

Final Environmental Impact Report

SCH# 2021020513

Volume 7

Chapters 7 – Response to Comments

ARATINA SOLAR PROJECT by 64NB 8ME LLC (PP20401)

Zone Change Case No. 6, Map No. 192
Zone Change Case No. 8, Map No. 192
Zone Change Case No. 3, Map No. 208-5
Zone Change Case No. 6, Map No. 208-6
Zone Change Case No. 1, Map No. 209-1
Conditional Use Permit No. 16, Map No. 192
Conditional Use Permit No. 17, Map No. 192
Conditional Use Permit No. 3, Map No. 208-5
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General Plan Amendment No. 6, Map No. 192 (Circulation)
General Plan Amendment No. 8, Map No. 192 (Circulation)
General Plan Amendment No. 2, Map No. 192-35(Circulation)
General Plan Amendment No. 3, Map No. 208-5 (Circulation)
General Plan Amendment No. 3, Map No. 208-6 (Circulation)
General Plan Amendment No. 1, Map No. 209-1(Circulation)
General Plan Amendment No. 1, Map No. 209-2 (Circulation)



Kern County
Planning and Natural Resources Department
Bakersfield, California

August 2021

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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

August 13, 2021

File: GPA #6, Map #192 and various others
S.D.: #2 - Scrivner

ADDRESSEE LIST (See Distribution List)

**RE: Response to Comments for Draft Environmental Impact Report – Aratina Solar Project by
64NB 8ME LLC (8Minute Energy) (PP20401) (SCH #2021020513)**

Dear Interested Party:

Enclosed is a document entitled *Volume 7 - 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 August 26, 2021 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.

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,

A handwritten signature in blue ink, appearing to read "Ronelle Candia".

Ronelle Candia, Supervising Planner
Advanced Planning Division

COMMENTING AGENCIES AND INTERESTED PERSONS: California Department of Fish & Wildlife; Eastern Kern Air Pollution Control District; Kern County Fire Department - Office of the Fire Marshall; Kern County Public Works Department - Floodplain Management Section; Kern County Surveyor; Kern County Public Health Services Department – Environmental Health Division; Millie Ashpaugh; Joe Barnard; Lynn Black; Debbie Brown; Sharon Burgess; Deric English; Janet Fenner-Mudrak; Donna Fort; James Hanson; Tena Hanson; Sidney Hobbs; Heather Hurley; International Brotherhood of Electrical Workers; Crystal Job; Shelley Keller-Gage; Charles Kennedy; Melba Kennedy; Barbara Kometas; Jonathan Moore; Hasmukh B. Patel; Roy Richards; Kristy Singer; Nancy Smith; California Department of Conservation – Geologic Energy Management; California Native Plant Society and Defenders of Wildlife

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Chapter 7

Response to Comments

SCH# 2021020513

Volume 7

**Aratina Solar Project
by 64NB 8ME LLC (PP20401)**

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Kern County
Planning and Natural Resources Department
Bakersfield, California

August 2021

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7.1 Introduction

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 Aratina Solar Project (project or proposed project). The Final EIR presents the environmental information and analyses that have been prepared for the 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 used by the Planning Commission and the Board of Supervisors in the decision-making process for the proposed project.

Environmental Review Process

A Notice of Preparation (NOP)/Initial Study (IS) (SCH No. 2021020513) was circulated for a 30-day public review period beginning on August 14, 2020 and ending September 14, 2020. Thirty-three individual written comment letters were received. Additional comments were received at the September 4, 2020 public scoping meeting from one individual in attendance. Subsequently, due to a change in the project design in response to public comments received, the NOP was recirculated from February 26, 2021 to March 29, 2021. A total of 38 individual comment letters were received. Additional verbal comments were received at the March 19, 2021 public scoping meeting from two individuals in attendance. All public comments received relevant to CEQA-related issues were considered by the County in preparing the Draft EIR.

The Draft EIR for the proposed project was circulated for a 45-day public review period beginning on May 28, 2021 and ending July 12, 2021. A total of 49 comment letters were received on the Draft EIR during this period. An additional 5 comment letters were received on the Draft EIR following the close of the public review period.

Section 15088 of the *CEQA Guidelines* 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 7, Chapter 7 of the Draft EIR. Volumes 1, 2, 3, 4, 5, 6, and 7 together constitute the Final EIR.

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 ~~striking through~~. 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 Changes: The following “global changes” are intended to apply to the Draft EIR in all instances where such text shown below appears within the document. The text revisions are not repeated herein for each occurrence within the Draft EIR in order to streamline this document.

a) Changes in zone classifications as follows:

- Zone Change Case No. 6, Map No. 192 – from A-1 to A for ~~696.69~~ 444.38 acres
- Zone Change Case No. 8, Map No. 192 – from A-1 to A for 252.31 acres
- Zone Change Case No. 3, Map No. 208-5 – from A-1 to A for 299.94 acres
- Zone Change Case No. 6, Map No. 208-6 – from A-1 to A for 222.49 acres and from R-1 to A for 79.6 acres
- Zone Change Case No. 1, Map No. 209-1 from A-1 to A for 635.20 acres

b) Conditional Use Permits to allow for the construction and operation of five solar facilities with a total generating capacity of approximately 530 megawatts-alternating current (MW-AC) of renewable energy (broken down by site, below), including up to 600 megawatts of energy storage (for all sites), within the A (Exclusive Agriculture) Zone Districts (in Zone Maps 192, 208-5, 208-6, and 209-1) and the M-1 (Light Industrial) Zone District (in Zone Map 209-2) pursuant to Sections 19.12.030.G and 19.36.30.G, respectively, of the Kern County Zoning Ordinance:

- Site 1 (up to 70 MW)
 - Conditional Use Permit No. 3, Map No. 208-5 for 299.94 acres
- Site 2 (up to 180 MW)
 - Conditional Use Permit No. 7, Map No. 208-6 for 169.92 acres
 - Conditional Use Permit No. 1, Map No. 209-1 for 635.20 acres
- Site 3 (up to 140 MW)
 - Conditional Use Permit No. 1, Map No. 209-2 for 620.26 acres
- Site 4 (up to 80 MW)
 - Conditional Use Permit No. 16, Map No. 192 for 339.46 acres
- Site 5 (up to 60 MW)
 - Conditional Use Permit No. 17, Map No. 192 for 252.31 acres

- c) General Plan Amendments to the Circulation Element of the Kern County General Plan to remove future road reservations on the section and mid-section lines within the project boundaries:
- General Plan Amendment No. 6, Map No. 192
 - General Plan Amendment No. 8, Map No. 192
 - General Plan Amendment No. 2, Map No. 192-35
 - General Plan Amendment No. 3, Map No. 208-5
 - General Plan Amendment No. 3, Map No. 208-6
 - General Plan Amendment No. 1, Map No. 209-1
 - General Plan Amendment No. 1, Map No. 209-2

Brief Explanation of Change: The addition of the ZCC and GPA case numbers is administrative in nature and does not change the project's acreage or any of the analysis contained within the EIR.

Executive Summary, Regional Setting, Page 1-6:

The project site is located within Sections 5 and 6, Township 10N, Range 7W; Sections 1 and 2, Township 10N, 8W; and Sections 33 and ~~35~~ 34, Township 11N, Range 8W, San Bernardino Base Meridian...

Chapter 1, Executive Summary; Section 1.5.4, Project Characteristics; Page 1-13:

Stormwater Management

At this preliminary stage of site design, it has not been determined whether on-site stormwater management facilities, such as detention ponds, would be necessary. Mitigation Measure MM 4.10-1 would require preparation of a Stormwater Pollution and Prevention Plan (SWPPP) for approval by the Regional Water Quality Control Board - Lahontan Region to ensure that runoff from the site is minimized and that best management practices (BMPs) are identified to prevent degradation of stormwater during project construction. Additionally, Mitigation Measure MM 4.10-2 would require preparation of a final hydrologic study and drainage plan for review and approval by the Kern County Public Works Department to evaluate and minimize potential increases in runoff from the project site. Based on the findings of the hydrologic study, the drainage plan would recommend an on-site design that complies with all channel setback requirements and ensures facilities are located in such a way to lessen their impact on drainage areas and water quality. Refer also to Section 4.10, Hydrology and Water Quality, of this EIR for additional discussion of the proposed project relative to hydrology and water quality. This will be determined through further hydrological analysis and if required, these facilities will be described and addressed in the EIR.

Chapter 1, Executive Summary; Section 1.6, Environmental Impacts; Page 1-14:

CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons why any new and possibly significant effects of a project were determined not to be significant and were, therefore, not discussed in detail in the EIR. The County has engaged the public to participate in the scoping of the environmental document. The contents of this EIR were established based on a notice of preparation/initial study (NOP/IS) prepared in accordance with the *CEQA Guidelines*, as well as public and

agency input that was received during the scoping process. Comments received on the NOP/IS are located in Appendix A of this EIR. Specific issues found to have no impact or less-than-significant impacts during preparation of the NOP/IS do not need to be addressed further in this EIR. Based on the findings of the NOP/IS and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of all environmental issues identified in *CEQA Guidelines* Appendix G except population and housing and recreation.

Based on the findings of the NOP/IS and the results of scoping, a determination was made that this EIR must contain a comprehensive analysis of all environmental issues identified in *CEQA Guidelines* Appendix G except mineral resources, population and housing, and recreation.

Chapter 1, Executive Summary; Section 1.6.5, Growth Inducement; Page 1-19:

The Kern County General Plan recognizes that certain forms of growth are beneficial, both economically and socially. CEQA Guidelines Section 15126.2 ~~(d)~~ (e) provides the following guidance on growth-inducing impacts:

A project is identified as growth-inducing if it “would foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.”

Chapter 1, Executive Summary, Section 1.6.6, Irreversible Impacts; Page 1-20:

CEQA Guidelines Section 15126.2 ~~(e)~~ (d) defines an irreversible impact as an impact that that uses nonrenewable resources during the initial and continued phases of the project. Irreversible impacts can also result from damage caused by environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to ensure that such consumption is justified.

