For a discussion of the level of detail and studies required by CEQA, please see the response to Comments 12-I and 12-J.

Discussion of Swainson's hawks have been addressed previously in responses to Comments 12-J, 12-M, 12- Q and 12-U.

The Draft EIR addresses LeConte's thrasher and loggerhead shrike and explains that while the Project site contains suitable nesting and foraging habitat for these species—primarily in the form of habitat removal— impacts would be less than significant with mitigation. (See Draft EIR pages 4.4-19, 4.4-32 to 4.4-33.) LeConte's thrasher in San Joaquin Valley are considered a greater conservation risk and are protected by MBTA. The thrashers outside the San Joaquin Valley are not at a higher risk and are protected under MBTA as discussed previously. LeConte's thrashers in the desert are designated as a California Species of Special Concern, and along with the other species listed by the comment, were sought during both protocol and reconnaissance surveys, though none was found. Preconstruction and clearance surveys performed immediately prior to construction will seek nests of all birds, including those listed by the comment.

The Draft EIR similarly addresses Cooper's hawk, sharp-skinned hawk, and prairie falcon (often alongside Swainson's hawk), concluding that project impacts would be less than significant with mitigation (Draft EIR p. 4.4-18 to 19, 4.4-33 to 36, 4.4-54 to 55).

There are no known or recorded Swainson's hawk, Cooper's hawk, sharp-shinned hawk, loggerhead shrike sightings or nest sites within 10-miles in the CNDDB data base search. There are eight prairie falcon recorded observations between 1972-1979 within 10-miles in the CNDDB data base search. There are two LeConte's thrasher recorded observations, one in 1946 and one in 1968, within 10-miles in the CNDDB data base search.

According to eBird these species were each documented within the Inyokern vicinity. See table below.

eBird Species Observations As Documented as of August 2020			
Species	Inyokern WTP	Town of Inyokern	Inyokern – South of Hwy 178
Swainson's hawk	No	No	2 SWHA in April 2020
Cooper's hawk	No	January 2020	July 2020
Sharp-shinned hawk	No	May 2012	November 2019
Prairie falcon	May 2018	September 2011	December 2012
Loggerhead shrike	August 2020	October 2019	October 2019
LeConte's thrasher	October 2019	September 2017	September 2019

While the Draft EIR acknowledges that raptors and migratory birds may forage on or migrate through the project site, there is no evidence that if converted to a solar facility, impacts on these bird species would be significant due to the fact that none of these species have not been seen foraging onsite, and were not observed using the project site for foraging. While availability of potential foraging habitat would be reduced or lost during and following construction, this reduction would not be a significant impact on an existing important foraging area, particularly when considered with the available remaining foraging habitat surrounding the project site in agricultural fields, along drainages, desert scrub habitat to the southwest and northeast, and among the foothills to the north, south, and west. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-W: The comment states that reptile species are susceptible to solar development projects, provides examples of potential impacts to reptiles and therefore must be analyzed in the Draft EIR. The comment also states that the Draft EIR must conduct a focused reptile survey given the potential for significant impacts to specific lizards and reptiles.

For a discussion of CEQA's requirements with respect to surveys, see the response to Comment 12-I. For a discussion of surveys conducted at the Project site, see the response to Comment 12-M. The Draft EIR analyzes three reptile species including southern Sierra legless lizard, desert tortoise and coast horned lizard. Southern Sierra legless lizard has a moderate potential to occur due to suitable habitat present throughout the Project site. The project site was determined to be on the fringe of the species' range, but elements of suitable habitat are present onsite. These species were not observed during the surveys. No further analysis of or surveys for southern Sierra legless lizard and coast horned lizard is warranted. Desert tortoise is considered to have a moderate potential to occur and protocol surveys for the species were conducted. The desert tortoise is not anticipated to be present of the site but this species is fully analyzed in the Draft EIR, which includes mitigation measures to avoid impacts to the species as described under response to Comments 12-I. See also response to Comment 5-G.

The comment cites 7 studies and one personal communication that ostensibly relates to the effects of solar projects to lizard species (Vera et al 2011, Dutcher 2009, Heaton 2002, Richmond 2016, Gerson 2004, Williams 2004, Rosen 2000, Wilton pers. comm. 2015). None of these studies evaluated the effects of solar projects on lizards, and only three of the studies evaluated the effects of some type of habitat disturbances (e.g., fire). Those studies were situated in a very broad geographic range (including as far away as Virginia and Texas) and were focused on unlisted lizard species. One of the studies focused on the effects of translocation of the flat-tailed horned lizard, which is a Species of Special Concern in Arizona and California, and is a federal candidate species, but it does not occur in the region of the RB Inyokern project. None of these studies have any relevance to the RB Inyokern Solar Project. The DEIR analyzed the effects of the Project on the desert tortoise, which is a federally and State listed species. Although it is anticipated that the Project would result in some impacts to unprotected reptile species, there are no protected reptile species except the desert tortoise that would occur on the Project site. Additional studies or mitigation for the RB Inyokern Solar Project are not needed to meet requirements of a CEQA analysis. Studies focused on unprotected reptile species would not change the impact analysis of the Draft EIR.

The comment also points out that large concentrating solar facilities may create localized drought conditions or alter the microclimate of a region, impacting reptiles. The Project, however, would not use concentrating solar technology, but rather photovoltaic technology.

12-X: This comment states that the Draft EIR fails to adequately disclose and analyze impacts on air quality. The comment alleges that this failure is due to the air quality analysis relying on emissions calculated with the modeling tool of CalEEMod.2016.3.2. This modeling tool provides recommended default values based on site-specific information. According to the comment SWAPE's review found multiple errors and omissions in the air quality analysis, which may result in an underestimation of the Project's air quality impacts. This comment is an introduction to Comments 12-Y through 12-F2.

The Project Description- Chapter 3 of the Draft EIR clearly outlines the project components, including an unmanned Operations and Maintenance building and battery storage units. According to the CalEEMod User's Guide, "CalEEMod was designed with default assumptions supported by substantial evidence to the extent available at the time of programming. The functionality and content of CalEEMod is based on fully adopted methods and data. However, CalEEMod was also designed to allow the user to change the defaults to reflect site- or project-specific information, when available, provided that the information is supported by substantial evidence as required by CEQA. If the user chooses to modify any defaults, an explanation will be required in the Remarks box found at the bottom of the screen to justify and support the modification before the user will be able to proceed to the next screen. Modifications to defaults and the explanations are noted in the output report. Comments in the Remarks box are also included in the report and alert reviewers of modifications to the defaults. Comments are important because they show the user's justification for the modifications, which allows the reviewers the ability to determine whether or not the modifications are appropriate and sufficiently justified. Appendix C of the Draft EIR includes the project's Air Quality Impact Analysis Report (AQIA) (Insight, 2017, 2019). Thus, the Draft EIR provided appropriate documentation and explanations for the Project-specific modeling inputs in CalEEMod and SWAPE should have reasonably been able to verify inputs used to determine the accuracy of the air model.

As discussed in the Draft EIR, Section 4.3, Air Quality, page 4.3-31, "Operational emissions would be limited to sporadic maintenance activities and vehicle travel by offsite employees to the project site. The facility will be monitored remotely, and no full-time staff would monitor the site. Periodically, up to four times a year, staff would conduct routine maintenance that would include panel washing." As discussed in the project's AQIA (Insight, 2017; 2019) located in Appendix C of the Draft EIR, on page 14 states that "Long-term emissions are caused by operational mobile sources from periodic maintenance and cleaning of the solar panels. There were three categories of mobile sources generating long-term emissions: water trucks, maintenance trucks and employee vehicles." The comment continually incorrectly states that the operational emissions were calculated using CalEEMod when it is clearly stated that the CalEEMod runs were for construction purposes only. Operational emissions were only calculated using EMFAC2014 and AP-42 emission factors. This emissions determination methodology is approved for use within the Eastern Kern APCD and is widely used throughout California to demonstrate emissions impacts as required under CEQA. Further, the Draft EIR states that "the emission calculations based on the emission factors from EMFAC2014 and AP-42 are available in Attachment E." From the Report's Attachment E, Project Emissions Calculations EMFAC2014 and AP-42, the project's operational emissions calculations and inputs are provided after the CalEEMod output files in Attachment E of the AQIA. Thus, project operational emissions are appropriately accounted for in the calculations provided for operational emissions in Appendix C of the Draft EIR.

12-Y: This comment states that the Draft EIR fails to account for all operational air quality impacts. The comment states that, "according to the CalEEMod User's Guide, operational emissions must include a long list of additional sources, including fugitive dust associated with roads, architectural coating activities, off-road equipment used during operation, emergency generators and more."

Operational electricity usage would be *de minimis*. The proposed project includes one unmanned O&M building, which will be a prefabricated commercial coach structure measuring up to 25 feet by 25 feet in area and 12 feet high. The O&M building electricity usage would be so *de minimis* that any source of off-site power generation feeding it would be too attenuated (not proximate) to register a potential effect. The unmanned O&M building will not be plumbed as no permanent staff are required; therefore, water trucks included in the model account for all operational water usage. There will be no paved parking lot so no parking lot degreasers will be used. Operational solid waste disposal and cleaning will be *de minimis* as the O&M building will be unmanned and rarely visited. There would be no architectural coatings used on site, and no emergency generators are proposed with the project. There will be no use of fire pumps, process boilers, fertilizers/pesticides, etc. Off road equipment usage would be minimal. The comment continues to incorrectly state that operational emissions were calculated with CalEEMod; as noted in the Air Quality Impact Assessment prepared for the project (Insight, 2017, 2019; Appendix C of the DEIR), shown in Table 7-2 below, operational-related emissions, as estimated with EMFAC2014 and AP-42 emissions factors would be well below the EKAPCD significance threshold levels. Therefore, the proposed project would have a less than significant long term air quality impact.

Table 7-2 – Post-Project (Full Buildout Operational) Emissions

Emissions	**Pollutant (tons/year)[1]**					
Source	**ROG**	**NOX**	**CO**	**SOX**	**PM10**	**PM2.5**
Mitigated Emission Estimates						
Water Truck Off-Site Emissions	0.0001	0.0016	0.0003	0.0000	0.0003	0.0001
Water Truck On-Site Emissions	0.0001	0.0029	0.0006	0.0000	0.0000	0.0000
Water Truck On-Site Fugitive Dust Emissions					0.0361	0.0036
Maintenance Truck Off-Site Emissions	0.0000	0.0000	0.0004	0.0000	0.0000	0.0000
Maintenance Truck On-Site Fugitive Dust Emissions					0.0017	0.0002
Employee Vehicle Off-Site Emissions	0.0000	0.0001	0.0005	0.0000	0.0000	0.0000
Employee Vehicle On-Site Fugitive Dust Emissions					0.0026	0.0003
Mitigated Operational Emissions	0.0002	0.0047	0.0018	0.0000	0.0407	0.0042
EKAPCD Threshold	25	25	---[2]	27	15	15
Is Threshold Exceeded After Mitigation?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Insight Environmental Consultants 2019
Notes: 1) Emissions equaling 0.0000 could represent emissions <0.00005.
2) The EKAPCD has no established threshold.

In addition, the project would comply with applicable EKAPCD Rules and Regulations, the local zoning codes, and Mitigation Measures MM 4.3-1 through MM 4.3-9 as required to reduce PM_{10} fugitive dust emissions even further to ensure that the project's short- and long-term emissions remain at a less than significant level. The Draft EIR accurately reflects the operational emissions of the project and revisions to the Draft EIR are not necessary

12-Z: This comment states that the Draft EIR underestimates the land use size.

The comment is incorrect that the project's CalEEMod underestimates the land use type size. As indicated in Attachment E to Appendix C of the Draft EIR, the project construction modeling runs entered into the CalEEMod file a land use type of "User Defined Industrial" with zero square feet as a land use type placeholder. The "User Defined Industrial" land use type contains 20,750 square feet of "floor surface area" as pointed out on page 5 of the comment letter. This square footage covers the building square footage for the project. The comment incorrectly assumes the "floor surface area" encompasses the entire project site. The CalEEMod run clearly shows the project site has 288 acres which allows for the rest of the Project's components to be built. The "User Defined Industrial" land use type with 20,750 square feet of floor surface area does not result in an underestimation of construction emissions for the project. On the contrary, it allows the model to be successfully run and avoid a model run error. The project construction equipment and vehicle trips were appropriately included in the construction modeling runs to appropriately estimate the project's construction emissions. Thus, project construction emissions are appropriately accounted for in the calculations in Appendix C of the Draft EIR. Again the comment incorrectly assumes that the CalEEmod run was used for calculating operational emissions. The CalEEMod run, as clearly stated in the AQIA, was conducted to estimate emissions from off-road construction equipment and construction employee travel. As discussed in the Draft EIR, Section 4.3, Air Quality, page 4.3-31, "Operational emissions would be limited to sporadic maintenance activities and vehicle travel by offsite employees to the project site. The facility will be monitored remotely, and no full-time staff would monitor the site. Periodically, up to four times a year, staff would conduct routine maintenance that would include panel washing." As discussed in the project's AQIA (Insight, 2017; 2019) located in Appendix C of the Draft EIR states that "Long-term emissions are caused by operational mobile sources from periodic maintenance and cleaning of the solar panels. There were three categories of mobile sources generating long-term emissions: water trucks, maintenance trucks and employee vehicles." Further, "the emission calculations based on the emission factors from EMFAC2014 and AP-42 are available in Attachment E." From the Report's Attachment E, Project Emissions Calculations EMFAC2014 and AP-42, the project's operational emissions calculations and inputs are provided after the Project's construction CalEEMod output files in Attachment E of the AQIA. Thus, project operational emissions are appropriately accounted for in the calculations provided for operational emissions in Appendix C of the Draft EIR.

12-A2: This comment states that the Draft EIR used the incorrect land use type.

The CalEEMod runs were conducted to estimate emissions from off-road construction equipment and construction worker travel. The "User Defined Industrial" is the appropriate land-use type for this purpose. All necessary user inputs were known and input to CalEEMod to calculate the emissions of the construction equipment and workers.

12-B2: This comment states that the Draft EIR used the incorrect construction schedule.

The construction as noted in the Draft EIR Chapter 3- *Project Description* estimates a construction schedule of 7 to 10 months duration. The grading estimates are actually an overestimation, as the project does not propose to grade the site but use a mow and roll method of ground preparation to keep the exiting vegetative rootballs intact. Minimal grading would only be done to construct the internal roads. As noted in response to Comment 12-Y, the AQIA and Draft EIR accurately reflects the short-term construction and long-term operational emissions of the project. The detailed schedule shown in the Draft EIR is a conservative estimate and was not available at the time the AQIA was completed. Therefore, the AQIA used the defaults from SJVACPD, which is an acceptable assumption model allowed by the EKAPCD. It is also noted that if the detailed scheduled was used the Project would still be less than significant.

12-C2: This comment states that the Draft EIR used unsupported changes to construction values.

As stated in the AQIA, all changes to construction equipment including hours, type and horsepower were done so in accordance with the SJVAPCD's default construction schedule and equipment for solar projects which was used with the approval of the EKACPD. The defaults from SJVAPCD and the ratioed values for this Project were included in the attachments of the AQIA. SJVAPCD's default values for solar projects was developed after the review and approval of many solar projects large and small. Additionally, no load factors were changed manually for this project. If a load factor did not match the default value and it appeared in the changes from default value it was a result of the CalEEMod.

12-D2: This comment states that the Draft EIR failed to model proposed off-road construction equipment list.

See Responses 12-X through 12-C2.

12-E2: This comment states that the Draft EIR underestimated the number of construction trips.

See Responses 12-X, 12-Z and 12-B2.

12-F2: This comment states that the Draft EIR had unsupported application of mitigation measures

The comment states that "the model includes the 'Reduce Vehicle Speed on Unpaved Roads' construction mitigation measure with a reduced vehicle speed of 15 MPH," whereas the Draft EIR states that vehicles may travel up to 25 mph in some circumstances.

Mitigation Measure MM 4.3-1 C outlines the allowable MPH on site during construction activities. Onsite vehicle speed shall be limited to 10 miles per hour on unpaved areas within the project site. Vehicles may travel up to 25 miles per hour on stabilized unpaved roads. Stabilized roads will not generate dust, so increased speeds would be allowable, per the Air District regulations. As noted in the Drat EIR, construction assumptions took into account the EKCAPCD rules and regulations applicable to the project that reduce emissions of criteria pollutants. Adjustment to the CalEEMod default values assumed reduce vehicle speed on unpaved roads to less than 15 miles per hour.

The comment is noted for the record and no revisions are warranted.

12-G2: The comment asserts that the Draft EIR's greenhouse gas (GHG) analysis fails to adequate disclose, analyze, and mitigate GHG impacts on climate change from the Project's construction and

operational activities because the GHG analysis relies on incorrect and unsubstantiated air model and analysis and because the GHG threshold applied is not applicable to this project.

With respect to the first assertion, the comment suggests that the Draft EIR's estimated GHG emissions for the project cannot be relied upon because the Draft EIR's analysis of operational emissions did not include all emission sources and because the air quality modeling inputs are unsubstantiated. As noted in the responses to comment 12-X above, the operational air pollutant emissions were appropriately analyzed in the Project's emissions modeling in the Project's AQIA (Insight, 2017, 2019) located in Appendix C of the Draft EIR. As stated in Section 4.8 Greenhouse Gas Emissions of the Draft EIR, "Information in this section is based primarily on the GHG section of the project's AQIA (Insight, 2017; 2019) located in Appendix C of this EIR." The GHG emissions estimates are based on the same emissions model, calculations, and Project inputs used for estimating air pollutant emissions for Section 4.3 Air Quality, as the model also estimates GHG emissions. As such, the GHG emissions for the project presented in the Draft EIR was not calculated with an unsubstantiated air model.