Chapter 1, Executive Summary, Table 1-7; Page 1-35:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.3 Air Quality | | | |
| Impact 4.3-1: The project would conflict with or obstruct implementation of the applicable air quality plan. | Potentially significant | MM 4.1-3: Preserve and replace existing vegetation to extent feasible, which would reduce potential for surface erosion and dust generation, as defined in Section 4.1, Aesthetics. MM 4.3-1: To control NO _x and PM emissions during construction, the project proponent/operator and/or its contractor(s) shall implement the following measures during construction of the project, subject to verification by the County:... | Less than significant |

Chapter 1, Executive Summary, Table 1-7; Page 1-40:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--|-------------------------|--|--|
| 4.3 Air Quality | | | |
| Impact 4.3-2: The project would expose sensitive receptors to substantial pollutant concentrations. | Potentially significant | <p>Implement Mitigation Measures MM 4.1-3 (see Section 4.1, <i>Aesthetics</i>, for full text), MM 4.3-1; <u>through</u> MM 4.3-23, and:</p> <p>MM 4.3-4: Prior to the issuance of building and grading permits, the project proponent shall submit materials showing the final design plans for a 6-foot tall solid barrier (fence or wall) in the locations shown on Figure 4.3-2, <i>Solid Barrier Location</i>, to the Kern County Natural Resources Department for review and approval. Any barrier used shall be a natural color, such as light brown, that will blend with the desert environment. White, bright green, blue or other colors will not be accepted. A copy of the final design plans shall also be provided to the California Department of Fish and Wildlife. The approved barrier shall be fully installed prior to the last inspection by Kern County Public Works. No extensions of time for construction installation shall be granted. The applicant shall continuously comply with the following:</p> <ol style="list-style-type: none"> As part of routine maintenance, on-site staff shall monitor the buildup of wind-blown materials around the base of the fence and clear out debris and tumbleweeds on both sides of the barrier on an as-needed basis; and The solid barrier shall be maintained during the life of the project in good condition, graffiti free and replaced as needed to remain effective. | Significant and unavoidable |

Chapter 1, Executive Summary, Table 1-7; Page 1-40 – 1-41:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--|-------------------------|--|--|
| 4.3 Air Quality | | | |
| Impact 4.3-2: The project would expose sensitive receptors to substantial pollutant concentrations. | Potentially significant | <p>MM 4.3-65: <u>At the time of project implementation, a COVID-19 Health and Safety Plan should be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the Kern County Planning and Natural Resources Department for review and approval.</u></p> <p>MM 4.3-56: To minimize personnel and public exposure to potential Valley Fever-containing dust on and off site, the following control measures shall be implemented during project construction:</p> <ol style="list-style-type: none"> Equipment, vehicles, and other items shall be thoroughly cleaned of dust before they are moved off site to other work locations. Wherever possible, grading and trenching work shall be phased so that earth-moving | Significant and unavoidable |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|---|--|
| | | <p>equipment is working well ahead or downwind of workers on the ground.</p> <ul style="list-style-type: none"> c. The area immediately behind grading or trenching equipment shall be sprayed with water before ground workers move into the area. d. In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust shall leave the area until a truck can resume water spraying. e. To the greatest extent feasible, heavy-duty earth-moving vehicles shall be closed-cab and equipped with a HEP-filtered air system. f. Workers shall receive training in procedures to minimize activities that may result in the release of airborne <i>Coccidioides immitis</i> spores, to recognize the symptoms of Valley Fever, and shall be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor. Evidence of training shall be provided to the Kern County Planning and Natural Resources Department within 5 days of the training session. g. A Valley Fever informational handout shall be provided to all onsite construction personnel. The handout shall, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment. Additional information and handouts can be obtained by contacting the Kern County Public Health Services Department. h. Onsite personnel shall be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health-approved respirators shall be provided to onsite personnel, upon request. When exposure to dust is unavoidable, provide appropriate National Institute for Occupational Safety and Health-approved respiratory protection to affected workers. If respiratory protection is deemed necessary, employers must develop and implement a respiratory protection program in accordance with Cal/OSHA's Respiratory Protection standard (8 CCR 5144). <p>MM 4.3-6: At the time of project implementation, a COVID-19 Health and Safety Plan should be prepared in accordance with the Kern County Public Health Services Department and Kern County Health Officer mandates. A copy of the COVID-19 Health and Safety Plan shall be submitted to the</p> | |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|---|--|
| | | Kern County Planning and Natural Resources Department for review and approval. | |

Chapter 1, Executive Summary, Table 1-7; Pages 1-44:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|---|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | MM 4.4-6: Spoils shall be stockpiled in disturbed areas presently lacking native vegetation. Stockpile areas shall be marked to define the limits where stockpiling can occur. Standard best management practices shall be employed to prevent loss of habitat due to erosion caused by project-related impacts (i.e., grading or clearing for new roads). All detected erosion shall be remedied within two days of discovery. | Less than significant |

Chapter 1, Executive Summary, Table 1-7; Pages 1-45 to 1-46:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4-8: The project operator and/or contractor shall implement the following during project decommissioning:</p> <ul style="list-style-type: none"> a. All applicable construction phase general protection measures shall be implemented during decommissioning. b. A 25-15-mile-per-hour speed limit on paved or stabilized unpaved roads shall be applied for travel during decommissioning activities. Travel shall be confined to existing roads and previously disturbed areas. c. If any special-status wildlife is detected in the work area during decommissioning activities, no work shall be conducted until the individual moves on its own outside of the work area. d. Work outside areas with desert tortoise exclusion fencing shall only occur during daylight hours. <p>MM 4.4-9: During construction and decommissioning the project operator and/or contractor shall implement the following general avoidance and protective measures:</p> | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <ul style="list-style-type: none"> a. Prior to issuance of grading or building permits but after consulting with the California Department of Fish and Wildlife and, obtaining a project Section 2081 permit for incidental take, if required, the entire solar facility project site shall be fenced with a permanent desert tortoise exclusion fence to keep any desert tortoise that may be using habitat adjacent to the facility from entering during construction, operations and maintenance, and dismantling and restoration (decommissioning) phases. The fencing type shall follow current fence specifications established by the United States Fish and Wildlife Service. Desert tortoise-proof gates shall be established at all photovoltaic solar facility entry points. Workers installing the exclusion fencing shall have undergone the worker training program mandated in Mitigation Measure MM 4.4-2 and a biological monitor under the authority of the project Lead Biologist shall be present during exclusion fencing installation. b. The fencing shall be inspected monthly and immediately after all major rainfall events. Any damage to the fencing shall be repaired immediately or no later than 2 days following the observation. c. Following the construction of desert tortoise exclusion fencing, around the solar facility perimeter as described above, clearance surveys shall be conducted by the Lead Biologist to ensure that no desert tortoises or other listed wildlife species are trapped within the fenced area. The Lead Biologist may be assisted by biological monitors under the supervision of the Lead Biologist. Clearance surveys shall adhere to the current United States Fish and Wildlife Service clearance survey protocols described in the Desert Tortoise Field Manual, including a minimum of two clearance passes to be completed after desert tortoise-proof fencing is installed, which shall coincide with heightened desert tortoise activity from late March through May and September through October <u>or as specified by the Incidental Take Permit issued by CDFW.</u> d. If a desert tortoise is found on the site during project construction, operations, or decommissioning, active construction or operations shall cease in the vicinity of the animal and the desert tortoise shall be passively restricted to the area encompassing its observed position on the construction site and its point of entry shall be determined if possible. The Lead | |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|---|--|
| | | <p>Biologist shall install a temporary tortoise-proof fence around this area. Concurrent with this effort, United States 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 desert tortoise is observed leaving the site, work in the area can resume. A report shall be prepared by the Lead Biologist to document the activities of the desert tortoise within the site; all fence construction, modification, and repair efforts; and movements of the desert tortoise once again outside the permanent tortoise-proof fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department.</p> <p>e. Outside permanently fenced desert tortoise exclusion areas, the project operator shall limit the areas of disturbance in desert tortoise habitat. Parking areas; new roads; pulling sites; and staging, storage, excavation, and disposal site locations shall be confined to the smallest areas possible. These areas shall be flagged and disturbance activities, vehicles, and equipment shall be confined to these flagged areas.</p> <p>f. The Lead Biologist or biological monitor shall monitor any ground-disturbance activities that occur outside the desert tortoise exclusion fencing. Work outside areas with desert tortoise exclusion fencing shall only occur during daylight hours.</p> | |

Chapter 1, Executive Summary, Table 1-7; Page 1-53 to 1-54:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4.15: The project operator and /or contractor shall implement the following prior to the issuance of grading or building permits:</p> <p>a. Following the construction of exclusion fencing around the solar facility perimeters, clearance surveys shall be conducted by the Lead Biologist to ensure that no desert tortoises, Mohave ground squirrel, or other wildlife are trapped within the fenced area. The Lead Biologist may be assisted by biological monitors under the supervision of the Lead Biologist. Clearance surveys shall adhere to the current United States Fish and Wildlife Service clearance survey protocols described in the</p> | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <p>Desert Tortoise Field Manual, including a minimum of two clearance passes to be completed after desert tortoise-proof fencing is installed, which shall coincide with heightened desert tortoise activity from late March through May and September through October <u>or as specified by the Incidental Take Permit issued by CDFW.</u></p> <p>b. If a desert tortoise or Mohave ground squirrel is found on the site during project construction, operations, or decommissioning, activity shall cease in the vicinity of the animal. The Lead Biologist shall contact the United States 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. Work shall not resume at the site until both the United States Fish and Wildlife Service and California Department of Fish and Wildlife respond, and all recommended measures are taken. A report shall be prepared by the Lead Biologist to document the activities of the desert tortoise or Mohave ground squirrel within the site; all fence construction, modification, and repair efforts; and movements of the animal once again outside the permanent tortoise-proof fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department.</p> <p>c. Outside permanently fenced desert tortoise exclusion areas, the project operator shall limit the areas of disturbance in desert tortoise and Mohave ground squirrel habitat. Parking areas, new roads, pulling sites, and locations for staging, storage, and excavation shall be confined to the smallest areas possible. These areas shall be flagged, and disturbance activities, vehicles, and equipment shall be confined to these flagged areas.</p> | |

Chapter 1, Executive Summary, Table 1-7; Pages 1-54:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|---|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4-16: The measures listed below shall be implemented prior to and during construction, operations, and decommissioning at the project sites.</p> <p>a. The project operator shall mitigate for permanent impacts to suitable desert tortoise and Mohave ground squirrel habitat, should an incidental take permit be required from California Department of Fish and Wildlife, through an approved mitigation bank, or in-lieu fee program. Compensatory mitigation acreage for permanent impacts to western burrowing owl nesting, occupied, and satellite burrows and/or western burrowing owl habitat shall be determined and acquired in consultation with the wildlife or resource agency. Compensatory mitigation lands purchased may provide habitat for all three species, as well as rare plants and State Waters (only if impacted by the project). Verification of compliance shall be submitted to the Kern County Planning and Natural Resources Department.</p> <p><u>The project operator has filed for an Incidental Take Permit for Mohave ground squirrel and desert tortoise with California Department of Fish and Wildlife. The project proponent shall mitigate for permanent impacts to suitable desert tortoise and Mohave ground squirrel habitat, through an approved mitigation bank, in-lieu fee program, or other mechanism accepted by California Department of Fish and Wildlife and/or United States Fish and Wildlife Service, as outlined in each agency's respective permit. Compensatory mitigation acreage for permanent impacts to western burrowing owl nesting, occupied, and satellite burrows and/or western burrowing owl habitat shall be determined and acquired in consultation with the wildlife or resource agency and may be mitigated alongside impact on covered species. Compensatory mitigation would provide habitat for desert tortoise, Mohave ground squirrel, and/or burrowing owl, as well as rare plants, State Waters (only if impacted by the project), and features covered under the Project's Lake and Streambed Alteration Agreement. The Final Interim Take Permit shall be submitted to the Kern County Planning and Natural Resources Department prior to the onset of activities that have the potential to impact covered species.</u></p> <p>b. Prepare a Habitat Mitigation and Monitoring Plan (if required, should an incidental take permit be required for the project) that outlines all project compensatory mitigation for desert</p> | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <p>tortoise, western burrowing owl, and Mohave ground squirrel, in coordination with the California Department of Fish and Wildlife and the Regional Water Quality Control Board.</p> <p>a. <u>1.</u> Compensatory lands shall be of similar or better quality than habitat lost, and preferably shall be located in the vicinity of the site.</p> <p>b. <u>2.</u> Compensatory lands shall be permanently preserved through a conservation easement.</p> <p>c. <u>3.</u> The plan shall identify conservation actions to ensure that the compensatory lands are managed to ensure the continued existence of the species.</p> <p>d. <u>4.</u> The plan shall identify an approach for funding assurance for the long-term management of the conserved land.</p> | |

Chapter 1, Executive Summary, Table 1-7; Pages 1-54 to 1-58:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4-17 The following measures shall be implemented during project construction, operations/maintenance, and decommissioning activities with respect to western burrowing owls....</p> <p>b. If no burrowing owls are detected, no further mitigation is necessary. If burrowing owls are detected, no ground-disturbing activities, such as road construction or installation of solar arrays or ancillary facilities, shall be permitted within the distances specified in Table 2 of the Staff Report from an active burrow during the nesting and fledging seasons (April 1 to August 15 and August 16 to October 15, respectively), unless otherwise authorized by California Department of Fish and Wildlife. The specified buffer distance ranges from 656 feet to 1,640 feet, according to the time of year and the level of disturbance. Buffers shall be established in accordance with the table provided in Mitigation Measure MM 4.4-17c), below, and occupied burrows shall not be disturbed during the nesting season unless a qualified biologist approved by California Department of Fish and Wildlife, verifies through noninvasive methods that either: (1) the birds 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 (April 1 to October</p> | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-----------------------|--|--|--------------|--------------------------------|--|--|-----|--------|------|---------------|----------------|-----|------|------|---------------|-----------------|-----|-----|------|---------------------|-----------------|-----|-----|------|--|
| | | <p>15) or as specified by the Incidental Take Permit issued by CDFW.</p> <p>c. During the nonbreeding (winter) season (October 16 to March 31), consistent with the table below (<i>Western Burrowing Owl Burrow Buffers</i>), all ground-disturbing work shall maintain a distance ranging from 164 feet to 1,640 feet from any active burrows depending on the level of disturbance. If active winter burrows are found that would be directly affected by ground-disturbing activities, owls can be displaced from winter burrows according to recommendations made in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012).</p> <p>Western Burrowing Owl Burrow Buffers</p> <table><tr><th rowspan="2">Location</th><th rowspan="2">Time of Year</th><th colspan="3">Level of Disturbance (in feet)</th></tr><tr><th>Low</th><th>Medium</th><th>High</th></tr><tr><td>Nesting Sites</td><td>April 1-Aug 15</td><td>656</td><td>1640</td><td>1640</td></tr><tr><td>Nesting Sites</td><td>Aug 16 - Oct 15</td><td>656</td><td>656</td><td>1640</td></tr><tr><td>Any occupied burrow</td><td>Oct 16 - Mar 31</td><td>164</td><td>328</td><td>1640</td></tr></table> <p>Source: California Department of Fish and Game 2012</p> <p>d. Burrowing owls should not be excluded from burrows unless or until a Burrowing Owl Exclusion Plan is developed by the Lead Biologist 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:</p> <ol style="list-style-type: none">1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;2. Type of scope to be used and appropriate timing of scoping to avoid impacts;3. Occupancy factors to look for and what shall guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before | Location | Time of Year | Level of Disturbance (in feet) | | | Low | Medium | High | Nesting Sites | April 1-Aug 15 | 656 | 1640 | 1640 | Nesting Sites | Aug 16 - Oct 15 | 656 | 656 | 1640 | Any occupied burrow | Oct 16 - Mar 31 | 164 | 328 | 1640 | |
| Location | Time of Year | Level of Disturbance (in feet) | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Low | Medium | High | | | | | | | | | | | | | | | | | | | | | | |
| Nesting Sites | April 1-Aug 15 | 656 | 1640 | 1640 | | | | | | | | | | | | | | | | | | | | | | |
| Nesting Sites | Aug 16 - Oct 15 | 656 | 656 | 1640 | | | | | | | | | | | | | | | | | | | | | | |
| Any occupied burrow | Oct 16 - Mar 31 | 164 | 328 | 1640 | | | | | | | | | | | | | | | | | | | | | | |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|---|--|
| | | <p>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).</p> <p>4. How the burrow(s) shall 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 no owls reside inside the burrow);</p> <p>5. Removal of other potential owl burrow surrogates or refugia on-site; and,</p> <p>6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.</p> <p>e <u>7.</u> Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;</p> <p>f <u>8.</u> How the impacted site shall 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.</p> <p>g <u>9.</u> Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows to ensure take is avoided. Conduct daily monitoring for one week to confirm young of the year have fledged if the exclusion shall occur immediately after the end of the breeding season.</p> <p>h <u>10.</u> Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).</p> <p>i <u>e.</u> In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or heavy material 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. Forty-eight hours after</p> | |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <p>the installation of the one-way doors, the doors can be removed, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.</p> <p>j.f. During construction and decommissioning activities, monthly and final compliance reports shall be provided to California Department of Fish and Wildlife, the Kern County Planning and Natural Resources Department, and other applicable resource agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.</p> | |

Chapter 1, Executive Summary, Table 1-7; Pages 1-58 to 1-59:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4-18 Should burrowing owls be found on-site:</p> <ol style="list-style-type: none"> Compensatory mitigation for lost breeding and/or wintering habitat shall be implemented off-site in accordance with the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012) and in consultation with California Department of Fish and Wildlife. At a minimum, the following recommendations shall be implemented: <ol style="list-style-type: none"> Temporarily disturbed habitat shall be restored, if feasible, to pre-project conditions, including de-compacting soil and revegetating. Permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat shall be mitigated such that the habitat acreage, number of burrows and burrowing owl impacted are replaced based on a site-specific analysis and shall include: Permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) 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. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <p>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 operator may purchase available burrowing owl conservation bank credits.</p> <p>b-5. Develop and implement a mitigation land management plan in accordance with the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012) guidelines to address long-term ecological sustainability and maintenance of the site for burrowing owls.</p> <p>46. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.</p> <p>27. 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 CDFW-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.</p> <p>38. Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present.</p> <p>49. Consult with the CDFW when determining off-site mitigation acreages.</p> | |

Chapter 1, Executive Summary, Table 1-7; Pages 1-59 to 1-60:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of | Potentially significant | <p>MM 4.4-19 Prior to the issuance of grading or building permit the following shall be implemented:</p> <p>a. Preconstruction surveys shall be conducted by a qualified biologist for the presence of desert kit fox and American badger dens prior to installation of desert tortoise exclusion fencing. Copies of the completed surveys shall be submitted to Kern County Planning and Natural Resources Department.</p> | Less than significant |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--|-----------------------|--|--|
| Fish and Wildlife or U.S. Fish and Wildlife Service. | | <p>b. The survey shall be conducted in areas of suitable habitat for American badger and desert kit fox, which includes fallow agricultural land and scrub habitats. Surveys shall not be conducted for all areas of suitable habitat at one time; they shall be phased so that surveys occur within two weeks prior to disturbance of that portion of the site. If no potential American badger or desert kit fox dens are present, no further mitigation is required.</p> <p>c. If potential dens are observed, the following measures are required to avoid potential adverse effects to American badger and desert kit fox:</p> <p>d. <u>1.</u> If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers or foxes from reuse during construction. <u>Den excavation shall be prohibited during the pupping season to avoid possible pup mortality resulting from a lack of available refugia.</u></p> <p>e. <u>2.</u> Passive relocation shall be prohibited during the pupping season, which is February 15 to June 1 for both species. If the qualified biologist determines that potential dens outside the breeding season may be active, the biologist shall notify the California Department of Fish and Wildlife. Entrances to the dens shall be blocked with soil, sticks, and debris for three to five days to discourage use of these dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three-to five-day period. After the qualified biologist determines that badgers and foxes have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction. The collapsing of active desert kit fox dens shall not occur without prior consultation with the CDFW. A biologist shall remain on-call throughout construction in the event that badger or desert kit fox are present on the site.</p> <p>f. <u>3.</u> Construction activities shall not occur within 50 feet of active badger dens. The project operator shall contact California Department of Fish and Wildlife immediately if natal badger dens are detected to determine</p> | |

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|--------|-----------------------|--|--|
| | | <p>suitable buffers and other measures to avoid take.</p> <p>4. Construction activities shall not occur within 100 feet of active kit fox dens. The project operator shall contact California Department of Fish and Wildlife immediately if pupping kit fox dens are detected to determine suitable buffers and other measures to avoid take.</p> | |

Chapter 1, Executive Summary, Table 1-7; Page 1-64:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---|-------------------------|--|--|
| 4.4 Biological Resources | | | |
| Impact 4.4-1: The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or a special-status species in local or regional plans, policies, or regulations or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. | Potentially significant | <p>MM 4.4-25: The following measures shall be implemented within the project area to ensure that direct or indirect effects to jurisdictional waters are minimized: ...</p> <p>d. All work within the drainages shall be conducted to avoid periods of flowing water. Construction within drainages shall be timed to occur during the dry season (generally April 15 – October 15) and shall avoid periods in the summer when convective thunderstorms are predicted <u>or as approved in the Streambed Alteration Agreement issued by CDFW.</u></p> | Less than significant |

Chapter 1, Executive Summary, Table 1-7; Page 1-65:

| Impact | Level of Significance | Mitigation Measures | Level of Significance after Mitigation |
|---------------------------------------|-------------------------|---|--|
| 4.4 Biological Resources | | | |
| Impact 4.4: Cumulative Impacts | Potentially significant | <p>Implementation of Mitigation Measures MM 4.4-1 through 4.4-25, and MM 4.1-4 through MM 4.1-6 would be required (see Section 4.1, <i>Aesthetics</i>, for full text), and MM 4.10-1 through MM 4.10-2 would be required (see Section 4.10 <i>Hydrology and Water Quality</i>, for full text).</p> <p>Implementation of Mitigation Measures <u>MM 4.1-4 through MM 4.1-6</u> (see Section 4.1, <i>Aesthetics</i>, for full text), <u>MM 4.4-1 through MM 4.4-25</u>, <u>MM 4.9-1</u> (see Section 4.9, <i>Hazards and Hazardous Materials</i>, for full text), and <u>MM 4.10-1 through MM 4.10-2</u> (see Section 4.10, <i>Hydrology and Water Quality</i>, for full text).</p> | Significant and unavoidable |

Chapter 3, Project Description; Section 3.2, Project Location; Page 3-1:

The project site is located within Sections 5 and 6, Township 10N, Range 7W; Sections 1 and 2, Township 10N, 8W; and Sections 33 and ~~35~~ 34, Township 11N, Range 8W, San Bernardino Base Meridian...