As indicated under the Methodology section on page 4.8-14 of the Draft EIR, Kern County has not developed a quantified threshold of significance for GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted implementation of the CARB Climate Change Scoping Plan is presumed to have less-than-significant GHG impacts. This is the threshold that is applied by the County in significance determination for the project. The EKAPCD's 25,000 MT CO2e/year threshold is included in the Draft EIR to disclose the quantitative GHG threshold that has been established for use by the local air district. In the impact analysis, a comparison of the project's total annual GHG emissions to EKAPCD's threshold is presented in Table 4.8-2 to provide context showing the relatively low emission levels of the project. The project's implementation will result in a net decrease in CO2e emissions. As shown in Table 4.3-3 of the Draft EIR, the project is estimated to displace approximately 21,243 MTCO2e of emissions annually on average and a total of approximately 743,491 MTCO2e over its 35-year lifespan, which would assist in the attainment of the State's goal to reduce GHG emissions. As concluded on page 4.8-19 of the Draft EIR, considering the project's minimal annual emissions and anticipated reduction in overall GHG emissions, the project is not expected to significantly contribute to global warming or climate change.

12-H2: The comment states, "the… 25,000 tpy threshold [adopted by EKAPCD with reference to EPA's Final Rule for Mandatory Reporting of Greenhouse Gases] is…not determinative of the significance of the impacts of a source's GHG emissions. Rather the threshold was intended to determine whether a stationary source would be subject (or applicable) to the GHG reporting requirements." This comment states that the EKAPCD threshold of 25,000 tpy is not applicable to determine the significance of the Project's GHG impacts and that the Draft EIR fails to provide substantial evidence to support its application of this threshold.

The Draft EIR did not apply the 25,000 tpy threshold used by EKAPCD; it merely referenced it to provide additional context. No substantial evidence is required to support a significance threshold that is not applied. As indicated under the Methodology section on page 4.8-14 of the Draft EIR, Kern County has not developed a numerical threshold of significance for GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the CARB Climate Change Scoping Plan, such as this project, is reasonably presumed to have less-than-significant GHG impacts. See response 12-G2 for additional information.

12-I2: This comment states that the Draft EIR fails to mitigate impacts on biological resources due to deferring mitigation and by relying on mitigation measures that are neither enforceable nor effective.

Contrary to the comment's assertion, mitigation measures imposed on the project do not impermissibly defer mitigation. As a general matter, an agency "can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval." *Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.3d 1011, 1029. In other words, an EIR may defer finalizing the details of a specific mitigation measure as long as it commits to eventually designing it and specifies the performance standards pursuant to which it will be designed. For example, in *Endangered Habitats League, Inc. v. County of Orange*, the EIR in question stated that the project developer would prepare a water quality plan that would incorporate "best management practices." (2005) 131 Cal.App.4th 777, 795-96. The court found that the design features to be incorporated into the water quality plan were adequate "since they require use of clearly identified standards in the form of the 'best management practices.'" *Id. see also Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 234 Cal.App.4th 214, 244-45.

As discussed in more detail in response to the comments below, the Draft EIR's mitigation measures contain appropriate performance standards to the extent they provide for certain details to be finalized at a later date. For example, Mitigation Measure MM 4.4-7 specifies a number of requirements the project must meet, such as requiring preconstruction surveys prior to ground-disturbing activities, limiting areas of disturbance, appropriate stockpiling of soils, etc. Similarly, Mitigation Measure MM 4.4-8 requires a Raven Management Plan and lists the minimum requirements for such a plan, including identification of nests and weekly inspections. And Mitigation Measure MM 4.4-10 provides a detailed list of measures that must be implemented to mitigate impacts to burrowing owls. This analysis, and these mitigation measures, will apply with equal force during project decommissioning. An application to CDFW for take of desert tortoises and MGS was submitted to CDFW in 2019 and revised in February 2020. There will be mitigation measures outlined in the final ITP that cannot be elucidated in the EIR, pending finalization of the ITP. But these are not impermissibly deferred, as they will be fully implemented at the time of construction, operations, maintenance, and decommissioning pursuant to a regulatory regime specifically designed to reduce these impacts to less than significant levels under the "fully mitigated" requirements of CESA.

12-J2: This comment states that the Draft EIR fails to adequately mitigate impacts on birds from the lake effect. The comment states that the Draft EIR includes some measures presented in the "mitigation measures" section that will respond to such potential impacts, but asserts these measures do not qualify as proper mitigation measures under CEQA.

See the Response to Response 12-I2. The comment is an introduction to comments 12-K2 through 12-P2; please see the responses thereto. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-K2: This comment asserts that Mitigation Measure MM 4.4-12 impermissibly defers mitigation and states that one example of an appropriate mitigation measure for "lake effect" would be compensatory mitigation that contributes to a conservation grant, trust, or other relevant entity that has demonstrated successful conservation of regional migratory birds.

This comment is an introduction to comments 12-L2 through 12-O2; please see the responses thereto, as well as the responses to Comments 12-J, 12-M and 12-I2. As explained in these responses, Mitigation Measure MM 4.4-12 does not impermissibly defer mitigation, rendering the comment's suggestion to employ compensatory mitigation unnecessary. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-L2: This comment states that Draft EIR Mitigation Measure MM 4.4-12 fails to obey the CEQA deferral of mitigation standards requiring that the agency 1) commits itself to the mitigation, 2) adopts specific performance standards the mitigation will achieve, and 3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. The comment states the Draft EIR fails to obey these standards because Mitigation Measure MM 4.4-12 includes a requirement to consult with agencies and such consultation can result in project-specific decisions that are not standardized but instead highly discretionary.

See the response to Comment 12-I2 for a discussion of applicable CEQA rules.

As explained in the Draft EIR, Mitigation Measure MM 4.4-12 requires the applicant to develop an Avian Mortality Monitoring Program in coordination with USFWS and CDFW. The measure provides eight subcategories setting forth detailed requirements for said program. For example, the program must "follow the Mortality Monitoring Design for Utility-Scale Solar Power Facilities [a detailed USGS publication] to achieve Objective 1 (monitoring to estimate total bird and bat mortality)," and must require that all power transmission lines be built according to the 2006 Avian Power Line Interaction Committee Guidelines. It also specifies the sort of data that must be collected, and the time period in which mortality monitoring is required. With respect specifically to Mitigation Measure MM 4.4-12(e), that measure first provides that appropriate performance standards for mitigating impacts to species regulated by the Bald and Golden Eagle Protection Act, the Endangered Species Act, or the California Endangered Species Act are prescribed in those statutory and regulatory schemes. For species not protected by those laws, Mitigation Measure MM 4.4-12 would require adaptive management measures if monitoring demonstrates a substantial, long-term reduction in the demographic viability of the species in question. Here, Mitigation Measure MM 4.4-12(e) appropriately provides a list of appropriate adaptive management measures, including passive avian diverter installations and the use of sound, light, or other means to discourage site use. Mitigation Measure MM 4.4-12 thus contains robust performance standards and does not impermissibly defer mitigation.

12-M2: This comment states that Draft EIR fails to obey the CEQA deferral of mitigation standards requiring that the agency 1) commits itself to the mitigation, 2) adopts specific performance standards the mitigation will achieve, and 3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. The comment states the Draft EIR fails to obey these standards because the agency did not adopt specific performance standards which cannot be binding or reviewed by the public.

Specifically, the comment states that 4.4-12(e)'s trigger for adaptive management—which the comment describes simply as "adaptive management must be implemented to reduce impacts to below this threshold"—is not sufficiently clear. The comment fails to quote the language that proceeds that clause. Read in full, the trigger for adaptive management is "If, after 2 years of

mortality monitoring, project impacts to any other avian species caused by the project are shown to result in a substantial, long-term reduction in the demographic viability of the population of the species in question, then adaptive management must be implemented to reduce impacts to below this threshold." This is a clear threshold.

12-N2: This comment states that Draft EIR fails to obey the CEQA deferral of mitigation standards requiring that the agency 1) commits itself to the mitigation, 2) adopts specific performance standards the mitigation will achieve, and 3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure. The comment states the Draft EIR fails to obey these standards because no potential action(s) can feasibly achieve the standards. Specifically, the comment asserts no peer-reviewed evidence that "adaptive management" including diverters, sound, or light have been scientifically demonstrated to reduce bird strikes to solar panels.

See the response to Comment 12-I2 for a discussion of applicable CEQA rules. With respect to the comment's assertion that Mitigation Measure MM 4.4-12's adaptive management provisions are not proven to work via peer-reviewed studies, CEQA does not contain such a requirement. Instead, Under CEQA, mitigation need only be partially effective. *See Sierra Club v. County of Fresno*, (2018) 6 Cal.5th 502, 523. Similarly, "concerns about whether a specific mitigation measure 'will actually work as advertised,' whether it 'can ... be carried out,' and whether its 'success ... is uncertain' go to the *feasibility* of the mitigation measure;" under CEQA a mitigation measure is feasible if it is "'capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.'" *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 622 (quoting CEQA, § 21061.1)). "[W]here substantial evidence supports the approving agency's conclusion that mitigation measures will be effective, courts will uphold such measures against attacks based on their alleged inadequacy." *Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1027; *see also Mount Shasta Bioregional Ecology Center v. County of Siskiyou* (2012) 210 Cal.App.4th 184, 208 (applying the "deferential substantial evidence test" with respect to a mitigation measure's effectiveness); *Concerned Citizens of South Central L.A. v. Los Angeles Unified School Dist.* (1994) 24 Cal.App.4th 826, 841 ("The discussion of mitigation measures in the SEIR must be assessed in accordance with the 'rule of reason[.]'"). Here, the Draft EIR provides more than enough substantial evidence that the adaptive management program will reduce bird strikes to solar panels, whether or not such evidence is "peer-reviewed."

The comment does not appear to argue that Mitigation Measure MM 4.4-12's adaptive management provisions (such as using sound or light to discourage birds from using the project site) fail to meet this threshold.

12-O2: This comment states that the Draft EIR is flawed because it relies on two years of data collection to formulate mitigation. The comment paraphrases Owens, stating that due to changes in climate change, development, and other pressures, any given species' population viability can change within the next few decades, and this information will not be reflected in the two years of data that was collected.

See the response to Comment 12-J for a discussion of CEQA's requirements regarding existing environmental conditions or a project's impacts. With respect to the comment's claim that Mitigation Measure MM 4.4-12 must require some additional amount of mortality monitoring—

how much, the comment does not say—an EIR need only describe "*feasible* measures which could minimize significant adverse impacts." 14 CCR § 15126.4(a)(1) (emphasis added). An EIR need not identify and discuss mitigation measures that are infeasible, and "[n]othing in CEQA requires an EIR to explain why certain mitigation measures are infeasible." *Clover Valley Found. V. City of Rocklin* (2011) 197 Cal.App.4th 200, 245. Nor must an EIR analyze in detail mitigation measures it concludes are infeasible. *See Cherry Valley Pass Acres & Neighbors v, City of Beaumont* (2010) 190 Cal.App.4th 316, 350-53 ("[T]he EIR properly treated [certain suggested] mitigation measures as facially infeasible and properly declined to analyze them in any detail."). Here, asking the County to collect more than two years of costly mortality monitoring data is infeasible, and additional data gathering need not be analyzed in detail in the EIR. A weekly study, at a minimum would be required. An estimate would be approximately $100,000 per year for a multi-year study of any real value. This an onerous requirement for a project of this size.

Moreover, the comment presents no evidence that two years of data is insufficient or ineffective to formulate mitigation. "[W]here substantial evidence supports the approving agency's conclusion that mitigation measures will be effective, courts will uphold such measures against attacks based on their alleged inadequacy." *Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1027; *see also Mount Shasta Bioregional Ecology Center v. County of Siskiyou* (2012) 210 Cal.App.4th 184, 208 (applying the "deferential substantial evidence test" with respect to a mitigation measure's effectiveness); *Concerned Citizens of South Central L.A. v. Los Angeles Unified School Dist.* (1994) 24 Cal.App.4th 826, 841 ("The discussion of mitigation measures in the SEIR must be assessed in accordance with the 'rule of reason[.]'"). Mitigation Measure MM 4.4-12's adaptive management provisions are designed to ensure that the Project will not result in ecologically significant impacts to avian species—primarily in the form of collisions—which should be clear when the Project becomes operational. Mitigation Measure MM 4.4-12 is not intended to insure against changes in avian populations over several decades "due to impacts from climate change, development, and other pressures," something that is far beyond the scope of CEQA, which requires mitigation to be proportional to the impacts of a project, consistent with state and federal constitutional law.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-P2: This comment states that the Draft EIR claims in its discussion regarding birds and operational impact mitigation that the solar photovoltaic panels consist of non-reflective glass to minimizes the "fake lake effect" however, there is no substantial evidence to support this claim.

See the Response to Comment 12-M regarding the level of detail and study required by CEQA for the "fake lake effect." The lead agency also notes that the comment's argument regarding fake lake effect is premised in significant part on the notion that "since birds are prone to collisions with reflective surfaces, it would be expected that a utility-scale solar energy project could cause significant bird mortality." (See Comment 12-S). It is thus reasonable to infer that utilizing non-reflective solar panels, as the Project will, will minimize fake lake effect. Furthermore, the comment's claim is based on an unsupported assumption that avian species perceive light in the same manner as humans.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-Q2: This comment states that the Draft EIR fails to mitigate impacts on golden eagles, a fully protected species. There are no known or recorded golden eagle nest sites within 5-miles in the CNDDB data

base search. There is one known golden eagle record documenting two nests site within 10-miles in the CNDDB data base search. This record was documented during helicopter surveys in 1977 when a golden eagle was observed; however, in 1990 both nests were considered "active", but no individuals were observed. No current CNDDB information is available regarding these nests. The DEIR nevertheless concludes, conservatively, that golden eagles have moderate potential to "occasionally use the site for foraging."

While the Draft EIR acknowledges that raptors, including golden eagles, may forage on or migrate through the project site, there is no evidence that if converted to a solar facility, impacts on golden eagles would be significant due to the fact that golden eagles have not been seen foraging onsite, are not using the project site for foraging, and the golden eagle foraging habitat on the project site is of low quality due, in particular, to its proximity to adjacent residential development. While availability of potential foraging habitat would be reduced or lost during and following construction, this reduction would not be a significant impact on an existing important foraging area, particularly when considered with the available remaining foraging habitat surrounding the project site in agricultural fields, along drainages, desert scrub habitat to the southwest and northeast, and among the foothills to the north, south, and west.

The USGS and BLM studies associated with the DRECP found that ranges of golden eagles tended to be broader than previously thought, and were seasonally dependent upon breeding associations, habitat associations, and temperature. Golden eagles in the Mojave Desert used more space and a wider range of habitat types than expected and renewable energy projects could affect a larger section of the regional population than was previously thought. These revelations have little relevance to the RB Inyokern Solar Project because of the lack of breeding habitat on-site, the small area of potential foraging habitat at the site, and the high level of the development in the Project vicinity, all contributing to decrease the value of the site to eagles, and decrease the potential for impacts to occur.

Assuming that the two eBird observations noted by Ms. Owens are accurate, they are consistent with this analysis.

Finally, the comment misrepresents the Draft EIR mitigation applicable to golden eagles. Far from relying solely on following Avian Power Line Interaction Committee Guidelines specifications, the DEIR sets forth extensive mitigation measures to ensure less-than-significant impacts to golden eagles and other special-status avian species. (See Mitigation Measures MM 4.4-5, MM 4.4-6, 4.4-7, 4.4-8, 4.4-9, 4.4-11, 4.4-12.)

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-R2: This comment states that the Draft EIR fails to mitigate impacts on fully protected species specifically peregrine falcon. Peregrine falcons breed in nests on cliff faces and tall buildings, and their breeding habitat is limited (Cornell Lab). There is some very low potential for the species, which is incidental to the area, to forage in the Indian Wells Valley as a migrant. However, no suitable nesting or foraging habitat exists on the project property or anywhere within at least 5 miles of the Project site. The Draft EIR's analysis of impacts to raptors applies with equal force to peregrine falcon, as do its mitigation measures. Nevertheless, the Draft EIR has been clarified to discuss peregrine falcon specifically. While these modifications add clarity to the Draft EIR, they are clarifications/amplifications of the existing analysis and do not reflect a new or substantially

increased significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

To clarify, Mitigation Measure MM 4.4-11 will be modified as follows:

MM 4.4-11: To mitigate for potential impacts to nesting birds, special-status birds including the Swainson's hawk and peregrine falcon, and birds protected under the Migratory Bird Treaty Act and California Fish and Game Code during construction and decommissioning activities, the following measures shall be implemented as part of the approval for a grading or building permit:

a. During the avian nesting season (February 1–August 31), a qualified biologist shall conduct a preconstruction avian nesting survey no more than 7 days prior to initial vegetation clearing. Surveys need not be conducted for the entire project site at one time; they may be phased so that surveys occur within 7 days prior to clearing or disturbance in specific areas of the site. The surveying biologist must be qualified to determine the species, status, and nesting stage without causing intrusive disturbance. At no time shall the biologist be allowed to handle the nest or its eggs. The survey shall cover all reasonably potential nesting locations on and within 500 feet of the project site, including ground nesting where species, such as California horned lark and killdeer might nest all shrubs that could support nests, and suitable raptor nest sites such as nearby trees, windrows and power poles. Swainson's hawk nest surveys will be conducted prior to construction according to the *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* (California Department of Fish and Wildlife, 2010) and within a 5-mile buffer around the project site. Access shall be granted on private offsite properties prior to conducting surveys on private land. If access is not obtainable, the biologist shall survey these areas from the nearest vantage point with use of spotting scopes or binoculars.

b. If construction is scheduled to occur during the non-nesting season (September 1–February 1), no preconstruction surveys or additional measures are required for non-listed avian species.

c. If construction begins in the non-nesting season and proceeds continuously into the nesting season within any particular construction or decommissioning area, no surveys are required for non-listed avian species so long as all suitable nesting sites have been cleared from active construction/decommissioning areas.

d. If active nests are found, a 300-foot no-disturbance buffer shall be created around passerine species' nests unless adjusted by the qualified biologist based on the needs and sensitivities of individual species, a 0.5-mile no-disturbance buffer for Swainson's hawk nest, and a 500-foot no-disturbance buffer around raptor species' nests (or a suitable distance otherwise determined in consultation with California Department of Fish and Wildlife). Any nest of a federal- or State-listed bird species shall require consultation with the appropriate agency (United States Fish and Wildlife Service or the California Department of Fish and Wildlife) to determine the appropriate buffer distance surrounding the nest to provide adequate nest protection. These buffers shall remain in effect until a qualified wildlife biologist has determined that the birds have fledged or the proposed project component(s) have been redesigned to avoid the area. All no-disturbance buffers shall be delineated in the field with visible flagging or fencing material.