Chapter 3, Project Description, Figure 3-9, Proposed Zoning; Page 3-16:

Refer to revised Figure 3.9, *Proposed Zoning*, below. The figure has been corrected to show the correct zoning on Site 3 (no change from the existing zoning that applies).



Chapter 3, Project Description; Section 3.7, Project Characteristics; Page 3-22:**Stormwater Management**

At this preliminary stage of site design, it has not been determined whether on-site stormwater management facilities, such as detention ponds, would be necessary. Mitigation Measure MM 4.10-1 would require preparation of a Stormwater Pollution and Prevention Plan (SWPPP) for approval by the Regional Water Quality Control Board - Lahontan Region to ensure that runoff from the site is minimized and that best management practices (BMPs) are identified to prevent degradation of stormwater during project construction. Additionally, Mitigation Measure MM 4.10-2 would require preparation of a final hydrologic study and drainage plan for review and approval by the Kern County Public Works Department to evaluate and minimize potential increases in runoff from the project site. Based on the findings of the hydrologic study, the drainage plan would recommend an on-site design that complies with all channel setback requirements and ensures facilities are located in such a way to lessen their impact on drainage areas and water quality. Refer also to Section 4.10, Hydrology and Water Quality, of this EIR for additional discussion of the proposed project relative to hydrology and water quality. This will be determined through further hydrological analysis and if required, these facilities will be described and addressed in the EIR.

Chapter 4, Air Quality, Impact 4.3-2; Page 4.3-53:**Mitigation Measures**

Implement Mitigation Measures MM 4.1-3 (see Section 4.1, *Aesthetics*, for full text), MM 4.3-1, through MM 4.3-23, and:

MM 4.3-4 Prior to the issuance of building and grading permits, the project proponent shall submit...

Chapter 4, Air Quality, Impact 4.3-3; Page 4.3-55:**Impact 4.3-3: The project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.**

Substantial objectionable odors are normally associated with agriculture, wastewater treatment, industrial uses, or landfills. The project would involve the construction, operation and maintenance, and decommissioning of a solar energy facility and associated infrastructure that do not produce objectionable odors. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors (nearby residences). In addition, construction-related odors would be short-term and would cease upon completion of construction. Operation of the project would not emit any odorous compounds.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less significant.

Chapter 4, Biological Resources, CDNPA Plants, Page 4.4-13:

Four CDNPA-protected species were recorded in the project areas: Joshua tree, silver cholla, diamond cholla, and beavertail. A total of ~~4,500~~ 4,946 CDNPA plants were recorded in the project area during the ~~survey~~ biological surveys of the project area (Table 4.4 3).

Chapter 4, Biological Resources, Wildlife Movement Corridors; Page 4.4-22:

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. The project site ~~does not lie within a recognized wildlife connectivity area~~ is located within an area identified and mapped as “Focal Species Union” and “Land Facet Union” as mapped by the California Essential Habitat Connectivity (CEHC) Project. However, the project site is not located within a Natural Landscape Block or Essential Connectivity Area as mapped in the CEHC. The project site and surrounding area contain expanses of open habitat with little development and the site lacks any significant barriers to local wildlife movement. However, such elements as local highways (i.e., SR 58) and industrial operations (i.e., mining operations such as Borax Mine), along with established local communities such as Boron and Desert Lake, may deter wildlife movement in the project vicinity and the surrounding area.

Chapter 4, Biological Resources, Thresholds of Significance; Page 4.4-35:

The project is considered to be consistent with the Land Use, Open Space, and Conservation Element of the Kern County General Plan. The project site is located within the Desert Renewable Energy Conservation Plan (DRECP) planning area, ~~which means that the area is expected to support fewer sensitive status species than areas identified with conservation potential and is therefore more likely to be appropriate for renewable energy development.~~ However, the DRECP at this time only applies to federal public lands managed by the Bureau of Land Management and is not an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The proposed project would be located on private land and therefore is not subject to the DRECP. There are no other adopted conservation plans for protection of biological resources governing the project area. No impact would occur as the proposed project would not conflict with the provisions of an adopted habitat conservation plan. No further analysis in the EIR is warranted.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-36:

Loss of more than 10 percent of habitat occupied by on-site special-status plant species (i.e., desert cymopterus, Barstow woolly sunflower, Mojave spineflower, and crowned muilla), where present within the project area or potentially occurring within the project area, would be considered significant. However, this potentially significant impact can be mitigated to less than significant through the implementation of Mitigation Measure MM 4.4-12. ~~All four of these special-status plant species are present within the solar facility, with no special-status plants present within the gen-tie.~~

Chapter 4, Biological Resources, Impact 4.4-1; Page 4.4-44:

MM 4.4-6 Spoils shall be stockpiled in disturbed areas ~~presently~~ lacking native vegetation. Stockpile areas shall be marked to define the limits where stockpiling can occur. Standard best management practices shall be employed to prevent loss of habitat due to erosion caused

by project-related impacts (i.e., grading or clearing for new roads). All detected erosion shall be remedied within two days of discovery.

Chapter 4, Biological Resources, Impact 4.4-1; Page 4.4-44:

- MM 4.4-8** The project operator and/or contractor shall implement the following during project decommissioning:
- All applicable construction phase general protection measures shall be implemented during decommissioning.
 - A ~~25~~15-mile-per-hour speed limit on paved or stabilized unpaved roads shall be applied for travel during decommissioning activities. Travel shall be confined to existing roads and previously disturbed areas.
 - If any special-status wildlife is detected in the work area during decommissioning activities, no work shall be conducted until the individual moves on its own outside of the work area.
 - Work outside areas with desert tortoise exclusion fencing shall only occur during daylight hours.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-44 to 4.4-45:

- MM 4.4-9** During construction and decommissioning the project operator and/or contractor shall implement the following general avoidance and protective measures:
- Prior to issuance of grading or building permits but after consulting with the California Department of Fish and Wildlife and, obtaining a project Section 2081 permit for incidental take, if required, the entire solar facility project site shall be fenced with a permanent desert tortoise exclusion fence to keep any desert tortoise that may be using habitat adjacent to the facility from entering during construction, operations and maintenance, and dismantling and restoration (decommissioning) phases. The fencing type shall follow current fence specifications established by the United States Fish and Wildlife Service. Desert tortoise-proof gates shall be established at all photovoltaic solar facility entry points. Workers installing the exclusion fencing shall have undergone the worker training program mandated in Mitigation Measure MM 4.4-2 and a biological monitor under the authority of the project Lead Biologist shall be present during exclusion fencing installation.
 - The fencing shall be inspected monthly and immediately after all major rainfall events. Any damage to the fencing shall be repaired immediately or no later than 2 days following the observation.
 - Following the construction of desert tortoise exclusion fencing, around the solar facility perimeter as described above, clearance surveys shall be conducted by the Lead Biologist to ensure that no desert tortoises or other listed wildlife species are trapped within the fenced area. The Lead Biologist may be assisted by biological monitors under the supervision of the Lead Biologist. Clearance surveys shall adhere to the current United States Fish and Wildlife Service clearance survey protocols described

in the Desert Tortoise Field Manual, including a minimum of two clearance passes to be completed after desert tortoise-proof fencing is installed, which shall coincide with heightened desert tortoise activity from late March through May and September through October or as specified by the Incidental Take Permit issued by CDFW.

- d. If a desert tortoise is found on the site during project construction, operations, or decommissioning, active construction or operations shall cease in the vicinity of the animal and the desert tortoise shall be passively restricted to the area encompassing its observed position on the construction site and its point of entry shall be determined if possible. The Lead Biologist shall install a temporary tortoise-proof fence around this area. Concurrent with this effort, United States 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 desert tortoise is observed leaving the site, work in the area can resume. A report shall be prepared by the Lead Biologist to document the activities of the desert tortoise within the site; all fence construction, modification, and repair efforts; and movements of the desert tortoise once again outside the permanent tortoise-proof fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department.
- e. Outside permanently fenced desert tortoise exclusion areas, the project operator shall limit the areas of disturbance in desert tortoise habitat. Parking areas; new roads; pulling sites; and staging, storage, excavation, and disposal site locations shall be confined to the smallest areas possible. These areas shall be flagged and disturbance activities, vehicles, and equipment shall be confined to these flagged areas.
- f. The Lead Biologist or biological monitor shall monitor any ground-disturbance activities that occur outside the desert tortoise exclusion fencing. Work outside areas with desert tortoise exclusion fencing shall only occur during daylight hours.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-48 to 4.4-49:

MM 4.4-14 The following measures shall be implemented to reduce direct impacts to Sensitive Natural Communities. To the extent feasible, the following avoidance and minimization measures shall be implemented:

- a. Where feasible, the project shall be designed to avoid disturbance of *Atriplex spinifera* shrubland alliance and Joshua tree woodland identified within the project site.
- b. Where it is not feasible to avoid direct impacts the *Atriplex spinifera* shrubland alliance and Joshua tree woodland identified within the project site, the project operator shall implement the following measures:
- c. Compensatory mitigation for impacts to Sensitive Natural Communities shall occur either on-site or off-site and would occur at a ratio no less than 1:1 for each Sensitive Natural Community impacted. A Habitat Mitigation and Monitoring Plan shall be prepared that outlines the compensatory mitigation in coordination with the California Department of Fish and Wildlife.

- d. If on-site mitigation is proposed, the Habitat Mitigation and Monitoring Plan shall identify those portions of the site that contain suitable characteristics for restoration or enhancement of sensitive habitat. Determination of mitigation adequacy shall be based on comparison of the restored or enhanced habitat with similar, undisturbed habitat in the vicinity of the development site. If mitigation is implemented off-site, compensatory lands shall contain similar or more well-developed habitat and preferably be located in the vicinity of the site or watershed. Off-site land shall be preserved through a conservation easement and the Plan shall identify an approach for funding assurance for the long-term management of the compensatory land.
- e. Where direct impacts to Joshua trees are unavoidable, if Joshua tree is listed as a 'candidate,' 'threatened,' or 'endangered' species under the California Endangered Species Act at the time of issuance of a building or grading permit in areas that would involve the removal of western Joshua trees, the project applicant may pursue one of the following mitigation options:
 - f. 1. The project operator shall provide evidence to the Kern County Planning and Natural Resources Department demonstrating that impacts to western Joshua tree have been mitigated in accordance with Section 2084 of the California Fish and Game Code.
 - ~~g.~~ 2. Prior to initiating ground- or vegetation-disturbing activities that would result in take of western Joshua tree on the project site, the project operator shall mitigate for permanent impacts to western Joshua tree, should an Incidental Take Permit be required from California Department of Fish and Wildlife, through an approved mitigation bank, in-lieu fee program, or other California Department of Fish and Wildlife-approved process. Compensatory mitigation for permanent impacts to western Joshua tree shall be determined and acquired in consultation with the wildlife or resource agency. Verification of compliance shall be submitted to the Kern County Planning and Natural Resources Department prior to project construction in areas that would involve removal of Joshua trees. As-built development plans shall also be submitted to the California Department of Fish and Wildlife within 90 days of completion of construction and ground-disturbing activities.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-49 to 4.4-50:

MM 4.4-15 The project operator and /or contractor shall implement the following prior to the issuance of grading or building permits:

- a. Following the construction of exclusion fencing around the solar facility perimeters, clearance surveys shall be conducted by the Lead Biologist to ensure that no desert tortoises, Mohave ground squirrel, or other wildlife are trapped within the fenced area. The Lead Biologist may be assisted by biological monitors under the supervision of the Lead Biologist. Clearance surveys shall adhere to the current United States Fish and Wildlife Service clearance survey protocols described in the Desert Tortoise Field Manual, including a minimum of two clearance passes to be completed after desert tortoise-proof fencing is installed, which shall coincide with heightened desert tortoise

activity from late March through May and September through October or as specified by the Incidental Take Permit issued by CDFW.

- b. If a desert tortoise or Mohave ground squirrel is found on the site during project construction, operations, or decommissioning, activity shall cease in the vicinity of the animal. The Lead Biologist shall contact the United States 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. Work shall not resume at the site until both the United States Fish and Wildlife Service and California Department of Fish and Wildlife respond, and all recommended measures are taken. A report shall be prepared by the Lead Biologist to document the activities of the desert tortoise or Mohave ground squirrel within the site; all fence construction, modification, and repair efforts; and movements of the animal once again outside the permanent tortoise-proof fence. This report shall be submitted to wildlife and resource agency representatives and the Kern County Planning and Natural Resources Department.
- c. Outside permanently fenced desert tortoise exclusion areas, the project operator shall limit the areas of disturbance in desert tortoise and Mohave ground squirrel habitat. Parking areas, new roads, pulling sites, and locations for staging, storage, and excavation shall be confined to the smallest areas possible. These areas shall be flagged, and disturbance activities, vehicles, and equipment shall be confined to these flagged areas.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-50 to 4.4-51:

MM 4.4-16 The measures listed below shall be implemented prior to and during construction, operations, and decommissioning at the project sites.

- a. ~~The project operator shall mitigate for permanent impacts to suitable desert tortoise and Mohave ground squirrel habitat, should an incidental take permit be required from California Department of Fish and Wildlife, through an approved mitigation bank, or in-lieu fee program. Compensatory mitigation acreage for permanent impacts to western burrowing owl nesting, occupied, and satellite burrows and/or western burrowing owl habitat shall be determined and acquired in consultation with the wildlife or resource agency. Compensatory mitigation lands purchased may provide habitat for all three species, as well as rare plants and State Waters (only if impacted by the project). Verification of compliance shall be submitted to the Kern County Planning and Natural Resources Department.~~

The project operator has filed for an Incidental Take Permit for Mohave ground squirrel and desert tortoise with California Department of Fish and Wildlife. The project proponent shall mitigate for permanent impacts to suitable desert tortoise and Mohave ground squirrel habitat, through an approved mitigation bank, in-lieu fee program, or other mechanism accepted by California Department of Fish and Wildlife and/or United States Fish and Wildlife Service, as outlined in each agencies respective permit. Compensatory mitigation acreage for permanent impacts to western burrowing owl nesting, occupied, and satellite burrows and/or western burrowing owl habitat shall be determined and acquired in consultation with the wildlife or resource agency and

may be mitigated alongside impact on covered species. Compensatory mitigation would provide habitat for desert tortoise, Mohave ground squirrel, and/or burrowing owl, as well as rare plants, State Waters (only if impacted by the project), and features covered under the Project's Lake and Streambed Alteration Agreement. The Final Interim Take Permit shall be submitted to the Kern County Planning and Natural Resources Department prior to the onset of activities that have the potential to impact covered species.

- b. Prepare a Habitat Mitigation and Monitoring Plan (if required, should an incidental take permit be required for the project) that outlines all project compensatory mitigation for desert tortoise, western burrowing owl, and Mohave ground squirrel, in coordination with the California Department of Fish and Wildlife and the Regional Water Quality Control Board.
- e. 1. Compensatory lands shall be of similar or better quality than habitat lost, and preferably shall be located in the vicinity of the site.
- d. 2. Compensatory lands shall be permanently preserved through a conservation easement.
- e. 3. The plan shall identify conservation actions to ensure that the compensatory lands are managed to ensure the continued existence of the species.
- f. 4. The plan shall identify an approach for funding assurance for the long-term management of the conserved land.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-52 to 4.4-53:

MM 4.4-17 The following measures shall be implemented during project construction, operations/maintenance, and decommissioning activities with respect to western burrowing owls....

- b. If no burrowing owls are detected, no further mitigation is necessary. If burrowing owls are detected, no ground-disturbing activities, such as road construction or installation of solar arrays or ancillary facilities, shall be permitted within the distances specified in Table 2 of the Staff Report from an active burrow during the nesting and fledging seasons (April 1 to August 15 and August 16 to October 15, respectively), unless otherwise authorized by California Department of Fish and Wildlife. The specified buffer distance ranges from 656 feet to 1,640 feet, according to the time of year and the level of disturbance. Buffers shall be established in accordance with the table provided in Mitigation Measure MM 4.4-17c), below, and occupied burrows shall not be disturbed during the nesting season unless a qualified biologist approved by California Department of Fish and Wildlife, verifies through noninvasive methods that either: (1) the birds 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 (April 1 to October 15) or as specified by the Incidental Take Permit issued by CDFW.

- d. During the nonbreeding (winter) season (October 16 to March 31), consistent with the table below (Western Burrowing Owl Burrow Buffers), all ground-disturbing work shall maintain a distance ranging from 164 feet to 1,640 feet from any active burrows depending on the level of disturbance. If active winter burrows are found that would be directly affected by ground-disturbing activities, owls can be displaced from winter burrows according to recommendations made in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 2012).

Western Burrowing Owl Burrow Buffers

| Location | Time of Year | Level of Disturbance (in feet) | | |
|---|-----------------|--------------------------------|--------|------|
| | | Low | Medium | High |
| Nesting Sites | April 1-Aug 15 | 656 | 1640 | 1640 |
| Nesting Sites | Aug 16 - Oct 15 | 656 | 656 | 1640 |
| Any occupied burrow | Oct 16 - Mar 31 | 164 | 328 | 1640 |
| Source: California Department of Fish and Game 2012 | | | | |

- d. Burrowing owls should not be excluded from burrows unless or until a Burrowing Owl Exclusion Plan is developed by the Lead Biologist 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:
1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
 2. Type of scope to be used and appropriate timing of scoping to avoid impacts;
 3. Occupancy factors to look for and what shall guide determination of vacancy and excavation timing (one-way doors should be left in place 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).
 4. How the burrow(s) shall 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 no owls reside inside the burrow);
 5. Removal of other potential owl burrow surrogates or refugia on-site; and,
 6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.
- ~~e.~~ 7. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;
- ~~f.~~ 8. How the impacted site shall 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.
- ~~g.~~ 9. Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows to ensure take is avoided. Conduct daily monitoring for one

week to confirm young of the year have fledged if the exclusion shall occur immediately after the end of the breeding season.

- ~~h.~~ 10. Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).
- ~~i.~~ e. In accordance with the Burrowing Owl Exclusion Plan, a qualified wildlife biologist shall excavate burrows using hand tools. Sections of flexible plastic pipe or heavy material 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. Forty-eight hours after the installation of the one-way doors, the doors can be removed, and ground-disturbing activities can proceed. Alternatively, burrows can be filled to prevent reoccupation.
- ~~j.~~ f. During construction and decommissioning activities, monthly and final compliance reports shall be provided to California Department of Fish and Wildlife, the Kern County Planning and Natural Resources Department, and other applicable resource agencies documenting the effectiveness of mitigation measures and the level of burrowing owl take associated with the proposed project.

Chapter 4, Biological Resources, Impact 4.4-1; Pages 4.4-54 to 4.4-55:

MM 4.4-19 Prior to the issuance of grading or building permit the following shall be implemented:

- a. Preconstruction surveys shall be conducted by a qualified biologist for the presence of desert kit fox and American badger dens prior to installation of desert tortoise exclusion fencing. Copies of the completed surveys shall be submitted to Kern County Planning and Natural Resources Department.
- b. The survey shall be conducted in areas of suitable habitat for American badger and desert kit fox, which includes fallow agricultural land and scrub habitats. Surveys shall not be conducted for all areas of suitable habitat at one time; they shall be phased so that surveys occur within two weeks prior to disturbance of that portion of the site. If no potential American badger or desert kit fox dens are present, no further mitigation is required.
- c. If potential dens are observed, the following measures are required to avoid potential adverse effects to American badger and desert kit fox:
 - ~~d.~~ 1. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers or foxes from reuse during construction. Den excavation shall be prohibited during the pupping season to avoid possible pup mortality resulting from a lack of available refugia.
 - ~~e.~~ 2. Passive relocation shall be prohibited during the pupping season, which is February 15 to June 1 for both species. If the qualified biologist determines that potential dens outside the breeding season may be active, the biologist shall notify the California Department of Fish and Wildlife. Entrances to the dens shall be blocked with soil, sticks, and debris for three to five days to discourage use of these

dens prior to project disturbance. The den entrances shall be blocked to an incrementally greater degree over the three- to five-day period. After the qualified biologist determines that badgers and foxes have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction. The collapsing of active desert kit fox dens shall not occur without prior consultation with the CDFW. A biologist shall remain on-call throughout construction in the event that badger or desert kit fox are present on the site.

- f. 3. Construction activities shall not occur within 50 feet of active badger dens. The project operator shall contact California Department of Fish and Wildlife immediately if natal badger dens are detected to determine suitable buffers and other measures to avoid take.
- ~~g.~~ 4. Construction activities shall not occur within 100 feet of active kit fox dens. The project operator shall contact California Department of Fish and Wildlife immediately if pupping kit fox dens are detected to determine suitable buffers and other measures to avoid take.