While this modification adds clarity to the EIR, it does not reflect a new or substantially increase significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

12-S2: This comment states that the Draft EIR relies on unenforceable and ineffective mitigation measures.

Specifically, the comment asserts that the effectiveness of Mitigation Measure MM 4.4-6 (requiring an environmental awareness training and education program) is not supported by evidence, and that Ms. Owens has not observed such trainings to translate into actions that significantly reduce project impacts to wildlife. Ms. Owens provides no evidence to support this claim.

The lead agency reminds the comment that Mitigation Measure MM 4.4-6 is one of many mitigation measures the Draft EIR employs. With respect to CEQA's rules regarding the effectiveness of mitigation, please see the response to Comment 12-N2. Here, the worker training program will be administered by an qualified biologist; include species-specific information; inform attendees about specific protection measures for each species; inform attendees about penalties for violations; require attendee signatures to be kept on file; and other similar performance standards to ensure the program's effectiveness. It is reasonable to infer that so educating workers at the Project site will result in reduced impacts than turning said workers loose without such information.

The comment also asserts that "there is no realistic mechanism for holding employees responsible for impacts whether 'unauthorized' can be clearly defined or not," rendering Mitigation Measure MM 4.4-6 unenforceable and ineffective. The lead agency disagrees. As set forth in the Draft EIR, Mitigation Measure MM 4.4-6(f) provides that "The construction crews and contractor(s) shall be responsible for preventing unauthorized impacts from construction activities to sensitive biological resources that are outside the areas defined as subject to impacts by project permits. Unauthorized impacts may result in project stoppage, and/or fines depending on the impact and consultation with the California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service." Read in context, this requirement is straightforward and easily enforceable. Other mitigation measures (e.g., Mitigation Measures MM 4.4-4, 4.4-5, 4.4-9, 4.4-10, 4.4-11) plainly give the project's qualified biologist the authority to stop work to avoid impacts to special-status species, and clearly specify that construction activities may not occur within certain distances of special-status species discovered at the Project site. Of course, laws such as the state and federal Endangered Species Acts also provide clear penalties for impacting certain species when not authorized by project permits

12-T2: The comment summarizes the provided comments and concludes the comment letter. Detailed responses to the comments are provided, above. This comment does not otherwise raise a substantive issue on the content of the EIR. The comment has been noted for the record.

Response to Comment Letter 15, Exhibit A: Renee Owens (August 16, 2020)

12-U2: The comment describes the project background. The comment has been noted for the record.

12-V2: The comment states that the Draft EIR fails to adequately disclose and analyze the biological baseline.

The comment states that the Draft EIR fails to properly describe the environmental setting for the likelihood of several special-status species to occur due to the use of database queries, literature

review, and reconnaissance surveys and lack of focused or protocol surveys. The comment also states that the biological studies are five years old, and thus not analyzing current conditions.

Please see the response to Comment 12-I. The Draft EIR describes existing environmental conditions before analyzing each of the project's anticipated impacts. *See* "Environmental Setting" sections throughout Draft EIR Chapter 4. The Draft EIR's discussion of baseline biological resources conditions is particularly robust; it describes each of the plant and wildlife species known or suspected to be located at or near the project site with particular emphasis on special-status species (Draft EIR p. 4.4-1 to 4.4-23). As explained in the Draft EIR, this analysis was based not just on site-specific studies, but also on a thorough review of existing and project-specific literature and databases that include decades of records of special-status species sightings (Draft EIR p. 4.4-1, 10-4).

These reports include the comprehensive, project-specific biological surveys and reports, made available to the public in Appendix D of the Draft EIR. Consequently, the DEIR provides an accurate, comprehensive picture of baseline conditions and not, as the comment suggests, a misleading snapshot of conditions in 2015.

Here and elsewhere, the comment's assertions imply that CEQA requires new studies until all uncertainty regarding existing environmental conditions or a project's impacts thereon have been removed. This is incorrect. As the California Supreme Court has emphasized, an EIR need not achieve "technical perfection or scientific certainty." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515. Instead, CEQA requires "adequacy, completeness, and a good-faith effort at full disclosure." CEQA Guidelines § 15003(i). The appropriate degree of specificity and analysis a given issue warrants depends on "the nature of the project and the rule of reason." *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 679; *see also* CEQA Guidelines Section 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.").

Surveys were conducted to identify special-status plant and wildlife species that occur or may occur on the Project site. Long term studies of the individual species are not warranted because, in the unlikely event that special status species not disclosed by existing studies or the literature review are present on or around the Project site, pre-construction surveys will occur prior to the beginning of construction activities. The DEIR also prescribes Mitigation Measures (MM) to reduce or eliminate impacts to special-status species, including nesting birds, regardless of whether they are currently expected to be impacted by the Project. These measures (MM 4.4-1 through MM4.4-12) are outlined in detail in regard to general or protocol surveys, avoidance measures if found on site and compensation for loss of habitat. Some of the specific surveys, though not all inclusive, are outlined in the DEIR MMs below.

The DEIR MM 4.4-1 and 4.4-2 outlines surveys for rare plant that have or are expected to occur prior to issuance of a grading permit from the County. The MMRP outlines "avoidance areas" to be established around plants, defines relocation efforts and/or collection of seed to be applied during revegetation efforts upon completion of the construction phase of the Project.

The DEIR MM 4.4-3 outlines surveys for Mohave ground squirrel and requires a CDFW 2081 incidental take permit and compensatory habitat-based mitigation for the loss of suitable habitat prior to construction.

The DEIR requires desert tortoise surveys by an Agency authorized biologist prior to construction as outlined in MM 4.4-4. It also outlines mitigation measures if desert tortoises or their burrows are located.

The DEIR MM requires that the operator retain a qualified biologist(s) approved by the USFWS to oversee compliance with protection measures for all Agency listed and other special-status species that may be affected by construction activities to prevent impacts to these species.

"CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct focused, protocol-level surveys. *Id*.

With respect to the CNPS survey guidelines referenced by the comment, CNPS produces only "guidelines". CNPS is not a regulatory body and cannot require that an EIR conduct analyses that are beyond the statutory requirements of CEQA. The CDFW rare plant protocol states that multiple seasons of surveys and multiple years of surveys *may* be needed to adequately determine the presence/absence of rare plant surveys at any particular site. The site was characterized in the biological study as being heavily disturbed by off-road vehicle use, hunting and shooting, and other anthropogenic impacts. Surveys of the site were conducted for rare plants at a time shortly after peak germination periods after a good rain year. Only silver cholla was found on the site that might be subject to pertinent development codes. Satellite imagery provides some information on the overall vegetation condition of a site, which may vary from year to year depending upon local rainfall and weather conditions, but that imagery does not provide any usable information about species composition, cover, density, or diversity. CEQA does not demand exhaustive surveys or demand that environmental conditions must be optimal for analysis. Mitigation Measure 4.4-1 in the DEIR contains measures requiring preconstruction surveys, avoidance of rare plants when possible, an Incidental Take Permit if the Mojave tar plant is present and cannot be avoided, and salvage of rare plants if found to be present on site and when avoidance is not feasible. Of the rare plants potentially present on the site, it is anticipated that only silver cholla would be present. This measure would adequately protect any rare plant species that could potentially occur on site. Given the above, additional surveys are not warranted to inform the EIR here. See above and the Response to Comment 12-I for a discussion of applicable CEQA requirements.

This comment does not otherwise raise a substantive issue on the content of the EIR.

12-W2: The comment states that desert tortoise surveys should be required prior to construction activities, particularly given variability in rainfall from year to year.

See Responses 2-B, 2-C, 12-I, 12-J, and 12-W. As noted with respect to Comment 2, USFWS has reviewed available information and does not recommend that the applicant apply for incidental take authorization for impacts to desert tortoise, as the species is unlikely to be impacted by the Project.

In addition to the site-specific desert tortoise surveys and literature and database review described in the EIR, the DEIR requires preconstruction, clearance surveys by a qualified biologist prior to construction as outlined in MM 4.4-4. It also outlines mitigation measures if desert tortoises or their burrows are located.

12-X2: The comment states that the Draft EIR fails to properly describe the environmental setting for the likelihood of several special-status species to occur due to the use of database queries, literature review, and reconnaissance surveys and lack of focused or protocol surveys.

The comment states that the DEIR fails to conduct focused surveys for any species other than the desert tortoise and Mohave ground squirrel. The comment states that focused surveys for protected species for taxa (birds, reptiles, bats) is a standard practice for impact analysis. In addition, the comment suggested that focused survey cannot be conducted simultaneously, i.e., desert tortoise and burrowing owl surveys. The comment asserts that focused surveys be conducted on each species.

See Responses 12-J, 12-I, 12-L, 12-V, 12-W.

Here and elsewhere, the comment's assertions imply that CEQA requires new studies until all uncertainty regarding existing environmental conditions or a project's impacts thereon have been removed. This is incorrect. As the California Supreme Court has emphasized, an EIR need not achieve "technical perfection or scientific certainty." *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515. Instead, CEQA requires "adequacy, completeness, and a good-faith effort at full disclosure." CEQA Guidelines § 15003(i). The appropriate degree of specificity and analysis a given issue warrants depends on "the nature of the project and the rule of reason." *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 679; *see also* CEQA Guidelines Section 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.").

"CEQA does not require a lead agency to conduct every recommended test and perform all recommended research to evaluate the impacts of a proposed project. The fact that additional studies might be helpful does not mean that they are required." *Ass'n of Irritated Residents v. Cty. of Madera*, (2003) 107 Cal. App. 4th 1383, 1396, 133 Cal. Rptr. 2d 718. Consequently, CEQA does not contain a blanket requirement that agencies conduct focused or protocol-level surveys. *See Id*.

In addition to database searches, including CNDDB and CNPS, and reconnaissance-level biological surveys where appropriate, focused surveys were conducted for rare plants, desert tortoise and Mohave ground squirrel that were reasoned to have a relatively strong potential to occur on the Project site. It is not reasonably feasible to conduct focused surveys for every special-status species that could conceivably be found at the project site. While this comment extols the virtues of focused surveys generally, it does not establish that additional focused surveys are warranted at this time for this Project.

The comment also implies that biological observations during any site visit activities are not warranted or cannot be observed or used for presence or absence of a species. This is incorrect. For example, certainly burrowing owl burrows, desert kit fox and badger dens can be discovered while on a protocol level desert tortoise survey. Such a claim is in fact more fittingly directed at comment's reliance on eBird sightings which are logged by non-expert members of the public.

The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-Y2: The comment states that the DEIR fails to adequately analyze and mitigate impacts to birds.

With respect to the comment's assertion that the DEIR's statements regarding habitat removal are "disingenuous," please see the response to Comment 12-N, which explains that the comment quotes

the DEIR out of context and ignores its discussion of habitat loss. In addition, the loss of habitat for resident and migratory birds for nesting and foraging will be lost during the construction phase of the Project is expected to be insignificant given the close proximity of ample undisturbed and suitable habitat in the vicinity and surrounding areas. The Project location and immediate vicinity (adjacent to Hwy 395 to the east, a railway and civilian airport to the west, a water treatment plant to the north, and close proximity to Inyokern and China Lake Air force base) provide denuded habitat for many species that occupy this portion of the Mojave Desert.

With respect to the comment's assertion that the DEIR lacks an adequately described baseline, please see the responses to Comments 12-I, 12-J, and 12-V2.

With respect to the comment's assertions regarding natal site fidelity, please see the response to Comment 12-N.

The comment identified a confusing statement in the Draft EIR regarding MM 4.4-1 through 4.4-12. The Draft EIR asserts that MM4.4-1 through 4.4-12 promote long- term project site suitability. The Mitigation Measures were developed to protect sensitive plant and wildlife species during construction and operations of the Project. Revegetation of the site would contribute to wildlife habitat, but the measures are not designed to promote the long-term suitability of the site. Compensatory habitat will be purchased to offset habitat losses resulting from the Project. Section 4.4 under operations and maintenance in the Draft EIR will be modified as follows:

Direct impacts to special-status species are unlikely to result from project operation and maintenance activities because implementation of the project onsite would remove habitat for special-status species on the project site and restrict sensitive wildlife species movement into the project site (i.e., desert tortoise fencing) as discussed above. However, potential impacts to all these species would be minimized through the Worker Environmental Awareness Training and Education Program, speed limits, trash pickup, and restrictions on herbicides use. Mitigation Measures MM 4.4-1 through MM 4.4-12 would require methods designed to reduce wildlife mortality and impacts and educate onsite personnel. Project operation could result in indirect impacts to wildlife in proximity of the project if nighttime lighting is used. However, the potential indirect impact from nighttime lighting during operation and maintenance would be minimized through compliance with all development standards, the Kern County Zoning Ordinance, and the goals, policies, and implementation measures of the Kern County General Plan.

While this modification adds clarity to the EIR, it does not reflect a new or substantially increase significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

With respect to the comment's discussion of fake lake effect, please see the response to Comments 12-M and 12-O.

12-Z2: The comment disagrees with the Draft EIR's explanation that mortality from other projects has been collected over a relatively short period of time and is still being evaluated in addressing fake lake effect.

The comment asserts that everything is known about fake lake effect, or at the very least no additional information about avian mortalities over the long term are necessary to effectively evaluate fake lake effect of PV solar Projects. This is the comment's opinion, which is not supported in a recent publication of the summary of mortalities at PV solar sites. The comment is noted and no changes to the EIR are warranted.

12-A3: The comment disagrees with the Draft EIR's explanation, regarding fake lake effect, that in most cases the cause of death is not clear

See Responses 12-M, 12-O, 12-P and 12-P2.

12-B3: The comment disagrees with the Draft EIR's conclusion that the evidence is not sufficient to conclude that water birds are more susceptible to fake lake effect mortality.

See the response to Comment 12-M, 12-O, 12-P and 12-P2. Please also see the Response to Comments 12-I and 12-J and regarding the level of detail and study required by CEQA. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-C3: The comment asserts that the Draft EIR erred by inferring that lack of evidence regarding fake lake effect is evidence of the absence of lake effect.

See Responses 12-M, 12-O, 12-P and 12-P2.

12-C3: The comment asserts that MM 4.4-12 impermissibly defers mitigation.

Please see the response to Comment 12-L2.

12-E3: The comment asserts that MM 4.4-12's adaptive management framework is insufficient.

First, the comment states that there is sufficient data to statistically estimate avian mortality per acre or MW of solar panels due to panel strikes. As explained in the DEIR, however, after considering the best available science, the lead agency disagrees; given the current state of the science, the short-time frame in which studies were conducted, the lack of "baseline" information, and the highly unknown environmental and avian population variables that might be encountered over the next 25 years, we cannot reliably quantify estimated avian mortality due to panel strikes. As the Draft EIR explains, given the absence of nesting sites, dearth of suitable nesting habitat, and lower quality foraging habitat at the Project site and in the Project vicinity, special-status avian species are unlikely to be found at the Project site in considerable numbers. This, combined with the robust mitigation program set forth in the Draft EIR, supports the Draft EIR's conclusion that the Project's impacts to birds will be less than significant.

Second, the comment states that the MM 4.4-12 errs in requiring only two years of construction mortality monitoring data. This comment is addressed in the response to Comment 12-O2.

Third, the comment asserts that MM 4.4-12's adaptive management measures are not effective. This comment is addressed in the response to Comment 12-N2.

Fourth, the comment argues that the DEIR errs in including consultation with USFWS and CDFW in MM 4.4-12. This comment is addressed in the response to Comment 12-L2.

Please also **s**ee the response to Comments 12-M and 12-O, as well as the response to comment 5-C regarding glare issues resulting from the Project. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-F3: The comment asserts that the EIR errs by not analyzing impacts to entire bird populations. As explained in the response to Comment 12-R , while the current state of the science does not permit the Lead Agency to reliably quantify estimated avian mortality caused by the proposed project, , extrapolating from recent studies still only suggests that over a 25-year period there would be an

estimated 66 avian mortalities per year caused by the RB Inyokern Solar Project, the vast majority of which will be common species such as mourning dove. There are no reliable population estimates of the number of birds occurring within the Mojave Desert, but it is known that population numbers fluctuate seasonally due to migrations, and fluctuate annually because of highly variable environmental factors. Furthermore, it is often postulated that bird populations will decline in the future because of rising temperatures and reduced water availability. The models that predict such outcomes are generally not reliable indicators of short-term spatially specific conditions. The high variability in bird populations and unknown future population numbers of local bird populations makes a reasonably accurate analysis problematic. Suffice it to say that the mortality of 66 birds per year over a 25-year period is insignificant in comparison to the hundreds of thousands of birds that would die from natural causes in the region during that same period. This comment is also addressed in the response to Comment 12-P and 12-R. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-G3: The comment raises several arguments regarding a quotation from the DEIR's cumulative impacts discussion.

First, the comment argues that when the Draft EIR states "The residual effects on migratory birds of the project were determined to be less-than-significant," the term "residual" is not supported by a scientific definition or evidence and is therefore "meaningless." As is clear in the DEIR, "residual" here simply has its ordinary meaning: remaining after the greater part or quantity is gone. The DEIR thus simply reiterates a conclusion it had previously explained—the project-level impacts to migratory birds that remain after mitigation are less than significant—before proceeding to discuss cumulative impacts, the topic of the section in question. That the comment claims the term "residual" cannot be understood in this context without specifying a scientific definition calls into question the comment's credibility as an expert.

The comment also asserts that the Draft EIR's statement that significant cumulative impacts to migratory birds could occur even after mitigation contradicts the Draft EIR's discussion regarding project-level impacts due to lake effect. The response to this comment is provided in the response to Comment 12-P.

12-H3: The comment disagrees with the Draft EIR's conclusion that using non-reflective glass solar panels reduces impacts associated with fake lake effect and asserts that there is no evidence to support this conclusion.

Please see the responses to Comment 12-M, 12-O, 12-P and 12-P2. The comment's arguments regarding fake lake effect are premised in significant part on the inference that since birds are particularly prone to collisions with reflective surfaces, it would be expected that a utility-scale solar energy project could cause significant bird mortality. It is thus reasonable to infer that utilizing non-reflective solar panels, as the Project will, will help reduce collisions.

Please also see the Response to Comment 12-M regarding the level of detail and study required by CEQA for the "fake lake effect," and the response to Comment 5-C regarding glare issues resulting from the Project. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-I3: The comment discusses several sources in support of its argument that the science is sufficiently clear to conclude that the Project will result in potentially significant direct, indirect, and

cumulative impacts to birds as a result of collisions. Responses to this comment are provided in the response to Comment 12-O, 12-P, and 12-R.

12-J3: The comment states that the Draft EIR fails adequately to describe and analyze impacts to the Swainson's hawk.

Responses to this comment are provided in the responses to Comments 12-M, 12-U, and 12-V. As explained in those responses, the EIR thoroughly considers impacts to Swainson's hawk. After taking into account all evidence presented to the Lead Agency, the most reliable evidence, including project-specific studies, shows that this species is unlikely to use the project site and impacts to this species would be less than significant. Although the project site does contain potential foraging habitat, there is more suitable foraging habitat in agricultural fields to the north, and there is no evidence of Swainson's hawks foraging on the project sites. Similarly, although there is, theoretically at least, potential nesting habitat occurring on the project site these trees are typically too short and lacking in foliage cover to provide adequate nesting substrate for the species. There is more suitable nesting habitat occurring approximately 1.0 mile to the south of the site at locations where potential nest trees exist near agricultural fields. Given the lack of nesting substrate in proximity to the project site and the vast amount of desert still undeveloped in the Indian Wells Valley, any loss of foraging habitat caused by the project would be less than significant and therefore does not warrant compensatory mitigation. Please also see the response to Comment 12-L3.

Contrary to Ms. Owens interpretation of the EIR, the EIR does recognize a potential for the Swainson's hawk to forage on the site, however, the EIR also accurately points out that there is more suitable foraging habitat elsewhere in the Project vicinity. The EIR provides for the completion of full protocol surveys for the Swainson's hawk prior to the start of Project construction so that any nesting Swainson's hawks (MM 4.4-11) in the Project vicinity could be protected**.** Compensatory habitat will be provided in the region to offset impacts to the Mohave ground squirrel, which would also provide for the permanent protection of potential Swainson's hawk foraging habitat, equal to or greater in value than that of the Project site. Ms. Owens also states that Swainson's hawks sometimes feed on some species of desert dwelling invertebrates. This observation is noted. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

12-K3: The comment asserts that the DEIR fails to adequately describe and mitigate impacts to golden eagles. Responses to this comment are provided in the response to Comment 12-Q2.

12-L3: The comment asserts that the DEIR fails to adequately mitigate impacts to other special status avian species. Responses to this comment are provided in the response to Comment 12-V.

The comment also states that the following species are "known regional migrants, and have been observed and reported on eBird bordering the site as well as less than one mile from the site: yellow warbler, Vaux's swift, Summer tananger, least bittern, mountain plover, purple martin, northern harrier, long-eared owl, and short-eared owl. Similarly, the comment asserts that tricolored blackbird is on record as present at a hotspot less than a mile from the Project site. As migratory birds, these species ae anticipated to occur near the Project site but not nest on the site. Most of these species would be more common in areas surrounding the Project site that contain ornamental or native trees, artificial or natural water sources, or other primary constituent elements required by the species. Because of nearby records, it is assumed that these species would occasionally overfly

or even temporarily forage on the Project site. The mitigation measures contained in the DEIR (MM4.4-11) that address migratory bird species would ensure impacts to these and other migratory bird species would be less than significant. It is impractical to select a subset of migratory birds to specifically address when many other species of migratory birds are as likely to overfly the project site or temporarily forage as they migrate through the area.

With respect to the comment's statement that the EIR must be revised to include additional avian surveys, please see the responses to Comments 12-J, 12-I and 12-J.

With respect to the comment's statement that the EIR must establish mitigation measures to minimize risks to birds throughout the life of the project, the DEIR contains a robust suite of mitigation measures to ensure the Project's impacts to avian species are less than significant.

Finally, the comment states that the Draft EIR must "describe, with details including performance and success criteria, any relevant enforcement, and a bond or other type of payment guarantee, for compensatory mitigation of the impacts discussed above [i.e., impacts to special-status avian species other than fully protected species and Swainson's hawk], and for cumulative impacts that the DEIR states are significant and unavoidable."

To the extent the comment states that the Draft EIR must be revised to include additional compensatory mitigation for project-level impacts to birds, as shown in the DEIR, those impacts are less than significant with existing mitigation. Consequently, additional compensatory mitigation is neither necessary nor appropriate.

To the extent the comment states that the Draft EIR must be revised to include compensatory mitigation specifically for cumulative impacts to avian species, the Lead Agency notes initially that the DEIR already imposes compensatory mitigation obligations that would also address cumulative avian impacts. For example, MM 4.4-3 requires an incidental take permit for Mohave ground squirrel that will, in turn, require compensatory mitigation for habitat loss. Because Mohave ground squirrel habitat is coextensive with avian habitat at the Project site, the Project proponent will effectively provide compensatory mitigation for avian habitat loss. In addition, MM 4.4-10 provides for compensatory mitigation for habitat loss for burrowing owls. The Draft EIR's other mitigation measures related to avian impacts also operate to reduce cumulative impacts to avian species.

No additional feasible mitigation to address cumulative impacts to birds is available, nor has the comment demonstrated the availability of such feasible mitigation. In order to comply with state and federal statutory and constitutional law, the Lead Agency must ensure there is both a sufficient nexus between any mitigation it imposes and the impacts to be addressed, and rough proportionality between the burden created by the Project and any required mitigation. *See* 14 CCR § 15041; Cal. Govt. Code § 66001. In addition, given the geographic scope of cumulative impacts (the Draft EIR explains that this scope is the Indian Wells Valley, which includes parts of Kern, San Bernardino, and Inyo Counties) and the fact that most avian species potentially impacted by the cumulative projects are expected only visit the Project site when passing through the area, it appears that cumulative avian impacts can be addressed appropriately only at the regional, state, or federal level. *Cf. Tracy First v. City of Tracy*, 177 Cal. App. 4th 912, 938 (2009) (City could not require mitigation fees for projects outside of its jurisdiction where there was no county plan to ensure that the projects would be completed, and therefore City acted appropriately when declining to require mitigation fee and reaching significant and unavoidable impact finding).

Here, however there is no existing countywide, regional, or statewide program designed to address mitigation of cumulative avian impacts caused by solar projects, a program that would require not only a nexus study in order to avoid constitutional and statutory takings problems, but separate CEQA review. Were such a framework to mitigate cumulative impacts to avian species in the region to become available in the future, it would constitute an appropriate mitigation measure under MM 4.4-12(e). But currently, in the absence of such a framework, there is no existing metric for measuring the Project's contribution to cumulative avian impacts in a manner that would support lawfully requiring compensatory mitigation for those cumulative impacts. Instead, the Lead Agency has required a robust suite of mitigation measures that, while focused on project-level impacts, will also serve to reduce cumulative impacts to the maximum extent currently feasible.

With regard to the comment's statement regarding performance standards, as described in the response to previous comments, the DEIR's mitigation measures, and MM 4.4-12 in particular, contain adequate performance standards. With respect to bonds, bonding will be required by CDWF for the incidental take permit required for the Project, as well as MM 4.11-2, which requires a reclamation bond or similar instrument. The CDFW bond, in particular, will ensure that compensatory mitigation is properly funded. The financial assurances required by MM 4.11-2 will ensure that if the Project operator becomes financially incapable or abandons the Project (in which case it could not carry out mitigation required by the EIR), the County can retain an independent contractor to completely remove the Project and restore the Project site—at which point the Project would no longer have any impacts on avian or other species.

12-M3: The comment states that the Draft EIR fails adequately to describe and analyze impacts to reptiles. Responses to this comment are provided in the response to Comment 12-W. For a discussion of the need for additional studies, please see the responses to Comments 12-J and 12-I. In addition to information provided in response to Comment 12-W, desert tortoise is the only special-status reptile species reported from the vicinity of the subject property. There will be some opportunity to rescue common reptiles from harm's way during construction. Subsequent habitat compensation and management for listed species will predictably benefit the same common reptile species that would be impacted on the subject property. In fact, given the degradation of the subject property and isolation due to human development in surrounding areas, compensation lands should more than adequately mitigate impacts to common reptile species.

With regard to the comment's claims regarding commonly occurring lizards that are not species of special concern, the comment does not raise a significant environmental issue. It is noteworthy that biological monitors who are required onsite at the time of vegetation removal will capture and move from harm's way all common reptiles and small mammals that are uninjured and able to be captured. The comment also argues that large, concentrating solar facilities may have the ability to produce heat with a potential to create localized drought conditions. The project does not propose to use concentrating solar technology. See also response to Comment 5-G.

12-N3: The comment states that other mitigation measures fail to reduce impacts to less than significant levels.

With respect to MM 4.4-6, please see the response to Comment 12-S2.

With respect to MM 4.4-12, please see the response to Comments 12-L2 through 12-O2.

12-O3: The comment summarizes arguments regarding the Draft EIR raised previously in the comment's comment letter. The responses to this comment are provided above.

Response to Comment Letter 12, Exhibit B: SWAPE (July 28, 2020)

12-P3: The comment describes the project background and states that the DEIR fails to adequately evaluate the Project's hazards and hazardous materials, air quality, health risk, and greenhouse gas impacts. This comment is an introduction to Comments 11-Q3 through 11-G4, and responses are provided to these comments below.

12-Q3: The comment states that out of the two Phase I assessments that were included in the Draft EIR only one (Terracon 2015) was prepared for the Project site. The comment states that the other Phase I assessment (SEI 2014) was for an adjacent parcel that is not a part of the Project. The comment states that a Phase I needs to be prepared for the northern part of the Project site not covered by the 2015 Phase I ESA. In addition, the comment states that a revised DEIR is necessary to include a Phase I ESA for the area of the Project not covered by a Phase I ESA.

See response to Comment 12-K.

12-R3: The comment states that the Draft EIR fails to disclose material facts regarding the energy storage components and fails to disclose, analyze and mitigate potential health impacts from accidents. In addition, the comment states that the DEIR needs to disclose all energy storage system (ESS) components and to identify the impacts for whatever system might be chosen. The comment includes a list of six items that would need to be addressed for whatever system is chosen.

The project proposes up to two onsite energy storage systems (ESS) facilities and associated appurtenances (one on each of the individual sites). The ESS would measure approximately 65 feet by 150 feet and would consist of battery storage modules placed in multiple prefabricated enclosures near the on-site substation. The energy storage technology and design for the storage facility has not been determined at this time, but could include any commercially available battery technology, including but not limited to lithium iron, lead acid, sodium sulfur, and sodium or nickel hydride. The storage system would consist of battery banks housed in electrical enclosures and buried electrical conduit. The batteries enclosures have fire suppression equipment installed that automatically suppress thermal emergencies. The solar substations would include transformers, bus work, switches, breakers, and all associated equipment required to be compliant with utility grade interconnection services. The substation facilities would house the power generation control and relying equipment, station batteries, SCADA and communication systems. The power stored by the energy storage facility would be transferred by the Inyokern 33 kV electrical distribution line that connects to the existing SCE Inyokern Substation 0.5 mile east of the project site
Section 4.9 *Hazards and Hazardous Materials* discusses the Project's use of two battery storage units. Impact 4.9-5 notes the project would include a battery energy storage system component that has a very low likelihood of producing a fire (generally a result of thermal runaway event from an internal short with cascading events) and a very low likelihood of catching fire (due to the non-flammable material that are used for the structure and absence of flammable vegetation or other materials nearby). However, battery systems still have the possibility of catching fire under the right circumstances (which are rare) or being damaged by fire and generate fumes and gases that are extremely corrosive in those instances. Dry chemical, carbon dioxide, and foam are the preferred methods for extinguishing a fire involving batteries as water is generally not effective in extinguishing battery fires. Class D extinguishers are used for lithium-metal fires only. To further

increase safety, the battery units are usually low voltage, encased in a steel enclosure and are set apart from combustible materials. They are built with a thermal management system that includes coolant pumps, fans and a refrigerant system to further maintain cool temperatures within the unit.

The project would implement Mitigation Measure MM 4.14-1, which would require the preparation and submittal of a Fire Safety Plan to the Kern County Fire Department for review and approval. The purpose of the Fire Safety Plan would be to eliminate causes of fire, prevent loss of life and property by fire, to comply with County and County Fire Protection District standards for solar facilities, and to comply with the OSHA standard of fire prevention, 29 CFR 1910.39. The fire safety plan would address fire hazards of the different components of the project, including the battery energy storage system, and would include BMPs to reduce the potential for fire and extinguishment techniques if a fire were to occur. This comment does not otherwise raise a substantive issue on the content of the EIR. The comment has been noted for the record and revisions are not necessary.

Please also see the response to Comment 12-J

12-S3: The comment states that the Draft EIR fails to adequately evaluate operational air quality impacts. As a result, the Project's air quality impacts are inadequately addressed and mitigated. The comment states that "the DEIR only evaluates the Project's operational emissions from three sources. Thus, while the DEIR evaluates the Project's *partial* operational emissions, the DEIR fails to evaluate the Project's *entire* operational emissions. According to the CalEEMod User's Guide, a Project's operational emissions include the following sources: fugitive dust associated with roads, architectural coating activities, off-road equipment used during operation, emergency generators, fire pumps, process boilers, parking lot degreasers, fertilizers/pesticides, cleaning supplies, electricity usage in buildings, electricity usage from lighting, water usage, and solid waste disposal. Thus, by only conducting an air quality analysis for the Project's *mobile-source* operational emissions, specifically from water trucks, maintenance trucks, and employee vehicles, the DEIR underestimates the Project's *total* operational emissions." The comment also states that an updated analysis quantifies and evaluates the proposed Project's entire operational emissions to the correct Eastern Kern Air Pollution Control District thresholds, the proposed project should not be approved.

See Responses 12-X, 12-Y and 12-G2

12-T3: The comment states that unsubstantiated input parameters were used to estimate project emissions.

See Responses 12-X through 12-G2

12-U3: The comment states that the DEIR underestimated land use size based on the given dimensions for the two battery buildings and the O&M building compared to the CalEEMod output files. The comment states that by underestimating the square footage of the proposed Project, the model may underestimate the Project's construction related and operational emissions and should not be relied upon to determine Project significance.

See Responses 12-X through 12-G2

12-V3: The comment states that after reviewing the CalEEMod output files the incorrect land use type was used in the model. Review of the output file demonstrates that the model incorrectly categorized the Project as "User Defined Industrial." The comment further explains why this category should

not have been used in the Project's model and as a result the model may underestimate the Project's emissions and should not be relied upon to determine the Project's significance.

See Responses 12-X through 12-G2.

12-W3: The comment states that the CalEEMod model used the incorrect construction schedule. The DEIR states that Phase 1: Mobilization and Site Preparation was estimated for 42 days but the CalEEMod output file indicates that only 21 days was inserted into the mode. This indicates that the model is inconsistent with the information provided in the DEIR. As a result, the model may underestimate the Project's construction-related emission and should not be relied upon to determine Project significance.

See Responses 12 X and 12-G2.

12-X3: The comment states that the CalEEMod model fails to include the total amount of anticipated vehicle trips for the Project and as a result the Project's operational emission may be underestimated. The comment states that the model should not be relied upon to determine Project's significance.

See Responses 12-X and 12-G2.

12-Y3: The comment states that the CalEEMod model fails to include the total amount of required parking for the Project, and as result, the Project's construction and operational emission may be underestimated. The comment states that the model should not be relied upon to determine Project's significance.

There is no required parking for the project, as no permanent staff are proposed. A parking area will be available for the crew during construction activities. Once operational, a gravel area will be available for off-street parking when routine maintenance activities are required.