Chapter 4, Biological Resources, Impact 4.4-3; Pages 4.4-59 to 4.4-60:

MM 4.4-25 The following measures shall be implemented within the project area to ensure that direct or indirect effects to jurisdictional waters are minimized:

- a. Any laydown areas and/or material and spoils from project activities shall be located away from jurisdictional areas or sensitive habitat and protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- b. Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakages from contaminating the ground and generally at least 50 feet from the top of bank.
- c. Any spillage of material shall be stopped if it can be done safely. The contaminated area shall be cleaned and any contaminated materials properly dispose of. For all spills the project foreman or designated environmental representative shall be notified.
- d. All work within the drainages shall be conducted to avoid periods of flowing water. Construction within drainages shall be timed to occur during the dry season (generally April 15 – October 15) and shall avoid periods in the summer when convective thunderstorms are predicted or as approved in the Streambed Alteration Agreement issued by CDFW.
- e. If required, compensatory mitigation for Arizona-style crossings, within waters subject to the jurisdiction of California Department of Fish and Wildlife or the Lahontan Regional Water Quality Control Board, shall occur either on-site or off-site at a ratio no less than 1:1. As outlined in Mitigation Measure MM 4.4-12, if required, a Habitat Mitigation and Monitoring Plan shall be prepared that outlines the compensatory mitigation in coordination with the RWQCB and California Department of Fish and Wildlife.

- f. If mitigation is required and on-site mitigation is proposed, the Habitat Mitigation and Monitoring Plan shall identify those portions of the site that contain suitable characteristics (e.g., hydrology) for restoration or enhancement of desert wash scale broom scrub habitat. Determination of mitigation adequacy shall be based on comparison of the restored or enhanced habitat with similar, undisturbed habitat in the site vicinity (such as up or downstream of the site). If mitigation is implemented off-site, mitigation lands shall be comprised of similar or more well-developed desert wash and preferably be located in the vicinity of the site or watershed. Off-site land shall be preserved through a conservation easement and the Plan shall identify an approach for funding assurance for the long-term management of the conserved land.
- g. Copies of correspondences and determinations by the Lahontan Regional Water Quality Control Board and California Department of Fish and Wildlife shall be submitted to the Kern County Planning and Natural Resources Department. It is noted that the final mitigation ratio required by the Lahontan Regional Water Quality Control Board and California Department of Fish and Wildlife for acquisition of regulatory permits may differ from that proposed in this environmental impact report.

Chapter 4, Biological Resources; Cumulative Setting, Impacts, and Mitigation Measures; Page 4.4-65:

Mitigation Measures

~~Implementation of Mitigation Measures MM 4.4-1 through 4.4-25, and MM 4.1-4 through MM 4.1-6 would be required (see Section 4.1, *Aesthetics*, for full text), and MM 4.10-1 through MM 4.10-2 would be required (see Section 4.10 *Hydrology and Water Quality*, for full text).~~

Implementation of Mitigation Measures MM 4.1-4 through MM 4.1-6 (see Section 4.1, *Aesthetics*, for full text), MM 4.4-1 through MM 4.4-25, MM 4.9-1 (see Section 4.9, *Hazards and Hazardous Materials*, for full text), and MM 4.10-1 through MM 4.10-2 (see Section 4.10, *Hydrology and Water Quality*, for full text).

Chapter 4, Hazards and Hazardous Materials, Recognized Environmental Conditions; Page 4.9-3 to 4.9-4:

Site 1

Boron Sanitary Landfill. The Boron Sanitary Landfill, operated by Kern County Public Works Department, is located in the southeastern portion of the project site, in between Sites 1 and 2. Although the landfill is not a part of the project site, the project site boundaries nearly fully enclose the landfill facility. A historical release of volatile organic compounds (VOCs) occurred from the landfill operations during the 1990's which contaminated groundwater beneath the property. Groundwater monitoring has been performed since the discovery of the VOCs in groundwater. According to a 2018 groundwater sampling report for the landfill, the VOC compounds in shallow groundwater near the landfill have naturally attenuated to concentrations below the California Maximum Contaminant Levels (MCLs) (Stantec 2020a).

According to documents reviewed on the California State Water Resources Control online database Geotracker, no landfill gas collection system currently operates at this facility. However, landfill gas monitoring is performed at vapor well locations surrounding the facility. According to the most recent

monitoring report, no landfill gas (i.e. methane) was detected above action levels. Nonetheless, the presence of the landfill facility adjacent to the subject site ~~is~~ was considered to be a REC in the Phase I ESA. Subsequent to the initial findings of the Phase I ESA, a Phase II ESA was conducted, which included soil vapor borings. These borings were intended to evaluate potential methane migration from the offsite adjacent landfill. Methane was detected at 0.0% vol. in the two temporary vapor probes installed on the project site in close proximity to the landfill. Due to the lack of methane detected in the soil vapor screening points, it appears that no methane has encroached from the Boron Landfill onto the project site. Therefore, no further action was recommended related to the Boron Sanitary Landfill.

Shooting Range. A shooting range was identified in the southeastern portion of the project site, within Site 1. The shooting range is approximately ¼-mile in length and contains multiple targets for small munitions (handgun and rifle). The accumulation of heavy metals from small munitions within shallow soils of the shooting range area are considered likely. Therefore, the shooting range ~~is~~ was considered a REC in the Phase I ESA. Subsequent to the initial findings of the Phase I ESA, a Phase II ESA was conducted, which included shallow soil borings. These borings were intended to evaluate potential residual metals contaminants from the shooting range. Based on the Phase II ESA, low detections of the metals copper, lead, and nickel are present in shallow soils within the small-arms shooting range. However, all detected concentrations of these metals are within typical California regional background ranges, and below commercial-use screening criteria. Therefore, no further action was recommended related to the shooting range.

Site 2

Historical Target Site PB-9. A historical target identified as “PB-9” was used by Edwards Air Force Base and is located along the southern boundary of Site 2. In 2012, the identification and removal of munitions debris and non-munitions related debris was performed in portions of the project site (Site 2). While munitions debris was found and removed, no munitions or explosives of concern (MEC) or materials potentially presenting an explosion hazard (MPPEH) have been found in Site 2 to date. In addition, environmental sampling performed within the vicinity of PB-9 reported no detectable levels of munitions constituents (MC) of concern above human health screening levels according to a letter report prepared for the site by BayWest (Stantec 2020b). A recommendation for no further action (NFA) was made to the State and Edwards Air Force Base in the Remedial Investigation/Feasibility Study (RI/FS) prepared for the PB-9 munitions response site in February of 2018. A response on the NFA had not been received as of January 2019 (Stantec 2020b). The historical target is considered a historical REC (HREC). Although no MEC or MPPEH has been found on Site 2, it was recommended that, at a minimum: 1) all site workers should be given UXO awareness training prior to commencement of construction activities; 2) proper procedures to be implemented in the event that MEC or MPPEH are encountered should be identified; and, 3) that qualified UXO technicians should be present for any ground disturbing activities occurring within 1,000 feet of historical PB-9 site (Stantec 2020b).

Sites 3 through 5

No RECs were identified on Sites 3 through 5.

Chapter 4, Hazards and Hazardous Materials, Impact 4.9-1; Page 4.9-28:

As noted above, the Phase I ESA prepared for the subject site initially identified the following RECs on the project site and/or in the immediate vicinity; however, subsequent Phase II soil testing has recommended no further action related to the Boron Sanitary Landfill and the Shooting Range.

Chapter 4, Hazards and Hazardous Materials, Impact 4.9-3; Page 4.9-34:

~~Site 2~~ (Historical Target Site PB-9) is distanced from the elementary school and would be buffered by the proposed solar panel field. In the event that UXO is identified during project ground disturbing activities, the removal of such materials would occur in accordance with recommendations made in the Construction Support Plan and applicable local, State, and federal regulations pertaining to the handling and disposal of such materials. The other RECs identified were determined not to pose a potential hazard. Therefore, it is not anticipated that any of the sites identified would pose a significant risk to occupants of the school from the emission or handling of hazardous materials or waste.

Chapter 4, Hazards and Hazardous Materials, Impact 4.9-5; Page 4.9-35:

Therefore, the project would not impair the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance ~~after Mitigation~~

Impacts would be less than significant.

Chapter 4, Hazards and Hazardous Materials, Cumulative Impacts; Page 4.9-39:

Additionally, as noted, ~~several RECs have~~ one REC has been identified relative to the project site. Mitigation ~~measures~~ would be implemented to ensure that potential hazards to the public or environment relative to ~~these sites~~ this site would be reduced to less than significant. All cumulative projects identified would similarly be evaluated for the presence of documented hazardous sites, either on-site or off-site, having the potential to create a significant hazard to the public or the environment. As such, it is not anticipated that the project would result in a significant cumulative impact in this regard, as such conditions would be more site-specific and would be reduced to less than significant with mitigation. The project's cumulative impacts in this regard are considered less than significant with mitigation incorporated.

Chapter 4, Land Use and Planning, Table 4.11-2; Page 4.11-34:

| Goals/Policies | Consistency Determination | Project Consistency |
|---|--|---|
| 1.4 Public Facilities and Services | | |
| Goal 1: Kern County residents and businesses should receive adequate and cost effective public services and facilities. The County will compare new urban development proposals and land use | Consistent, with implementation of Mitigation Measure MM 4.13-2. | As discussed in Section 4.13, <i>Public Services</i> , of this EIR, implementation of Mitigation Measure MM 4.13-2 <u>the project would implement Mitigation Measure MM 4.13-2, which applies a Cumulative Impact Charge (CIC), to provide funding for the County budget for services that are not funded due to the State of California Active Solar Energy Exclusion</u> |

| Goals/Policies | Consistency Determination | Project Consistency |
|---|---------------------------|--|
| changes to the required public services and facilities needed for the proposed project. | | provision on property taxes. These are property taxes that the County would otherwise receive for services and facilities therefore supporting a prosperous economy and assuring the provision of adequate public services and facilities. would require the project to pay a fee assigned by the Kern County Planning and Natural Resources Department over the life of the proposed facilities in order to mitigate any potential impacts to fire or police protection services resulting from the proposed project. With payment of the required mitigation fee as assessed by the Kern County Planning and Natural Resources Department, any additional fire or police protection services, facilities or personnel required as a result of the proposed project would be appropriately funded. |

Chapter 4, Land Use and Planning, Table 4.11-2; Page 4-11-37:

| Goals/Policies | Consistency Determination | Project Consistency |
|---|--|---|
| 1.10.1 Public Services and Facilities | | |
| Policy 9: New development should pay its pro rata share of the local cost of expansions in services, facilities, and infrastructure which it generates and upon which it is dependent. | Consistent, with implementation of Mitigation Measure MM 4.13-2. | See 1.4, Public Facilities and Services, Goal 1, above. As discussed in Section 4.13, <i>Public Services</i>, of this EIR, the project would implement Mitigation Measure MM 4.13-2, which applies a Cumulative Impact Charge (CIC), to provide funding for the County budget for services that are not funded due to the State of California Active Solar Energy Exclusion provision on property taxes. These are property taxes that the County would otherwise receive for services and facilities therefore supporting a prosperous economy and assuring the provision of adequate public services and facilities. |

Chapter 4, Noise, Impact 4.12-37

Mitigation Measures

- MM 4.12-1** To reduce temporary construction-related noise impacts, the following shall be implemented by the project proponent/operator:
- a. In the event a noise-sensitive receptor is located within 1,000 feet of the project site:
 - 1. Equipment staging and laydown areas shall be located at the furthest practical distance from nearby residential land uses. To the extent possible, staging and laydown areas should be located at least 500 feet of existing residential dwellings.
 - 2. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise-sensitive receptor, where feasible.