12-Z3: The comment states that the CalEEMod output files demonstrates that several manual changes were made to the Project's anticipated off-road construction equipment horsepower values, load factor values, and usage hours. As a result, reviewers cannot verify any changes to the Project's anticipated off-road equipment horsepower values, load factors, or unit amounts.

See Responses 12-X through 12 G2.

12-A4: The comment states that the DEIR listed Project's construction equipment is inconsistent with the list of off-road construction equipment that was input into the CalEEMod model. In addition, the comment states that the model underestimates the pieces of equipment and fails to include the types of equipment indicated by the DEIR listed equipment. Indicating that the model may underestimate the Project's construction related emissions and should not be relied upon to determine Project significance.

See Responses 12-X through 12 G2.

12-B4: The comment states that the CalEEMod underestimated the overall amount of worker and vendor trips based on the values provided in the Traffic Study. As a result, the model underestimates the Project's construction-related emissions and should not be relied upon to determine Project significance.

See Responses 12-X through 12 G2.

12-C4: The comment states that the CalEEMod output file demonstrates that the model includes a construction-related mitigation measure without sufficient justification. As a result, the Project's construction-related emissions may be underestimated.

See Responses 12-X through 12-G2.

12-D4: The comment states that the DEIR fails to adequately evaluate greenhouse gas (GHG) impacts. The comment summarizes the DEIR proposed Project construction and operational GHG emissions and how they would not exceed the EKAPCD threshold. The comment further states the DEIR's GHG analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect, as the EKAPCD threshold is not applicable and cannot be relied upon to determine the significance of the Project's GHG emissions.

With respect to the first assertion, the comment suggests that the DEIR fails to adequately evaluate GHG impacts. As noted in the responses to comment 12-X above, the operational air pollutant emissions were appropriately analyzed in the Project's emissions modeling in the Project's AQIA (Insight, 2017, 2019) located in Appendix C of the Draft EIR. As stated in Section 4.8 Greenhouse Gas Emissions of the Draft EIR, "Information in this section is based primarily on the GHG section of the project's AQIA (Insight, 2017; 2019) located in Appendix C of this EIR." The GHG emissions estimates are based on the same emissions model, calculations, and Project inputs used for estimating air pollutant emissions for Section 4.3 Air Quality, as the model also estimates GHG emissions. As such, the GHG emissions for the project presented in the Draft EIR were adequately evaluated.

As indicated under the Methodology section on page 4.8-14 of the Draft EIR, Kern County has not developed a quantified threshold of significance for GHG emissions, but a project found to contribute to a net decrease in GHG emissions and found to be consistent with the adopted implementation of the CARB Climate Change Scoping Plan is presumed to have less-than-significant GHG impacts. This is the threshold that is applied by the County in significance determination for the project. The EKAPCD's 25,000 MT CO2e/year threshold is included in the Draft EIR to disclose the quantitative GHG threshold that has been established for use by the local air district. In the impact analysis, a comparison of the project's total annual GHG emissions to EKAPCD's threshold is presented in Table 4.8-2 to provide context showing the relatively low emission levels of the project. The project's implementation will result in a net decrease in CO2e emissions. As shown in Table 4.3-3, the project is estimated to displace approximately 21,243 MTCO2e of emissions annually on average and a total of approximately 743,491 MTCO2e over its 35-year lifespan, which would assist in the attainment of the State's goal to reduce GHG emissions. As concluded on page 4.8-19 of the Draft EIR, considering the project's minimal annual emissions and anticipated reduction in overall GHG emissions, the project is not expected to significantly contribute to global warming or climate change.

12-E4: This comment is an additional statement in relation to Comment Exhibit B, p. 13. The comment states that the Draft EIR relies upon the EKAPCD adopted threshold to determine significance of GHG emissions from the Project; however, the EKAPCD threshold does not apply to this Project.

See Responses 12-X and 12-G2

12-F4: This comment states that in an effort to reduce the Project's emissions, the comment identified several mitigation measures that are applicable to the proposed Project from NEDC's *Diesel*

Emission Controls in Construction Projects, Sacramento Metropolitan Air Quality Management Districts (SMAQMD) *Basic Construction Emission Control Practices* (*Best Management Practices*) and *Enhanced Exhaust Control Practices*.

The recommended mitigation measures outlined in the AQIA and utilized in the EIR are based on those endorsed and accepted by the EKAPCD. With implementation of these mitigation measures, the project's construction emissions remain significantly below established EKAPCD thresholds for all pollutants. Additional controls or mitigation measures are not necessary. The comment has been noted for the record and revisions to the EIR are not warranted.

12-G4: The comment states that as additional information may become available in the future and they retain the right to revise or amend this report when additional information becomes available. In addition, this report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties. The comment has been noted for the record.

DESERT TORTOISE COUNCIL
4654 East Avenue S #257B
Palmdale, California 93552
www.deserttortoise.org
eac@deserttortoise.org

Via email only

14 August 2020

Ronelle Candia
Kern County Planning Department
2700 "M" Street Suite 100
Bakersfield, CA 93301-2323
CandiaR@kerncounty.com

RE: RB Inyokern Solar Project Draft Environmental Impact Report (SCH# 2017071020)

Dear Ms. Candia,

The Desert Tortoise Council (Council) is a non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for wild desert tortoises and a commitment to advancing the public's understanding of desert tortoise species. Established in 1975 to promote conservation of tortoises in the deserts of the southwestern United States and Mexico, the Council routinely provides information and other forms of assistance to individuals, organizations, and regulatory agencies on matters potentially affecting desert tortoises within their geographic ranges. 13-A

We appreciate this opportunity to provide comments on the above-referenced project. Given the location of the proposed project in habitats likely occupied by Agassiz's desert tortoise (*Gopherus agassizii*) (synonymous with "Mojave desert tortoise"), our comments pertain to enhancing protection of this species during activities authorized by Kern County Planning and Natural Resources Department (Kern County).

Description of Proposed Action
R&L Capital, Inc. (Proponent) is proposing to construct and operate a solar photovoltaic (PV) power generating facility and associated facilities. The proposed location is on private land in Inyokern, Kern County, California. The lifespan of the PV power generating facility is 35 years. 13-B

Kern County has prepared the RB Inyokern Solar Project Draft Environmental Impact Report (DEIR) (SCH# 2017071020) that analyzes the impacts of the Proponent's proposed action and three other action alternatives. 13-B (cont.)

Alternatives

Kern County determined the following four alternatives, in addition to the No Project Alternative, as representing a reasonable range of alternatives that have the potential to attain most of the basic objectives of the Proposed Action:

1. No Project Alternative - No development would occur on the project site. The project site would remain unchanged.

2. Proposed Project (Project) – The Proponent would construct a solar PV facility that would generate a combined total of approximately 26.6 megawatts (MW) of renewable electrical energy. The Project's permanent facilities would include solar PV modules on a tracker system, energy storage systems (i.e., batteries), an operations and maintenance building, fenced switchyards. electrical collector system and inverters, gen-tie lines, overhead or underground telecommunication facilities and meteorological station, security fencing, and access roads. Battery technology is not identified but may include, but is not limited to, lithium ion, lead acid, sodium sulfur, and sodium or nickel hydride or any type of flow batteries. Water for day-to-day maintenance would be either from an onsite water well or trucked onto the site. Chain-link security fencing would be installed around the site perimeter.

The Proponent would construct 150 feet of a new gen-tie line that would connect with an existing Southern California Edison (SCE) 33-kilovolt (kV) electrical distribution line to an existing SCE Inyokern Substation approximately 0.5 mile to the east. The 166.5-acre Project would be constructed in two phases (Phase 1 = 20 MW on 124.5 acres, and Phase 2 = 6.6 MW on 42 acres), depending on market conditions. Phase 1 is located north of Inyokern Road (State Route 178 [SR 178]) and bordered by US 395 to the east, and Brown Road to the west, with a wastewater treatment facility on the northeast border. Phase 2 is located immediately south of Phase 1. 13-C

3. General Plan/Specific Plan and Zoning Build-Out Alternative – Under this alternative, the 166.5-acre Project Site would be developed to the maximum intensity allowed under the current Kern County General Plan land use designations, Inyokern Specific Plan, Kern County zoning, and other existing applicable restrictions. Under this alternative, the entire Project Site would be developed with commercial and industrial land uses that include outdoor storage and/or the use of heavy equipment, including general manufacturing processing and assembly activities.

4. Reduced Project Alternative – The Proponent would construct and operate one solar facility on approximately 124.5 acres, situated on the southern parcel of the Project site, would generate up to 20 MW of electricity and battery energy storage and deliver it to the grid. The project site would require Conditional Use Permit (CUP) and Specific Plan Amendment (SPA) approvals.

5. No Ground-Mounted Utility-Solar Development Alternative – Distributed Commercial and Industrial Rooftop Solar Only – For this alternative, the Proponent would construct 26.6 MW of PV solar distributed on rooftops throughout the Indian Wells Valley. Electricity generated would be for on-site use only. The battery energy storage facility would not be constructed as part of this alternative. Kern County identified this alternative as the Environmentally Superior Alternative. 13-C (cont.)

Regarding the action alternatives, the Council appreciates the inclusion of a "rooftop solar" alternative (Alternative 5) and supports this alternative for implementation. We concur this is an environmentally superior alternative for numerous reasons, one of which is avoiding impacts to species of special concern and the habitats they use [e.g., Mohave ground squirrel (*Xerospermophilus mohavensis*) and Mojave desert tortoise]. However, we question why the electricity generated would be for on-site use only and battery energy storage would not be included. For example, more than 90 percent of residential rooftop solar applications are not for on-site use only as they send the energy generated to the electrical grid. We found no explanation in the DEIR as to why this technology was not included in this alternative, and therefore request that it be addressed in the Final EIR. 13-D

Environmental Setting

According to the DEIR, no live desert tortoises were observed on or adjacent to the Project Site during protocol surveys conducted in 2015. However, the Project Site contains suitable habitat to support this species and an old carcass was found onsite. We remind Kern County that protocol surveys for the Mojave desert tortoise are only accepted by California Department of Fish and Wildlife (CDFW) for 1 year. Consequently, the area on and adjacent to the Project Site would need to be surveyed again for the tortoise. For the Mohave ground squirrel, potentially suitable habitat exists within the Project Site; and this species was observed during focused surveys. 13-E

We were unable to find an analysis of the direct and indirect impacts to the Mojave desert tortoise, Mohave ground squirrel, other species of special concern, and their habitats from increased use of the Project Site and nearby areas by predators of the tortoise, including common ravens (*Corvus corax*) and coyotes (*Canis latrans*). For example, grading, excavation, and other forms of ground disturbance result in exposure of and injury/mortality to burrowing and fossorial animals. This new food source attracts predators of the tortoise, ground squirrel and other species of special concern to the Project Site and increases predation pressure on these species that occur in the area. In addition, water would be used during construction to reduce fugitive dust, and during operation and maintenance to wash PV panels. We request that the Final EIR include an analysis of these impacts. 13-F

In the DEIR, Kern County says, "[t]he project site is predominantly Mojave creosote bush scrub with allscale scrub along the western margins in the south. Because of past disturbances, the project site has a high proportion of non-native species, including red-stemmed filaree (*Erodium cicutarium*), Saharan mustard (*Brassica tournefortii*), London rocket (*Sisymbrium irio*), Russian thistle (*Salsola tragus*), red brome (*Bromus madritensis* ssp. *rubens*), and cheat grass (*B. tectorum*)." 13-G

We were unable to find in the DEIR an analysis of direct or indirect impacts to the Mojave desert tortoise, Mohave ground squirrel, and other species of special concern and their habitats from the introduction of new and spread and proliferation of non-native invasive plant species at the Project Site and nearby areas.

Invasive plants cause several problems for desert ecosystems. Exotic annuals increase the fuel load and the frequency of fires in vegetation types (i.e., Mojave creosote bush scrub) that are poorly adapted to fire. Exotic plants may induce allelopathic effects, which hinder the growth or establishment of other plant species (BLM 2016). For example, roads promote the spread and establishment of exotic plants, either via the passage of vehicles or during construction, and act as corridors of disturbed land along which exotic plants can spread into otherwise undisturbed native vegetation (Brooks and Lair 2005, BLM 2016).

13-G (cont.)

For the Mojave desert tortoise, impacts from invasive plants include competition for limited resources between native and nonnative plant species (Lovich and Bainbridge 1999); reduction in availability and quality of nutritious forage for tortoises that are essential for survival, reproduction, growth, and recruitment; and promotion of fine fuels that spread fire and damage/destroy woody shrubs and can result in plant type conversion to annual plant species.

We request that the Final EIR include an analysis of these impacts to the tortoise, ground squirrel, and species of special concern.

Mitigation Measures (MM)

Under Aesthetics (4.1) MM 4.1-3.e. says, "Prior to the commencement of project operations and decommissioning, the project proponent/operator shall submit a Landscape Revegetation and Restoration Plan for the project site to the Kern County Planning and Natural Resources Department for review and approval."

This mitigation measure is under the Aesthetics section but it should also relevant to the Biological Resources section. As such, its purpose and success standards should reflect its biological importance (e.g., native plant species biodiversity, habitat for wildlife including listed species and species of special concern, etc.). We have provided an attachment for your use including best management practices for restoration of desert habitats (Abella and Berry 2016).

13-H

Because of the presence of a live Mojave ground squirrel and evidence of use of the habitat by the Mojave desert tortoise, we request that the Landscape Revegetation and Restoration Plan be submitted to the U. S. Fish and Wildlife Service (USFWS) and CDFW for their review and approval. The native vegetation established at the Project Site should consist of the diversity, density, and cover of species native to nearby undisturbed areas to restore the area to vegetation used by listed species and species of special concern.

In addition, MM 4.1-3.e. says "[t]he three-year monitoring program is intended to ensure the site naturally achieve native plant diversity, establishes perennials…" We note that in these times of climate changes and extended drought conditions and climate change, three years would likely be inadequate to establish native perennial species and achieve native plant diversity. A more realistic time would be 7 to 10 years.

13-I

Finally, MM 4.1-3.e. says, "Should efforts to revegetate …prove in the second year to not be successful by 75 percent cover rate, re-evaluation of revegetation methods shall be made in consultation with the Kern County Planning and Natural Resources Department and an additional year shall be added to the monitoring program to ensure coverage is achieved."

We are unsure what is meant by a 75 percent cover rate as we can interpret this three ways – (1) 75 percent of the Project Site will have been revegetated to the level of density, diversity and cover that undisturbed areas have; (2) the Project Site will have achieved a 75 percent cover rate of the typical 25 percent cover found in woody plants in Mojave creosote bush scrub; or (3) the Project Site will have a plant cover rate of 75 percent including annual and perennial plants. We suggest that the DEIR clarify this statement. 13-J

We were unable to locate in the DEIR what the requirements would be if the 75 percent cover rate is not achieved by the end of the third year. It appears the Proponent would have met their commitment to revegetate the site, but may not have met the success standards. We request that the Proponent be required to revegetate to the "to be determined" success standards, to provide monitoring reports annually to Kern County and CDFW to demonstrate the Proponent is progressing working toward achieving success standards, and to remove an end time when the Proponent's revegetation efforts would cease. These requirements would provide an incentive to the Proponent to successfully revegetate the site with native plants to meet the success standards as soon as feasible. 13-K

Under Air Quality (Section 4.3), MM 4.3-2.d. says, "[a] Revegetation Plan shall be submitted for approval to the Kern County Planning and Natural Resources Department. To minimize long term dust issues from the project, the project site shall be revegetated (consistent with existing site conditions)." "Following construction completion, the project area shall be re-seeded with native vegetation. See Mitigation Measure MM 4.1-3 for plan specifications." We request that the CDFW and USFWS be added to the list of entities that review and approve the Revegetation Plan because of the presence of the state threatened Mohave ground squirrel, and use of the Project Site by the Mojave desert tortoise and species of concern. 13-L

We were unable to find a requirement for a plan to manage/control invasive plant species at the Project Site. We request that an Invasive Species Management Plan be developed and implemented during all phases of the Project that includes regular monitoring and removal of invasive plant species. Our reasons for this request were provided above under Environmental Setting. 13-M

Under Biological Resources (Section 4.4), Kern County says, the Proponent applied to CDFW for a Section 2081 Incidental Take Permit in the spring of 2020. Obtaining this permit is necessary to comply with Mitigation Measure 4.4-4.a., which says, "Pre-construction tortoise clearance surveys shall be conducted at 15-foot intervals to locate any desert tortoises prior to grading or ground disturbance. The surveys shall be conducted by an authorized biologist within 24 hours of the onset of the surface disturbance and prior to the installation of all tortoise-proof fencing. An "authorized biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for this project." CDFW is not able to authorize a biologist to handle a species listed 13-N

under the California Endangered Species Act until it issues a Section 2081 Incidental Take Permit for that species and that project. Similarly, USFWS is not able to authorize a biologist to handle a species listed under the Federal Endangered Species Act until it issues a Section 10(a0(1)(B) Incidental Take Permit for that species and that project. We request Kern County add this requirement to the DEIR and require these permits if handling or other forms of take are likely to occur. 13-N (cont.)

For MM 4.4-4.c., please add to the requirement for inspection of desert tortoise exclusion fencing that inspections will occur immediately after a rainfall event on the Project Site or immediately upgradient of the Project Site. In addition, please include that if the inspection reveals damage to the fence, it will be repaired/replaced within 8 hours. 13-O

For MM 4.4-4.g. please add that the authorized biologist shall investigate how a tortoise was able to access the Project Site after completion of tortoise clearance surveys and construction and maintenance of the tortoise exclusion fence around the project site. Immediately after its discovery, the access point(s) would be fixed so ingress of a tortoise to the Project Site does not occur again. The authorized biologist would submit a report to the USFWS, CDFW, and Kern County on the findings and implemented remedies within 30 days of the discovery of the tortoise. 13-P

For MM 4.4-5, please add the qualified biologist must also be approved by the CDFW. 13-Q

For MM 4.4-5.e., please add "[a]ny individuals who undertake biological monitoring and mitigation tasks shall be supervised on site by the qualified biologist(s)." We believe this is a CDFW requirement. 13-R

For MM 4.4-6, please add "Any employee, contractor, or other person(s) working at the project site who are participating in the operations, maintenance, and/or decommissioning of the project facilities, including implementation of mitigation, shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis." 13-S

MM 4.4-7.g says, "To prevent inadvertent entrapment of desert kit foxes, American badgers, or other animals during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day, or provided with one or more escape ramps." We are unsure how Kern County determined that a depth of 2 feet is the minimum depth in which animals would become entrapped in a steep-sided hole or trench. For example, an adult tortoise would have a difficult time leaving a steep-walled trench 18 or 20 inches deep while a smaller tortoise would be entrapped in a smaller depth hole or trench. We request that Kern County provide a citation that supports the claim that a steep-sided hole or trench less than 2 feet deep provides egress for animals. Absent this citation, we request that all steep-sided holes or trenches be covered or provided with escape ramps and that they be inspected in the morning and evening for animals. 13-T

We find MM 4.4-7.h. to be unclear. It says, "all construction pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site (during operation or maintenance) for one or more overnight periods shall be thoroughly inspected by a qualified biologist for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved…" 13-U

We are unsure whether this mitigation measure would be implemented during the construction phase, as it says construction pipes, culverts, or similar structures, the operation and maintenance phase, as this wording is parenthetically added, or both. We request that this mitigation measure be clarified to include all phases of the Project. However, a typical best management practice is that all pipes and similar structures are capped to prevent animals from using them.

MM 4.4 – 8. This mitigation measure requires the development of a Raven Management Plan for the Project Site, which requires during construction, the identification of raven nests onsite and implementation of measures onsite to reduce its attractiveness to ravens; during operation, the inspection for raven nests; and during decommissioning, minimization of practices that attract ravens.

The wording during the operation phase only requires inspection of raven nests. Resources associated with human activities have allowed raven populations to grow beyond their "natural" carrying capacity in the desert habitat (Boarman 1993). For example, powerline poles and towers provide artificial perches and nest sites for common ravens (Lovich and Bainbridge 1999). Ravens are able to fly at least 30 miles in search of food and water on a daily basis (Boarman et al. 2006). Boarman (2003) reports that tortoise shells have been found beneath active raven nests and shells with evidence of raven predation have been found beneath likely raven perch sites. Mojave desert tortoises experience hyperpredation (Boarman 2003) when the raven population is maintained by some abundant, often introduced prey (e.g., human subsidies of food) but depredate rare native prey (e.g., Mojave desert tortoise) when they encounter them in the same habitat. 13-V

We request that the Raven Management Plan require implementing effective deterrents to prevent ravens from nesting, perching, or roosting on newly constructed buildings, fences, gen-tie poles, and other vertical structures that would subsidize their abilities to more effectively hunt wildlife species including Mojave desert tortoise, Mohave ground squirrel, and species of special concern in and near the Project Site. In addition, the Project will provide a water source for ravens during all phases. Please see our comments above under MM 4.3-1.a.i. In addition, in Appendix M Utilities and Service Systems, Kern County says the PV panels would be washed four times a year. This is another potential water source if water is allowed to pool. The Raven Management Plan should prohibit pooling of water on the Project Site.

We were unable to find a description of the poles that would be used for construction of the gen-tie line. Because common ravens are known to use lattice towers for nesting, we request that the Proponent use monopoles for supporting the gen-tie lines and other transmission lines associated with the Project to reduce the substrate available for nest construction. 13-W

The Raven Management Plan would be "approved by the Kern County Planning and Natural Resources Department." We request that the USFWS and CDFW review and approve of this plan. 13-X

USFWS (2010) provides a template for a project-specific management plan for common ravens. This template includes sections on construction, operation and maintenance, and decommissioning (including restoration) with monitoring and adaptive management during each project phase. We request the Raven Management Plan follow the guidance developed by the USFWS (2010). 13-Y

In the DEIR, Kern County mentions several plans that would be developed to mitigate the impacts of the Project. Some mitigation plans that are relevant to the Mojave desert tortoise, Mohave ground squirrel, and species of special concern include mitigation for aesthetics, air quality, biological resources, and hazards/hazardous materials. These plans include: aesthetics = Landscape Revegetation and Restoration Plan; air quality = Fugitive Dust Emissions Control and Monitoring Plan; biological resources = Raven Management Plan. Phased Grading Plan, Seed Harvesting, Storage, and Planting Plan, Stormwater Pollution Prevention Plan, Erosion Control Plan, Burrowing Owl Exclusion Plan, Habitat Mitigation and Monitoring Plan; and hazards and hazardous materials = Hazardous Materials Business Plan. Kern County says, "with implementation of these mitigation measures," which includes the to-be-developed mitigation plans, "impacts [to these resource issues] would be less than significant." 13-Z

Unfortunately, the DEIR does not provide a draft of these mitigation plans. The public must trust that Kern County will ensure that these plans will be adequate, science-based, and effective, include monitoring and adaptive management, and have measurable objectives/success criteria in achieving what Kern County asserts they will do. We contend the absence of these crucial mitigation plans is not acceptable under CEQA as the DEIR does not provide sufficient information about these plans to conclude the impacts to these resource issues would be less than significant. We request that Kern County include the draft mitigation plans in the Final EIR, so the decisionmaker and the public have sufficient information to see if the plans will achieve what Kern County says they will achieve, especially those mitigation plans affecting the Mojave desert tortoise, Mohave ground squirrel, and species of special concern.

In addition to the development of these mitigation plans, we request that Kern County require an Invasive Species Management Plan and Fire Prevention and Management Plan be developed and implemented for the Project. Both plans are needed because invasive species fuel and carry fires, and batteries and other material stored/used at the Project Site (e.g., lithium batteries) are prone to fire. Invasive species within and near the Project Site will fuel and carry a fire across the Project Site and into adjacent desert vegetation not adapted to and historically not experiencing large or recurring fires. 13-A2

We appreciate this opportunity to provide input and trust that our comments will help protect tortoises during any authorized project activities. Herein, we ask that the Desert Tortoise Council 13-B2

be identified as an Affected Interest for this and all other Kern County projects that may affect species of desert tortoises, and that any subsequent environmental documentation for this particular project is provided to us at the contact information listed above. 13-B2 (cont.)

Regards,

Ken MacDonald
Desert Tortoise Council, Chairperson

cc: California State Clearinghouse

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Abella, S.A., and K.H. Berry. 2016. Enhancing and Restoring Habitat for the Desert Tortoise Gopherus agassizii. Journal of Fish and Wildlife Management Volume 7(1):1-25.

Boarman, W.I. 2002. Threats to Desert Tortoise Populations: A Critical Review of the Literature. U.S. Geological Survey, Western Ecological Research Center, San Diego Field Station, San Diego, CA. Prepared for West Mojave Planning Team, Bureau of Land Management.

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[BLM] Bureau of Land Management. 2016. Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement. California Desert District, Moreno Valle, CA.

Lovich, J.E., and D. Bainbridge. 1999. Anthropogenic degradation of the southern California desert ecosystem and prospects for natural recovery and restoration. Environmental Management, v. 24, p. 309–326.

U.S. Fish and Wildlife Service. 2010. Common Raven Predation on the Desert Tortoise. Ventura Fish and Wildlife Office. November 2010.

Attachments

Abella S.R. and K.H. Berry. 2016. Enhancing and restoring habitat for the desert tortoise (Gopherus agassizii). Journal of Fish and Wildlife Management 7(1):xx–xx; e1944-687X. doi: 10.3996/052015-JFWM-046.

Response to Comment Letter 13: Desert Tortoise Council (August 14, 2020)

13-A: The comment states that the Desert Tortoise Council is a non-profit organization and provides a brief explanation of their organization's objectives. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record.

13-B: The comment provides a summary of the proposed project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record.

13-C: The comment provides a summary of the Kern County four alternatives, including the No Project Alternative. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record.

13-D: This comment states that the Desert Tortoise Council (DTC) supports the "rooftop solar" alternative (Alternative 5) [sic – the rooftop solar alternative is Alternative 4 in the Draft EIR]; however, DTC questions why the electricity generated would be for on-site use only and battery energy storage would not be included. They request that the Draft EIR be revised to address why the technology would not be included in this alternative.

The Draft EIR evaluated Alternative 4: No Ground-Mounted Utility-Solar Development Alternative—Distributed Commercial and Industrial Rooftop Solar Only ("Distributed Alternative"). As the Draft EIR found, however, there are a number of drawbacks to this alternative, including increased prohibitively high costs, delayed buildout, and the project operator's lack of control of or access to suitable sites (Draft EIR p. 6-37). Thus, while the Draft EIR finds that Alternative 4 is the environmentally superior action alternative under CEQA, it properly cautions that:

It is important to note that it is considered to be impracticable and infeasible to construct the Rooftop Solar Alternative within the same timeframe and/or with the same efficiency as the proposed project because the project proponent lacks control and access to the sites required to develop 32 MW of distributed solar generated electricity. In addition, Alternative 4 would not achieve the objective of assisting California load-serving entities in meeting their obligations under California's RPS Program

See Response 5-B.

Battery energy storage was not included in Alternative 4 because energy generated by the distributed rooftop solar PV systems would typically be consumed on site by the commercial or industrial facility which it is installed without requiring the construction of new electrical substation or transmission facilities. This is largely due to the fact that the energy generated by the distributed rooftop solar PV systems would not provide enough power to one spot and would require the establishment of multiple substations and transmission lines to provide the produced energy storage to the grid. Furthermore, existing rooftops may not be able to support the battery storage structures provided the technology for battery storage is different than solar PV panels. Existing rooftops may have to undergo an extensive retrofit to support such structures. This would be impractical as Alternative 4 proposes the development of solar PV systems on rooftops of existing facilities.

With respect to on-site use, although producers of rooftop solar energy may sell some electricity to California utilities, the share of Alternative 4's 26.6 MW of solar power that would be sold to public utilities is proportionally lower than that of the Proposed Project (using the comment's example,

90 percent rather than 100 percent). Therefore, Alternative 4 would not be as effective in assisting California load-serving entities in meeting their obligations under California's RPS Program as would the Proposed Project. In any event, the project's impact on California's RPS Program is only one of many drawbacks of Alternative 4 (Draft EIR p. 6-36).

13-E: This comment summarizes the desert tortoise protocol level surveys that were conducted in 2015. In addition, comments on the suitable habitat that could support the desert tortoise and Mohave ground squirrel and that desert tortoise carcass, and a Mohave ground squirrel was observed during the focus surveys.

With respect to the desert tortoise surveys, see Responses 2-B and 2-C. Based on the results of the surveys cited by comment, the U.S. Fish and Wildlife Service does not recommend that the applicant apply for incidental take authorization. See also Responses 12-I, 12-J, and 12-W.

With respect to Mohave ground squirrel, see Responses 5-E.

13-F: This comment states that the Draft EIR does not discuss any direct and indirect impacts to the Mojave Desert tortoise, Mohave ground squirrel, other species of special concern, and their habitat from increased use of the Project site and nearby areas by predators of the tortoise. The comment requests that the Final EIR include analysis of these impacts.

See Responses 2-B, 2-C, 5-E, 12-I, 12-J, and 12-W. Also refer comment to page 4.4-3 of the Draft EIR, which recognizes potential impacts to both species and identifies mitigation measures to reduce impacts to less than significant.

With respect to the comment's specific requests regarding predation and water impacts on these species that may result from project construction, we note that an EIR's impacts analysis "need not include all information available on a subject" as long as "it contains sufficient information and analysis to enable the public to discern the analytic route the agency traveled from evidence to action." *Association of Irritated Residents v County of Madera* (2003) 107 Cal.App.4th 1383, 1397; *see also* 14 C.C.R. § 15151 ("An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.").

13-G: This comment states that the Draft EIR does not discuss any direct and indirect impacts to the Mojave Desert tortoise, Mohave ground squirrel, other species of special concern, and their habitat from introduction of new and spread and proliferation of non-native invasive plant species at the Project site and nearby areas. The comment requests that the Final EIR include analysis of these impacts to the tortoise, ground squirrel, and species of special concern.

As noted in the Draft EIR, native plant cover and diversity is typically low within a few disturbed areas but otherwise intact on the project site. There are disturbances in several locations on the Phase 1 site that are either barren or have resulted in conditions that promote the growth of non-native species. There were observed plant species on the Phase 1 site that are not native to California (i.e., exotic), and the remaining are native species. The non-native species include several mustard species (*Brassica tournefortii, Descurainia pinnata, Sisymbrium altissimum,* and *Sisymbrium irio*), five grass species (*Bromus madritensis* ssp. *rubens, Bromus tectorum, Bromus trinii, Hordeum murinum,* and *Triticum aestivum*), wild lettuce (*Lactuca serriola*) and red-stemmed filaree (*Erodium cicutarium*). Some of the native invasive species include annual bur-sage (*Ambrosia acanthicarpa*), pineapple weed (*Camomilla suaveolens*), rubber rabbitbrush (*Chrysothamnus*

nauseosus), fiddleneck (*Amsinckia tessellata*) and Jimsonweed (*Datura wrightii*). Phase 2 contains areas that are even more disturbed than Phase 1, which supports an abundance of Russian thistle (*Salsola tragus*) (i.e., "tumble weed), which was not observed on the Phase 1 site (Circle Mountain, 2016).

Clearly, based on the existing site conditions, it is unlikely that the Project would introduce more non-native plant species than what is currently existing as baseline.

13-H: This comment summarizes Aesthetics Mitigation Measure MM 4.1-3(e) and states that this Mitigation Measure should also be relevant to the Biological Resources section.

With respect to submitting the Landscape Revegetation and Restoration Plan to USFWS and CDFW, the lead agency has the authority to approve the Plan. The Plan has relevance to biological resources, and the requirement as outlined is a standard acceptable to the wildlife agencies. However, there is no nexus to require approval by a wildlife agency.

Thank you. Your comment is noted for the record.

13-I: This comment is in addition to the Mitigation Measure MM 4.1-3 (e) comment above and summarizes that the three-year monitoring program for revegetation may not be sufficient due to climate changes and extended drought conditions. The comment suggests that the Draft EIR be revised to extend the revegetation monitoring program to 7 to 10 years.

The comment offers no substantiation as to why a seven-year revegetation monitoring period is in any way superior to a three-year period. A three-year monitoring period is appropriate and accepted by the wildlife agencies as adequate. The site already contains non-native plant species. The Draft EIR states in order to mitigate this long-term impact from the project, a revegetation/restoration plan should be prepared to restore the native vegetation on the project site to its pre-project conditions. This revegetation plan will include methods to restore native Mojave creosote scrub habitat to impacted areas on the project site, a regular monitoring schedule, and performance standards for successful restoration. Implementation of Mitigation Measures MM4.4-1, MM 4.4-2 and MM 4.4-12 would support recolonizing of the site by plants and wildlife, and eventually the site would return to its natural pre-project conditions when all project infrastructure has been removed.

13-J: This comment is in addition to the Mitigation Measure MM 4.1-3 (e) comment above and summarizes that should the revegetation efforts prove to not be successful by the second year by 75 percent cover rate, re-evaluation of the revegetation methods shall be made in consultation with the County. The comment provides three interpretations to this Mitigation Measure and suggests that the Draft EIR clarify this statement.

The correct interpretation of this measure is that Mitigation Measure MM 4.1-3 will require an average combined annual and perennial native vegetation cover of 75% by the end of the second year. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

13-K: The comment states that the Draft EIR does not specify what the revegetation requirements would be if 75 percent cover rate is not achieved by the end of the third year. The comment requests that the Proponent be required to revegetate to the "to be determined" success standards, to provide monitoring reports annually to Kern County and CDFW to demonstrate the Proponent is

progressing working toward achieving success standards, and to remove an end time when the Proponent's revegetation efforts would cease.

See Responses 13-I and 13-J. A three-year monitoring period is appropriate and accepted by the wildlife agencies as adequate. The lead agency has typically imposed a three-year monitoring period for other solar projects in the area, as well as mine and quarry projects. No comments or concerns have been raised by wildlife agencies about the adequacy of the requirement. Mitigation Measure MM 4.1-3 (e) provides that if revegetation efforts do not meet the 75 percent cover rate by the second year, then "re-evaluation of revegetation methods" shall take place and an additional year will be added to the monitoring program "*to ensure coverage is achieved*" (emphasis added). Mitigation Measure MM 4.1-3 (e) therefore provides a clear "success standard" as requested by the comment.

13-L: The comment summarizes the Air Quality (Section 4.3) Mitigation Measure MM 4.3-2 (d). The comment requests that the CDFW and USFWS be added to the list of entities that review and approve the Revegetation plan because of the presence of the state threatened Mohave ground squirrel, and use of the Project site by the Mojave Desert tortoise and species of concern.

See Responses 2-B, 2-C, 5-E, 5-G, 12-I, 12-J, and 12-W for discussions of impacts to Mohave ground squirrel and desert tortoise. As explained therein and on page 4.4-3 of the Draft EIR, the existing mitigation measures reduce impacts to both species to less than significant such that comment's suggested additional measures are not necessary.

13-M: The comment states that the Draft EIR does not have a requirement for a plan to manage/control invasive plant species at the Project site. The comment requests that an Invasive Species Management Plan be developed and implemented during all phases of the Project that includes regular monitoring and removal of invasive plant species.