- b. Haul trucks shall not be allowed to idle for periods greater than five minutes, except as needed to perform a specified function (e.g., concrete mixing).
- c. Construction equipment shall be fitted with noise-reduction features such as mufflers and engine shrouds that are no less effective than those originally installed by the manufacturer. On-site vehicle speeds shall be limited to 15 miles per hour, or less (except in cases of emergency).
- d. Back-up beepers for all construction equipment and vehicles shall be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration and California Division of Occupational Safety and Health's safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures such as escorts and spotters shall be employed.
- e. The construction contractor shall establish a Noise Disturbance Coordinator for the proposed project during construction. The Noise Disturbance Coordinator shall be responsible for responding to any complaints about construction noise. The Noise Disturbance Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Noise Disturbance Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of any ground disturbing activities.
- f. During all construction or decommissioning phases of the proposed project, the construction contractor shall limit all onsite noise-producing activities to the hours of 6:00 a.m. to 9:00 p.m., Monday through Friday, and to the hours of 8:00 a.m. and 9:00 p.m. on Saturdays and Sunday or as required through the Kern County Noise Ordinance (Kern County Code of Ordinances, Title 8, Chapter 8.36.020).
- g. If construction-related activities must occur outside of permitted hours per Section 8.36.020 of the Kern County Code, the project proponent/operator shall obtain approval from the development services agency director or designated representative for project construction activities occurring between the hours of 9:00 p.m. and 6:00 a.m. on weekdays and 9:00 p.m. and 8:00 a.m. on weekends, within 1,000 feet of an occupied residential building, if audible to a person with average hearing ability at a distance of 150 feet from a construction site. If construction activity is proposed outside of permitted hours, the project proponent/operator shall implement a noise control plan including appropriate noise-reduction measures to the satisfaction of the development services agency director or designated representative, which may include the measures listed above. In addition, the noise control plan may include a requirement to restrict the duration of construction activities outside of permitted hours within 1,000 feet of an occupied residential building.

MM 4.12-2 The construction contractor shall establish a Noise Disturbance Coordinator for the project during construction. The Noise Disturbance Coordinator shall be responsible for

responding to any complaints about construction noise. The Noise Disturbance Coordinator shall determine the cause of the complaint and shall be required to implement reasonable measures to resolve the complaint. Contact information for the Noise Disturbance Coordinator shall be submitted to the Kern County Planning and Natural Resources Department prior to commencement of any ground disturbing activities.

- MM 4.123-3** Prior to commencement of any onsite construction activities (i.e., fence construction, mobilization of construction equipment, initial grading, etc.), the project proponent/operator shall provide written notice to the public through mailing a notice, which shall include:
- a. The mailing notice shall be to all residences within 1,000 feet of the project site, 15 days or less prior to construction activities. The notices shall include the construction schedule and a telephone number and email address where complaints and questions can be registered with the noise disturbance coordinator.
 - b. A minimum of one sign, legible at a distance of 50 feet, shall be posted at the construction site, or adjacent to the nearest public access to the main construction entrance, throughout construction activities that shall provide the construction schedule (updated as needed) and a telephone number where noise complaints can be registered with the noise disturbance coordinator.
 - c. Documentation that the public notice has been sent and the sign has been posted shall be provided to the Kern County Planning and Natural Resources Department.

Chapter 4, Public Services, Impact 4.13-1; Page 4.13-14:

Operation

Operation of the project would require up to 25 full-time workers onsite, where each Site could require an operational staff of up to five full-time employees who could be there at any time. Employees would visit the project site for routine inspection, maintenance, and repair of solar arrays and accessory components. These employees would be expected to come from an existing local and/or regional labor force and would not likely relocate their households as a consequence of working on the project. Even if the maintenance employees were hired from out of the area and had to relocate to eastern Kern County, the resulting addition of potential families to this area would not result in a substantial increase in the number of users at local schools as accommodations for temporary housing would be available in the nearby hotels in Boron, Mojave, and other local communities. Therefore, staff required during operation would not increase demand for local schools, parks, or public facilities such that substantial physical deterioration of such facilities would occur, nor would project construction require the construction or expansion of recreational facilities which might have an adverse effect on the environment, nor result in substantial adverse physical impacts associated with the construction of new or physically altered facilities in order to maintain acceptable service ratios. Impacts during ~~construction~~ operation would be less than significant.

Chapter 10, Bibliography; Page 10-1:

Beck MW, Heck KL, Able KW, Childers DL, 9 others. 2001. *The identification, conservation, and management of estuarine and marine nurseries for fish and invertebrates.*

Chapter 10, Bibliography; Page 10-3:

———. 2019a. California Natural Communities and Sensitive Natural Communities.
<https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities> and
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>.

CDFW. 2019b. *Mojave Ground Squirrel Conservation Strategy*.

Chapter 10, Bibliography; Page 10-6:

Leitner, Phillip. 2008. *Current Status of the Mojave Ground Squirrel*. *BioScience*, Volume 51, Issue 8, August 2001, Pages 633–641.

Lovich, J.E., and R. Daniels. 2000. “Environmental Characteristics of Desert Tortoise (*Gopherus agassizii*) Burrow Locations in an Altered Industrial Landscape.” *Chelonian Conservation and Biology* 3(4):714–721.

7.3 Responses 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.

State Agencies

Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

Local Agencies

Letter 2: Eastern Kern Air Pollution Control District, Glen E. Stephens, PE (June 7, 2021)

Letter 3: Kern County Fire Department, Michael Nicholas, Assistant Fire Marshal (June 10, 2021)

Letter 4: Kern County Public Works Department (KCPWD), Floodplain Management Section, Kevin Hamilton by Brian Blase (June 16, 2021)

Letter 5: Kern County, County Surveyor Brian R. Blacklock, PLS, by Mark Braun, Engineering Technician III (June 7, 2021)

Letter 6: Kern County Public Health Services Department (KCPHSD), Evelyn Elizalde (June 23, 2021)

Interested Parties

Letter 7: Ashpaugh, Millie (July 11, 2021)

Letter 8: Barnard, Joe (July 10, 2021)

Letter 9: Black, Lynn (June 2, 2021)

Letter 10: Brown, Debbie (July 9, 2021)

Letter 11: Burgess, Sharon (July 8, 2021)

Letter 12: English, Deric (July 9, 2021)

Letter 13: Fenner-Mudrak, Janet (June 4, 2021)

Letter 14: Fort, Donna (July 12, 2021)

Letter 15: Hanson, James (June 11, 2021)

Letter 16: Hansen, Tena (June 11, 2021)

Letter 17: Hobbs, Sidney (July 9, 2021)

Letter 18: Hurley, Heather (July 11, 2021)

Letter 19: International Brotherhood of Electrical Workers (IBEW); Carabasal, Patrick (Illegible) (July 1, 2021)

Letter 20: IBEW; Elliott, Robert (July 1, 2021)

Letter 22: IBEW; Chisholm, Jon (July 1, 2021)

Letter 23: IBEW; Darringer, Jeremy (July 1, 2021)

Letter 24: IBEW; Foster, Jared (July 1, 2021)

Letter 25: IBEW; Thomas, Dave (July 1, 2021)

Letter 26: IBEW; Flores, Jose (July 1, 2021)

- Letter 27: IBEW; Garcia, Danny (July 1, 2021)
- Letter 28: IBEW; Rodriguez, Rocky (July 1, 2021)
- Letter 29: IBEW; Melendiaz, Samuel (Illegible) (July 1, 2021)
- Letter 30: IBEW; (Illegible) (July 1, 2021)
- Letter 31: IBEW; (Illegible) (July 1, 2021)
- Letter 32: IBEW; (Illegible) (July 1, 2021)
- Letter 33: IBEW; (Illegible) (July 1, 2021)
- Letter 34: IBEW; (Illegible) (July 1, 2021)
- Letter 35: IBEW; Rogers, Terry (July 1, 2021)
- Letter 36: IBEW; Baltazar, Rodney (No Date)
- Letter 37: IBEW; (Illegible) (July 1, 2021)
- Letter 38: IBEW; (Illegible) (July 1, 2021)
- Letter 39: IBEW; (Illegible) (July 1, 2021)
- Letter 40: IBEW; (Illegible) (July 1, 2021)
- Letter 41: Job, Crystal (July 12, 2021)
- Letter 42: Keller-Gage, Shelley (No Date)
- Letter 43: Kennedy, Charles (June 11, 2021)
- Letter 44: Kennedy, Melba (June 11, 2021)
- Letter 45: Kometas, Barbara (June 11, 2021)
- Letter 46: Moore, Jonathan (July 12, 2021)
- Letter 47: Richards, Roy (July 11, 2021)
- Letter 48: Singer, Kristy (July 11, 2021)
- Letter 49: Smith, Nancy (July 12, 2021)

Letters Received After July 12, 2021 Close of Public Comment Period

- Letter 50: California Department of Conservation – Geologic Energy Management Division; by Vianzon, Dante for Ghann-Amoah, Mark, District Deputy (July 21, 2021)
- Letter 51: California Native Plant Society (CNPS) and Defenders of Wildlife; Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)
- Letter 52: Barnard, Joe (July 13, 2021)
- Letter 53: Patel, Hasmukh (August 8, 2021)
- Letter 54: Richards, Roy (August 1, 2021)

State Agencies

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



July 12, 2021

Ronelle Rheta Candia
Kern County Planning and Natural Resources Department
2700 "M" Street Suite 100
Bakersfield, California 93301

Subject: Aratina Solar Project (Project)
Draft Environmental Impact Report (DEIR)
SCH# 2021020513

Dear Ms. Candia:

The California Department of Fish and Wildlife (CDFW) received a DEIR from the Kern County Planning and Natural Resources Department for the above-referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

1-A

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Conserving California's Wildlife Since 1870

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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Kern County Planning and Natural Resources Department
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CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code may be required.