See Responses 13-G and 13-I. As explained therein, it is unlikely that the Project would introduce more non-native plant species than what is currently existing as baseline. An invasive species management plan is therefore unnecessary.

13-N: The comment summarizes that under the Biological Resources (Section 4.4 of the Draft EIR) that the Proponent applied to CDFW for a Section 2081 Incidental Take Permit in the spring of 2020. The Mitigation Measure states that an "authorize biologist" is defined as a wildlife biologist who has been authorized to handle desert tortoises by USFWS and CDFW for this project; however, the comment states that CDFW is not able to authorize a biologist to handle a species listed under the CESA until it issues a Section 2081 Incidental take Permit for this species and that project. Similarly, USFWS is not able to authorize a biologist to handle a species listed under the FESA until it issues a Section 10(a)(1)(B) Incidental Take Permit for that species and that project. The comment requests that Kern County add this requirement to the Draft EIR and require these permits if handling or other forms of take are likely to occur.

As the comment notes, the term "authorized biologist" is defined in the Draft EIR as a wildlife biologist who has been authorized to handle desert tortoises by USFWS and CDFW. The comment provides no legal support for the assertion that USFWS and CDFW are unable to authorize a biologist before issuing an Incidental Take Permit, particularly as the term is defined in the Draft EIR. Rather, Mitigation Measure MM 4.4-4.a provides a process for selecting and authorizing a biologist to conduct field surveys: "Name(s) of proposed authorized biologist(s) must be submitted

to U.S. Fish and Wildlife Service and California Department of Fish and Wildlife for approval at least 15 days prior to initiating field surveys." There is no requirement that USFWS or CDFW issue Incidental Take Permits prior to authorizing the proposed biologist(s). Note, finally, that as explained in the response to Comment 2-C, the Mitigation Measure MM 4.4-4(a) has been revised to reflect USFWS's request that it not be included in that provision, because the likely absence of desert tortoises at the Project site renders federal incidental take authorization unnecessary. This modification adds clarity to the EIR, and therefore does not reflect a new or substantially increase significant impact or otherwise trigger recirculation under CEQA Guidelines Section 15088.5.

Also, see Responses 2-B, 2-C, 5-E, 5-G, 12-I, 12-J, 12-W and 13-I.

13-O: The comment requests that Mitigation Measure MM 4.4-4(c) have the following text be added: "the requirement for inspection of desert tortoise exclusion fencing that inspections will occur immediately after a rainfall event on the Project Site or immediately upgradient of the Project Site. In addition, please include that if the inspection reveals damage to the fence, it will be repaired/replaced within 8 hours."

See Responses 2-B, 2-C, 5-E, 12-I, 12-J, 12-W and 13-I. As explained therein and on page 4.4-3 of the Draft EIR, the Draft EIR's existing mitigation measures reduce impacts to both Mohave ground squirrel and Mojave desert tortoise to less than significant levels such that comment's suggested additional measures are not necessary. With respect to inspections after rainfall in particular, note that the Draft EIR provides mitigation measures to ensure that impacts to existing drainage patterns are less than significant (Draft EIR p. 4.10-22).

13-P: The comment requests that Mitigation Measure MM 4.4-4 have the following text be added: "that the authorized biologist shall investigate how a tortoise was able to access the Project site after completion of tortoise clearance surveys and construction and maintenance of the tortoise exclusion fence around the project site. Immediately after its discover, the access point(s) would be fixed so ingress of a tortoise to the Project Site does not occur again. The authorized biologist would submit a report to the USFWS, CDFW, and Kern County of the findings and implemented remedies within 30 days of the discovery of the tortoise."

See Responses 2-B and 2-C, 5-G, 12-I, 12-J and 12-W. As explained therein and on page 4.4-3 of the Draft EIR, the Draft EIR's existing mitigation measures reduce impacts to both Mohave ground squirrel and Mojave desert tortoise to less than significant such that the comment's suggested additional measures are not necessary.

13-Q: The comment requests that Mitigation Measure MM 4.4-5 have the following text be added: "the qualified biologist must also be approved by the CDFW."

See Responses 2-B, 2-C, 5-E, 5-G, 12-I, 12-J, 12-W and 13-I. As explained therein and on page 4.4-3 of the Draft EIR, the Draft EIR's existing mitigation measures reduce impacts to both Mohave ground squirrel and Mojave desert tortoise to less than significant such that the comment's suggested additional measures are not necessary.

13-R: The comment requests that Mitigation Measure MM 4.4-5 (e) have the following text be added: "[a]ny individuals who undertake biological monitoring and mitigation tasks shall be supervised on site by the qualified biologist(s)." In addition, they state that they believe this is a CDFW requirement.

See Responses 2-B, 2-C, 5-E, 5-G, 12-I, 12-J, 12-W and 13-I**.** As explained therein and on page 4.4-3 of the Draft EIR, the Draft EIR's existing mitigation measures reduce impacts to both Mohave ground squirrel and Mojave desert tortoise to less than significant such that comment's suggested additional measures are not necessary.

13-S: The comment requests that Mitigation Measure MM 4.4-6 have the following text be added: "Any employee, contractor, or other person(s) working at the project site who are participating in the operations, maintenance, and/or decommissioning of the project facilities, including implementation of mitigation, shall also attend the Worker Environmental Awareness Training and Education Program prior to starting work on the project and on an annual basis."

As noted in the Draft EIR, mitigation measures imposed during construction activities are also imposed during decommissioning activities. This would include decommissioning crews to receive Worker Environmental Awareness Training and Education Program training prior to commencement of ground disturbance activities, as required by Mitigation Measure MM 4.4-6.

See Responses 2-B, 2-C, 5-E, 12-I, 12-J, 12-W and 13-I

13-T: The comment summarizes Mitigation Measure MM 4.4-7 (g) and states that the County provide a citation that supports the claim that a steep-sided hole or trench less than 2 feet deep provides egress for animals. In addition, the comment request that all steep-sided holes or trenches be covered or provided with escape ramps and that they be inspected in the morning and evening for animals.

Mitigation Measure MM 4.4-7 provides egress for the American badger and desert kit fox, which are adopted from standard measures to protect the endangered San Joaquin kit fox, a species that has a greater level of protection than either the desert kit fox or American badger, yet with similar ecological needs and behaviors. This standard egress mitigation measure has been accepted by the regulatory agencies as adequate to protect American badgers and desert kit fox from direct and indirect impacts from construction activities. This measure is based around the USFWS "*Standardized recommendations for the protection of the San Joaquin kit fox prior too or during ground disturbance*" (2011) which is to be followed prior to construction activities. The comment does not present reliable evidence that these measures are ineffective. Given that the comments were made by an organization protecting tortoises, we conclude that the ramps provided for badgers and kit foxes will also function to allow tortoises to escape from any pitfalls. No additional or revised mitigation is necessary.

13-U: The comment summarizes Mitigation Measure MM 4.4-7 (h) and states that the mitigation is unclear if this measure would be implemented during the construction phases, as it says construction pipes, culverts, or similar structures, the operation and maintenance phase, as this wording is parenthetically added, or both. The comment requests that this Mitigation Measure be clarified to include all phases of the Project. However, a typical best management practice is to cap all pipes and similar structures to prevent animals from using them.

This mitigation measure clearly states that the measures *shall be implemented during construction, operations and maintenance, and decommissioning.* This measure is intended to protect all wildlife species that might be encountered on the project site, including desert tortoise, desert kit fox, burrowing owl, or other animals. See response to Comment 13-T.

13-V: The comment summarizes the Mitigation Measure MM 4.4-8 that requires the project proponent to develop a Raven Management Plan. The comment requests that the Raven Management Plan

require implementing effective deterrent to prevent ravens from nesting, perching, or roosting on newly constructed buildings, fences, gen-tie poles, and other vertical structures. In addition, the comment notes that Appendix M Utilities and Service Systems, the County says the PV panels would be washed four times a year. The comment states that the Raven Management Plan should prohibit pooling of water on the Project site to prevent providing a potential water source for ravens.

The Raven Management Plan as written, in combination with other desert tortoise related mitigation measures, will reduce impacts to desert tortoises to less than significant such that comment's suggested additional measures are not necessary.

See Response 12-J.

13-W: The comment states that the Draft EIR does not provide a description of the poles that would be used for construction of the gen-tie line. The comment requests that the project proponent use monopoles for supporting the gen-tie lines and other transmission lines associated with the Project to reduce the substrate available for raven nest construction.

It has been noted that Mitigation Measure MM 4.4-8 requires a Raven Management Plan to reduce ravens from using the project. In addition, Mitigation Measure MM 4.4-13 requires an Avian Monitoring Program that minimizes impacts to raptors and reduces use of gen-tie and transmission line use by ravens. See response to Comments 12-M, 12-R and 12-Q.

13-X: This comment states that Raven Management Plan would be approved by the County. The comment requests that the Plan be reviewed and approved by the USFWS and CDFW.

See response to Comments 12-M, 12-R and 12-Q.

13-Y: This comment states that the USFWS provides a template for a project-specific management plan for common ravens and includes sections on construction, operation and maintenance, and decommissioning with monitoring and adaptive management during each project phase. The comment requires that the Raven Management Plan follow this USFWS template.

See response to Comments 12-M, 12-R and 12-Q.

13-Z: This comment summarizes the plans that the County is requiring to mitigate the impacts of the Project. The comment requests that the County include the draft mitigation plans in the Final EIR, so the decision maker and public have sufficient information to see if the plans will achieve what the Kern County says they will achieve, especially those mitigation plans affecting the Mojave Desert tortoise, Mohave ground squirrel, and species of special concern.

The comment is noted for the record. Any clarifications to mitigation measures are provided to all the decision makers and appropriate agencies in Chapter 7- Response to Comments.

A draft Mitigation Measure Monitoring Program that details the steps to compliance for each proposed Mitigation Measure is provided to the decision-making bodies prior to project approval. Moreover, the lead agency notes that the CEQA Guidelines allow for the development of specific mitigation plans after project approval:

> The specific details of a mitigation measure . . . may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review provided that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the

type(s) of potential action(s) that can feasibly achieve that performance standard and that will considered, analyzed, and potentially incorporated in the mitigation measure.

14 CCR § 15126.4(a)(1)(B); *see also Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1029 ("[T]he agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval[.]").

The complete versions of the specific mitigation plans identified in the comment may be formulated at a later date pursuant to specific performance criteria of the existing Mitigation Measures in the Draft EIR.

13-A2: The comment requests that the County require an Invasive Species Management Plan and Fire Prevention and Management Plan be developed and implemented for the Project.

Draft EIR Section 4.14, Wildfires, requires the development of a Fire Safety Plan. Implementation of Mitigation Measure MM 4.14-1 is sufficient to reduce impacts to less than significant levels.

See also Responses 13-G and 13-I.

13-B2: The comment summarizes their appreciation for their inputs and trust that their comments will help project tortoise during any authorized project activities. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record.

Comment Letter No. 14: Indian Wells Valley Well Owners Association

To: Kern County Natural Resources Department, Advanced Planning Division, attn: Ronelle Candia

From: Don Decker, Chairman, IWV Domestic Well Owners Association

Subj: Comment/protest letter on the inadequacies of the Draft Environmental Impact Report for the RB Inyokern Solar Project dated July 2020

Date: August 15, 2020

To whom it may concern:

1) The undersigned has carefully read and studied the referenced Environmental Impact Report (EIR) which has been prepared by Kern County to support a photovoltaic power project to be located on approximately 160 acres of privately held, undisturbed desert land. This Report is voluminous but deficient in many areas of critical concern to the residents of the Indian Wells Valley (IWV). 14-A

2) The undersigned has been a resident of the IWV for over 50 years and can accurately attest to the claims made in this letter. The undersigned is also the Chairman of the IWV Domestic Well Owners and is in personal contact with many of the rural Associates of this organization. **The concerns expressed in this letter are widely held and would constitute a significant unmitigated consequence if the project were to go forward as presently proposed.** 14-B

3) Much of the analysis presented in the Appendices appears to be comprehensive but fail to address the specific local effects that are described below. 14-C

4) The specifics:

a) The glare analysis is incomplete in the sense that it fails to emphasize the intensity of the glare effect that a pilot can experience when flying in the vicinity of the Inyokern Airport and this proposed PV project. It can be argued that this effect will be uncommon but it will be unexpected and potentially very strong at certain sun angles and plane locations. Pilots are cautioned frequently and strongly to avoid situations producing distracting visual effects or images. It is impossible to avoid this glare potential with the Project located so close to the airport. This author has first hand understanding of this problem. 14-D

b) **Another unmitigated issue with the proposed project is the dust that will be produced and not controlled during construction and more importantly after completion and during actual operation**. The dust control measures proposed in the EIR address only the construction period. **It is virtually impossible to apply enough water on a windy day to actually control blowing dust from disturbed desert soil. The effected parties will include the Inyokern Airport and its operations, the residents of Inyokern and vicinity, the Navy China Lake Ranges and Laboratories and the rural Kern County and potentially even Ridgecrest residents.** 14-E

The soil at this site contains far more fine silt and clay than is identified in the Soils Appendix. This fine material is stabilized with a very fragile crust if undisturbed. **Once disturbed however, it is very difficult to return to a stable condition. Water alone is insufficient and reseeding is not usually successful.**

The dust production after the field is completed can and does exist for an indefinite period even if the project applicant follows Kern County requirements completely. This claim can be easily confirmed by direct observation of blowing dust on windy days from many of the PV projects already in existence in the Cantil area. <u>This issue is a serious limitation to further photovoltaic project expansion on fragile and vulnerable desert soils</u>.

14-E (cont.)

c) Attempts to control fugitive dust as described in the EIR are not only ultimately futile but would necessarily consume substantial precious local groundwater. **<u>This critically over-drafted basin has no surplus water for this or any other development until an alternate water supply is secured</u>.** Using native water for this project may be authorized by County Permit but the water is actually being taken from the existing residents.

14-F

d) This property is substantially pristine, and is high quality undisturbed Northern Mojave Desert land. The creosote bush density alone indentifies the biological fertility. It is private property and the owners cannot be denied the full enjoyment of this property. However, Kern County has a responsibility to oversee whatever development does take place. The project as proposed will result in total destruction of the biological value of the project footprint.

14-G

This property is of high quality for two endangered species: the desert tortoise and the Mojave ground squirrel. At a minimum, a property of equivalent biological value needs to be offered as mitigation for this project.

14-H

Sincerely, Don Decker

Response to Comment Letter 14: Indian Wells Valley Well Owners Association (August 15, 2020)

14-A: The comment states that representatives of the Indian Wells Valley (IWV) Owners Accosication have carefully read and studied the Draft EIR and summarizes the project description. In addition, the comment states that the Draft EIR is deficient in many areas of critical concern to the residents of the IWV. This introductory comment has been noted for the record.

14-B: The author of the comment states that they have been a resident of the IWV for over 50 years and can accurately attest to the claims made in the comment letter. The author of the comment states that the concerns expressed in the comment letter are widely held and would constitute a significant unmitigated consequence if the project were to go forward as presently proposed.

This comment has been noted for the record.

14-C: The comment states that the Appendices appear to be comprehensive but fail to address the specific local effects that are described in the letter.

This comment has been noted for the record.

14-D: The comment states that the glare analysis is incomplete in the sense that it fails to emphasize the intensity of the glare effect that a pilot can experience when flying in the vicinity of the Inyokern Airport and this proposed PV project.

See Response 5-C. As discussed therein, glare from solar PV arrays such as those proposed by the Project is minimal and is not expected to impact air traffic.

14-E: The comment states that another unmitigated issue is the dust that will be produced and not controlled during construction and more importantly after completion and during actual operation.

See Response 5-D. As discussed therein, the Draft EIR's numerous mitigation measures addressing fugitive dust control are comprehensive and effective. The comment here does not provide evidence to support the assertion that the existing mitigation measures will not be effective. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

14-F: The comment states that attempts to control fugitive dust as described in the Draft EIR are not only ultimately futile but would necessarily consume substantial precious local groundwater. In addition, the comment states the over-drafted basin has no surplus of water for this or any other development until an alternate water supply is secured.

The project is anticipated to use approximate 74-acre feet of water during construction and approximately 1.2-acre feet of water during operations. A Will Serve letter from the Inyokern Community Service District indicated their ability to provide sufficient water to the project. Mitigation Measures MM 4.10-2 and MM 4.10-3 require compliance with all Indian Wells Valley Groundwater Sustainability Plan and obtaining a new Will Serve letter prior to the issuance of grading or building permits.

It should be noted that the project site is zoned M-2 (Medium Industrial). Based on that zoning, the landowner could construct and operate a number of more water-intensive industrial or commercial uses on the site without any additional environmental review whatsoever. The

construction and operation of PV solar on the site actually will reduce the overall water demand of other allowed industrial uses and will be a less impactful use of the land.

14-G: The comment states that the property is substantially pristine and is high quality undisturbed Northern Mojave Desert land, and that project as proposed will result in "total destruction of the biological value of the project footprint."

See Responses 5-F and 13-G. As explained therein, the site is generally disturbed by a variety of previous uses, and native plant cover and diversity is typically low within disturbed areas on the site. There are disturbances in several locations on the site that have resulted in conditions that promote the growth of non-native species. There is no biological evidence to assert the site is "pristine" in nature. The Draft EIR's mitigation measures further reduce any potential biological impacts to less than significant as result of the project alone.

14-H: The comment states that the property is of high quality for two endangered species: desert tortoise and Mohave ground squirrel. The comment states, at a minimum, a property of equivalent biological value needs to be offered as mitigation for this project.

The proponent has identified mitigation lands that, if accepted by the CDFW, are of higher quality habitat than those being lost and surrounded by open desert, unlike the subject property. See also response to Comments 2-B, 2-C, 5-E, 12-I, 12-J, 12-W 13-I 14-G.

Comment Letter 15:
Kern County Public Works Department, Administration and Engineering Division

COUNTY OF KERN
PUBLIC WORKS DEPARTMENT
Office Memorandum

To: Lorelei Oviatt, Director
Planning and Natural Resources Department
Attn: Ronelle R. Candia, Supervising Planner

August 27, 2020

From: Joshua Champlin, Supervising Engineer
Administration and Engineering Division

Subject: 7-5.3 Conditional Use Permit #23, Map #47
7-5.3 Conditional Use Permit #27, Map #47
7-8.5c Specific Plan Amendment #4, Map #47
(Project site is located approximately 2,500 feet south of the U.S. Highway 395 (US 395) north Brown Road interchange in the Inyokern area.)

This Department has reviewed the subject project and recommends the following:

1. Applicant shall provide documentation and show legal access to site.

2. Depending on access point, Type A Improvements may be necessary.

3. Provide a 35-foot by 35-foot right of way corner cutoff at all intersections.

4. All easements shall be kept open, clear, and free from buildings and structures of any kind pursuant to Chapters 18.50 and 18.55 of the Kern County Land Division Ordinance. All obstructions, including utility poles and lines, trees, pole signs, fences, or similar obstructions, shall be removed from the ultimate road rights-of-way. Compliance with this requirement is the responsibility of the applicant and may result in significant financial expenditures.

15-A

Thank you for the opportunity to comment on this project. If you have any questions or comments, please contact Paul Candelaria of this Department.

Response to Comment Letter 15: Kern County Public Works Department, Administration and Engineering Division (August 27, 2020)

15-A: The comment states that the Kern County Public Works Department, Administration and Engineering Division has reviewed the proposed project and provides four main comments on the Draft EIR, as follows:

1. *Applicant shall provide documentation and show legal access to the site.*
2. *Depending on access point, Type A improvements may be necessary.*
3. *Provide a 35-foot by 35-foot right of way corner cutoff at all intersections.*
4. *All easements shall be kept open, clear, and free from buildings and structures of any kind pursuant to Chapters 18.50 and 18.55 of the Kern County Land Division Ordinance. All obstructions, including utility poles and lines, trees, pole signs, fences, or similar obstructions, shall be removed from the ultimate road rights-of-way. Compliance with this requirement is the responsibility of the applicant and may result in significant financial expenditures.*

Regarding documentation showing the applicant's legal access to the site, in compliance with this request, the project proponent will provide the appropriate documentation depicting the proposed site access to the Kern County Public Works Department, Administration and Engineering Division. Regarding the necessity of Type A improvements, if Type A improvements are required based-on the proposed access point, the project proponent will incorporate the improvements as applicable, and in compliance with this request. Regarding the provision of a right of way corner cutoff at all intersections, in compliance with this request, the project proponent will incorporate adequate right of way corner cutoffs at all applicable intersections. Furthermore, the comment states that all easements shall be kept open, clear, and free from buildings and structures including utility poles and lines, trees, pole signs, fences, etc. As described in Section 4.11, Land Use and Planning, of the Draft EIR, the proposed project would be in compliance with all applicable Chapters of the Kern County Land Division Ordinance, and thus, would ensure that all easements are kept open, clear, and free from any obstructions and this requirement will be included as a conditions of project approval. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 16: Kern County Public Works Department, Floodplain Management Section

Office Memorandum

KERN COUNTY

To: Planning and Natural Resources Department
Ronelle Candia

Date: August 28, 2020

From: Public Works Department
Floodplain Management Section
Kevin Hamilton, by Brian Blase

Phone: (661) 862-5098
Email: BlaseB@kerncounty.com

Subject: Notice of Public Hearing – Planning Commission
Conditional Use Permit #23, Map #47
Conditional Use Permit #27, Map #47
Special Plan Amendment #4, Map #47

Our section has reviewed the attached subject documents and has the following comments:

The subject property is subject to flooding.

The runoff of storm water from the site will be increased due to the increase in impervious surface generated by the proposed development.

Therefore, this section recommends the following be included as conditions of approval for this project:

Associated flood hazard requirements will need to be incorporated into the design of this project per the Kern County Floodplain Management Ordinance.

The applicant shall provide a plan for the disposal of drainage waters originating on site and from adjacent road right-of-ways (if required), subject to approval of the Public Works Department.

16-A

Response to Comment Letter 16: Kern County Public Works Department, Floodplain Management Section (August 28, 2020)

16-A: The comment notes that the project site is subject to flooding, that runoff of storm water from the site would increase due to the increase in impervious surface generated by the proposed project, and requests that the following be included as Conditions of Approval for this project:

> *The applicant shall provide a plan for the disposal of drainage waters originating on site and from adjacent road right-of-ways (if required), subject to approval of the Public Works Department, per the Kern County Development Standards.*
>
> *Associated flood hazard requirements will need to be incorporated into the design of this project per the Kern County Floodplain Management Ordinance.*

The Draft EIR identifies that the proposed project would result in an increase in impervious surfaces, which in turn, would result in an increase in stormwater runoff. Specifically, new impervious surfaces would be associated with newly-constructed access roads, PV module and other equipment foundations, substations, energy storage systems, the operations and maintenance building, and other improvements. The vast majority of the project site would remain pervious and absorb most precipitation. Further, as described in Draft EIR Section 4.10, *Hydrology and Water Quality*, the proposed project must comply with the requirements of the Kern County Code of Building Regulations, as well as with Kern County Development Standards, the Floodplain Management Ordinance, and the Kern Country Water Quality Control Plan.

As discussed in Section 4.10, *Hydrology and Water Quality*, Draft EIR page 4.10-19, per Mitigation Measure MM 4.10-1, a drainage plan would be prepared in accordance with the Kern County Development Standards and Kern County Code of Building Regulations. The Kern County Development Standards establish guidelines including but not limited to site development standards and mitigation, flood control requirements, erosion control, and on-site drainage flow requirements. Therefore, with adherence to all existing regulations regarding erosion and site drainage, the proposed project would neither alter the course of a stream or river nor result in substantial erosion onsite or offsite. Implementation of Mitigation Measure MM 4.10-1 and a stormwater pollution prevention plan (SWPPP), as described in the Draft EIR and required to be implemented for the proposed project, would reduce impacts to a less-than-significant level.

The requested will be included as conditions of project approval. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

Ronelle Candia, Supervising Planner
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Email: CandiaR@co.kern.ca.us

Re: CUP #23, Map #47; CUP #27, Map #47; SPA #4, Map #47

Dear Ms. Candia:

The Conditional Use Permits referred to above should be denied and the RB Inyokern Solar Project by R&L Capital, Inc. (SCH #2017071020) should not go forward. The proposed location is a particularly poor one for eastern Kern County, given the prevailing wind direction and proximity to nearby residences and US Route 395; the critical overdraft of the Indian Wells Valley (IWV) Groundwater Basin; and the effects on rare, threatened, or endangered species, especially the Mohave ground squirrel and desert tortoise. 17-A

Dust and sand from the project will blow across Route 395, possibly affecting motorist visibility and sensitive receptors residing to the east of the project site, including exposing them to increased risk of health conditions such as valley fever. 17-B

While the Inyokern Community Services District has struck a deal to sell its groundwater to the project proponent, according to the Groundwater Sustainability Plan for the Indian Wells Valley, this groundwater will have to be replenished by imported water, whose costs will not be borne exclusively by the Inyokern Community Service District and therefore places a burden on others in the IWV. Furthermore, while imported water might ameliorate a water shortage for human needs, pumping damage done to the basin will last at least until the water consumption in the IWV starts to decline, which won't happen anytime soon. 17-C

Kern County's vision for the IWV, given the critical overdraft of its groundwater basin, is to replace agriculture with solar farms for a net water gain. Using these disturbed and continually worked lands makes more sense than opening new land to pumping. 17-D

The project site lies in a connectivity corridor that connects three populations of the CA threatened Mohave ground squirrel (MGS). The Little Dixie Wash core population and another population that extends from south of Searles Valley westward thorough Ridgecrest and Inyokern are connected with the Coso Range – Olancha core population to the north. This corridor is important both for gene flow between populations and as a migration corridor, in which the MGS can move northward in response to global climate change. Thus the preservation of this corridor, which contains high-quality habitat for the MGS, increases long-term resilience of the species. 17-E

The translocation of the desert tortoise (DT) is not an effective mitigation measure for DT mortality and habitat destruction. Translocated tortoises can expect up to 50% mortality, and tortoises in the "donor" region also will experience increased mortality. If this trend of translocating the DT onto smaller parcels of land continues, the desert tortoise will become extinct. 17-F

For both the MGS, DT, and other rare species, using already disturbed land or rooftop solar does less damage and makes more sense. 17-G

Other unavoidable effects enumerated in the Draft EIR include significant adverse effects on aesthetics (including glare), utilities and service systems, and wildfire. For all of the reasons cited please deny the proponent the CUPs necessary for going forward with this project. 17-H

Thank you,

Nancy L. Gooch
337 Mari Ct.
Ridgecrest, CA 93555

Response to Comment Letter 17: Nancy L. Gooch (August 25, 2020)

17-A: The comment states the Conditional Use Permit referenced in the Draft EIR should be denied and the Project should not go forward. In addition, the comment states that the Project location is a poor one for eastern Kern County due to prevailing wind direction, proximity to nearby residences and US Route 395. Furthermore, the comment mentions the critical overdraft of the IWV Groundwater Basin and the effects on rare, threatened, or endangered species, specifically the Mohave ground squirrel and desert tortoise.

The comment introduces topics raised in greater detail in the remainder of the letter. Please see response to Comments 17-B through 17-H below for responses specific to each topic.

17-B: The comment states that dust and sand from the project will blow across Route 395 and possibly affect motorist visibility and sensitive receptors residing to the east of the Project site, including exposing them to increased risk of health conditions such as valley fever.

See response to Comments 5-D, 14-E, and 14-F. As discussed therein, the Draft EIR's numerous mitigation measures addressing fugitive dust control are comprehensive and effective.

17-C: The comment discusses the burden that will be placed on those that live in IWV and rely on the groundwater from the Inyokern Community Services District. The comment states that the groundwater will have to be replenished by imported water and the cost will not be borne exclusively by the Inyokern Community Service District and therefore places a burden on other in the IWV. In addition, the comment states that imported water might ameliorate a water shortage for human needs, pumping damage to the basin will last until the water consumption in the IWV starts to decline.

See response to Comments 14-F. As discussed therein, the Inyokern Community Service District has indicated its ability to provide sufficient water to the project, and Mitigation Measures MM 4.10-2 and MM 4.10-3 of the Draft EIR require compliance with the Indian Wells Valley Groundwater Sustainability Plan.

17-D: The comment states that the County's vision for the IWV is to replace agriculture with solar farms for a net water gain, but that using the existing disturbed and continually worked lands makes more sense than opening new land to water pumping.

See Response 14-F. As discussed therein, the project site is zoned M-2 (Medium Industrial). Based on that zoning, the landowner could construct and operate a number of more water-intensive industrial or commercial uses on the site without any additional environmental review whatsoever. The construction and operation of PV solar on the site actually will reduce the overall water demand of other allowed industrial uses and will be a less impactful use of the land.

17-E: The comment states that the project site lies in a connectivity corridor that connects three populations of Mohave ground squirrel. These three populations include: 1) the Little Dixie Wash; 2) a population that extends from south of Searles Valley westward thorough Ridgecrest and Inyokern and 3) the Coso Range – Olancha population to the north. The comment states that this corridor is important for gene flow between populations and is used as a migration corridor, in which the Mohave ground squirrel can move northward in response to global climate change. The comment states that this corridor needs to be preserved due to high-quality habitat and long-term resilience of the species.

See Responses 5-E and 5-F. As discussed therein, the site is not considered to be high-quality habitat, nor does it detract from habitat connectivity, as the main functional portion of the connectivity corridor lies between the Inyokern Airport and foothills of the Sierra Nevada up to about 6,000 feet elevation. Residential development between Highway 395 and areas west of the airport have already eliminated connectivity in the immediate area of the subject property. In other words, the subject property is completely separated by residential and commercial from the main functional part of the north-south movement corridor for the Mohave ground squirrel, which occurs west of the airport and other developed portions of the community of Inyokern.

17-F: The comment states that translocating desert tortoise is not an effective mitigation measure. The comment states that translocated tortoises can expect up to 50% mortality and tortoises in the "donor" region will experience increased mortality. The comment concludes that if translocating tortoises onto small parcels of land continues, the tortoise will become extinct.

As given above in Response 5-G, no tortoises are expected to occur onsite, so translocation is not anticipated, and measures have been identified in the unlikely event a tortoise is onsite at the time of construction.

17-G: The comment states that Mohave ground squirrel, desert tortoise, and other rare species using existing disturbed land or rooftop solar does less damage and makes more sense.

See response to Comments 5-B and 13-D. As discussed therein, Alternative 4: No Ground-Mounted Utility-Solar Development Alternative—Distributed Commercial and Industrial Rooftop Solar Only was considered by the County and selected against based on a variety of salient factors. Furthermore, as discussed in Response 5-F, the site is generally disturbed by a variety of previous uses.

17-H: The comment states that other unavoidable effects should the Project move forward include significant adverse effects on aesthetics (including glare), utilities and service systems, and wildfire. The comment concludes that because of the above-mentioned reasons the proponent should be denied the CUPs necessary for the project going forward. This comment has been noted for the record.

With respect to aesthetic impacts including glare, see response to Comment 5-C.

With respect to utilities and service systems, the comment does not assert a deficiency in the Draft EIR analysis or determinations regarding utilities and service systems or suggest that it be modified. Please see generally Draft EIR, Section 4.17- *Utilities and Service Systems* and Appendix M,

With respect to wildfire, the comment does not assert a deficiency in the Draft EIR analysis or determinations regarding wildfire or suggest that it be modified. Please see generally Draft EIR, Section 4.18, *Wildfire*.

Pacific Gas and Electric Company

Plan Review Team
Land Management

PGEPlanReview@pge.com

6111 Bollinger Canyon Road 3370A
San Ramon, CA 94583

August 29, 2020

Ronelle Candia
County of Kern
2700 M St, Ste 100
Bakersfield, CA 93301

Ref: Gas and Electric Transmission and Distribution

Dear Ronelle Candia,

Thank you for submitting the CUP #23, Map #47; CUP #27, Map #47, SPA #4, Map #47 plans for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities. 18-A

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights. 18-B

Below is additional information for your review: 18-C

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.

2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services. 18-D

3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities. 18-E

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required. 18-F

Sincerely,

Plan Review Team
Land Management

Pacific Gas and Electric Company

Attachment 1 – Gas Facilities

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: https://www.usanorth811.org/images/pdfs/CA-LAW-2018.pdf

1. Standby Inspection: A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.

2. Access: At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

3. Wheel Loads: To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. Grading: PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.

5. Excavating: Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 12 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch

wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [24/2 + 24 + 36/2 = 54] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 12 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible (90° +/- 15°). All utility lines crossing the gas pipeline must have a minimum of 12 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line 'kicker blocks', storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E's ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4') in height at maturity may be planted within the easement area.

Pacific Gas and Electric Company

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an “Impressed Current” cathodic protection system. Any proposed facilities, such as metal conduit, pipes, service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.

12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.

13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E’s facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.

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Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. Buildings and Other Structures: No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as "**RESTRICTED USE AREA – NO BUILDING."**

2. Grading: Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.

3. Fences: Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&'s facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.

4. Landscaping: Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 15 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.

5. Reservoirs, Sumps, Drainage Basins, and Ponds: Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.

6. Automobile Parking: Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.

7. Storage of Flammable, Explosive or Corrosive Materials: There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.

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8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (https://www.dir.ca.gov/Title8/sb5g2.html), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

Response to Comment Letter 18: Pacific Gas and Electric Company (August 29, 2020)

18-A: The comment provides an introduction to the following comments and states that Pacific Gas and Electric Company (PGE) will review the submitted plans in relationship to any existing PGE facilities within the project area. Furthermore, if the proposed project is adjacent or within PGE owned property or easements, the project proponent will be required to work with PGE to ensure compatible uses. In compliance with this request, the project proponent will notify PGE in the event that any project activities occur within or adjacent to PGE owned property/easements. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

18-B: The comment provides an introduction to Comments 18-C through 18-E. Responses to Comments 18-C through 18-E are provided, below. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

18-C: The comment states that the plan review process does not replace the application process for PGE gas or electric service the project may require. For those requests, the comment asks that the project works with the PGE Service Planning Department. In compliance with this request, the project proponent will submit a request to PGE Service Planning in the event that gas or electric service would be required for the proposed project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

18-D: The comment states that if the project being submitted is part of a larger project, to please include the entire scope of the project. The proposed project is not part of a larger project, and no further response is needed. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

18-E: The comment states that an engineering deposit may be required to review plans for a project depending on the size, scope, and location as it relates to any rearrangement or new installation of PGE facilities. In compliance with this request, the project proponent will be required to pay any engineering deposits as they apply to the proposed project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.

18-F: The comment concludes their comment letter and states that any proposed uses within the PGE fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing, that requires the CPUC to approve conveyance of rights for specific uses on PGE's fee strip or easement. Furthermore, the comment concludes by stating that the letter does not constitute PGE's consent to use any portion of its easement for any purpose not previously conveyed. In compliance with this request, the proposed project will include CPUC section 851 filing needs as applicable. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comment has been noted for the record and revisions to the Draft EIR are not necessary.