1-A
cont'd**PROJECT DESCRIPTION SUMMARY**

Proponent: Aratina Solar Project

Objective: To develop a photovoltaic solar facility and associated infrastructure necessary to generate up to 530 megawatt-alternating current (MW-AC) of renewable energy storage, on privately owned land in unincorporated Kern County. The proposed project consists of five separated sites (Sites 1 through 5) located on 22 parcels and totals approximately 2,554 acres; however, it is anticipated that approximately 2,317 acres will be utilized for the construction of the solar panels and permanent facilities.

1-B

The Project would be supported by a 230-kilovolt (kV) gen-tie overhead and/or underground electrical transmission line(s) originated from one or more on-site substations and terminating at the Southern California Edison's Holgate Substation to the north. Alternatively, the project may interconnect at the Southern California Edison's Kramer Substation to the east, located in San Bernadino County via an up to 230kV transmission line located within an Edwards Air Force Base utility corridor. The Project's permanent facilities would include, but are not limited to, service roads, a power collection system, inverter stations, transformer systems, transmission lines, electrical switchyards, project substations, energy (battery) storage system, and operations and maintenance facilities.

COMMENTS AND RECOMMENDATIONS

CDFW has concerns about the proposed mitigation measures for the State and federally threatened desert tortoise (*Gopherus agassizii*); the State threatened Mojave ground squirrel (*Xerospermophilus mohavensis*), and the desert kit fox (*Vulpes macrotis arsipus*), which is protected under the California Code of Regulations, Chapter 5, Section 460. As currently written, these measures may not be adequate to reduce impacts to less than significant or avoid unauthorized take. CDFW offers the following comments and recommendations to assist the Kern County Planning and Natural Resources Department and ensure that the proposed mitigation measures adequately

1-C

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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mitigate the Project's significant, or potentially significant, direct and indirect impacts on these species.

1-C
 cont'd

Mitigation Measure 4.4-8b: CDFW recommends installing a maximum 15 mile-per-hour (mph) speed limit on the project site instead of the proposed 25 mph to prevent inadvertent take of special-status species.

1-D

Mitigation Measure 4.4-9a: Mitigation Measure 4.4-9a states that exclusion fencing will be erected and that CDFW will be consulted on the issuance of an Incidental Take Permit (ITP) for desert tortoise. The last focused survey completed for desert tortoise was conducted in May 2019, and while no desert tortoise or fresh sign were observed, historic use of the Project area by the species was detected. As stated in the DEIR (pg. 4.4-15), one carcass was located within Site 3, a Class 3 burrow was detected approximately 50 meters south-southeast, and multiple Class 4 burrows were detected within Sites 1, 3, and 4.

CDFW typically considers the results of desert tortoise surveys to be valid for one year. Given that desert tortoise have historically used at least one of the Project sites and suitable habitat is present throughout the Project area, CDFW recommends additional surveys for desert tortoise. Specifically, CDFW recommends surveys for desert tortoise be conducted by a qualified wildlife biologist who understands the pre-project survey protocol as outlined in "Preparing for any action that may occur within the range of the Mojave desert tortoise (*Gopherus agassizii*)" (USFWS, 2010) and has previous experience surveying for desert tortoise. As previously stated, CDFW considers survey results valid for one year, and therefore surveys should be conducted within a year of the start of Project implementation. If additional desert tortoise surveys are not feasible, CDFW recommends that an ITP for desert tortoise be secured for the Project prior to any ground- or vegetation-disturbing activities.

1-E

Mitigation Measure 4.4-9(d): Mitigation Measure 4.4-9d states: "If a desert tortoise is found on the site during project construction, operations, or decommissioning, active construction or operations shall cease in the vicinity of the animal and the desert tortoise shall be passively restricted to the area encompassing its observed position on the construction site and its point of entry shall be determined if possible. The Lead Biologist shall install a temporary tortoise-proof fence around this area..." However, "vicinity" in this context is not defined, and therefore this measure is not quantifiable and may not be enforceable. "Passive restriction" is also not defined.

1-F

This practice, along with the installation of tortoise-proof fencing, have the potential to trap desert tortoise within the fence or other "restrictive barriers". CDFW considers entrapped animals captured, and the capture of any species listed under CESA requires an ITP, as capture (or attempt to do so) is defined as take under Fish and Game Code Section 86. Therefore, CDFW recommends that if a desert tortoise is observed on one of the five Project sites that all work stop at that individual Project site until the desert

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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tortoise leaves on its own or an ITP from CDFW is acquired. If tortoise-proof fencing and passive relocation remain as alternatives in the DEIR, CDFW recommends that this mitigation measure be edited to define passive relocation and identify tortoise-proof fencing methods so CDFW can evaluate if these methods have the potential to result in unauthorized take. Please note that CDFW cannot definitively determine if these measures will avoid unauthorized take until we receive this information. Alternatively, the Project can apply for an ITP and these measures can be authorized as part of that permit.

1-F
 cont'd

Mitigation Measure 4.4-15a: Mitigation measure 4.4-15a states: "Following the construction of exclusion fencing around the solar facility perimeters, clearance surveys shall be conducted by the Lead Biologist to ensure that no desert tortoises, Mohave ground squirrel, or other wildlife are trapped within the fenced area. The Lead Biologist may be assisted by biological monitors under the supervision of the Lead Biologist. Clearance surveys shall adhere to the current United States Fish and Wildlife Service clearance survey protocols described in the Desert Tortoise Field Manual, including a minimum of two clearance passes to be completed after desert tortoise-proof fencing is installed, which shall coincide with heightened desert tortoise activity from late March through May and September through October."

1-G

As stated above, any species listed pursuant to CESA found within the exclusion fence would be considered captured and the Project would be in violation of Fish and Game Code unless an ITP for captured species had been acquired before installation of the exclusion fence. CDFW strongly recommends that this language is either removed from the DEIR, that the fence is installed only after protocol surveys are completed with negative results within a year prior to the start of ground- or vegetation-disturbing activities, or an ITP is acquired prior to fence installation. In addition, desert tortoise surveys are not adequate to detect Mohave ground squirrel, and CDFW cannot concur with negative findings if surveys following the methods described in the Mohave Ground Squirrel Survey Guidelines (CDFG, 2003), or other CDFW-approved method, are not completed.

Mitigation Measure 4.4-15b: Mitigation Measure 4.4-15b states: "If a desert tortoise or Mohave ground squirrel is found on the site during project construction, operations, or decommissioning, activity shall cease in the vicinity of the animal."

Similar to Mitigation Measure 4.4-b, vicinity is not defined, and the measure may not be enforceable or avoid unauthorized take of a species listed pursuant to CESA. CDFW recommends that if a desert tortoise or Mohave ground squirrel is observed on one of the five Project sites that all work stop at that individual Project site until the desert tortoise and/or Mohave ground squirrel leaves on its own or an ITP from CDFW is acquired.

1-H

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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Ronelle Rheta Candia
Kern County Planning and Natural Resources Department
July 12, 2021
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Mitigation Measure 4.4-16a: Mitigation Measure 4.4-16a states: “The project operator shall mitigate for permanent impacts to suitable desert tortoise and Mohave ground squirrel habitat, should an incidental take permit be required from California Department of Fish and Wildlife, ...” As reported in the DEIR (pg. 4.4-16), “there was one observation of Mohave ground squirrel within the southwest corner of Site 1. There were no observations within Sites 2 through 4. There were two observations immediately adjacent to the proposed Aratina project site, one just west of Site 3 and one just east of the gen-tie/conductor lines located above the Mojave Barstow Freeway.” As acknowledged by the DEIR, there are also 3 California Natural Diversity Database (CNDDDB) records in the immediate vicinity of the Project area. The DEIR’s impact analysis (pg. 4.4-37) also states: “Mohave ground squirrel occurs within the project area and potential direct impacts to Mohave ground squirrel include the potential for mortality of individuals during construction, operation, and decommissioning activities.”

In addition to the information provided in the DEIR, the Project is located between the Edwards Air Force Base, North of Edwards, and Harper Lake core populations as described in A Conservation Strategy for the Mohave Ground Squirrel (CDFW 2019). The Project is also located within or immediately adjacent to the Edwards Linkage between the Edwards Air Force Base and North of Edwards core populations. The Kramer-Harper-Edwards linkage is located to the east of the Project site. Although the DEIR acknowledges that “large blocks of converted habitat can fragment contiguous MGS habitat and could potentially block important habitat linkages between populations,” it does not describe or analyze potential Project-specific or cumulative impacts to the Edwards linkage or the nearby core populations or Kramer-Harper-Edwards linkage.

Given the Project location, the documented presence of Mohave ground squirrel on-site, and the acknowledged possibility of Mohave ground squirrel mortality as a result of Project activities, CDFW considers acquisition of an ITP for the Project, in advance of ground disturbing activities, to be warranted to comply with CESA. We recommend that this mitigation measure be edited to explicitly state that an ITP for Mohave ground squirrel will be acquired from CDFW prior to the start of ground- or vegetation-disturbing activities. In addition, CDFW recommends that the DEIR specifically analyze potential Project-specific and cumulative impacts to the Edwards Air Force Base, North of Edwards, and Harper Lake core Mohave ground squirrel populations and Edwards and Kramer-Harper-Edwards linkages. CDFW recommends that any analysis include any reduction in connectivity as well as the loss of available habitat. CDFW also advises that in order to issue an ITP authorizing the take of Mohave ground squirrel for this Project, impacts to connectivity will need to be addressed in order to fully mitigate the Project’s impacts associated with the take authorization.

Mitigation Measure 4.4-19c: As stated above, desert kit fox (*Vulpes macrotis arsipus*) is protected under the California Code of Regulations, Chapter 5, Section 460, which

1-I

1-J

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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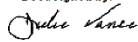
Ronelle Rheta Candia
Kern County Planning and Natural Resources Department
July 12, 2021
Page 6

prohibits “take” of the species for any reason. The DEIR states that a total of 152 desert kit fox dens were located within the Project area (pg. 4.4-21). Mitigation Measure 4.4-19c states: “If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers or foxes from reuse during construction.” Kit fox are known to use multiple dens during the pupping season, and currently vacant dens may be needed when desert kit fox relocate their pups. CDFW recommends that this measure be edited to prohibit den excavation during the pupping season to avoid possible pup mortality resulting from a lack of available refugia. If this measure is infeasible, consultation with CDFW is warranted for guidance on take avoidance measures for the desert kit fox.

1-J
cont'd

Given the number of historical dens on the project site, the Department recommends all perimeter fencing be raised five to seven inches above ground level and knuckled under to allow desert kit fox movement into and out of the Project site. If chain-link fencing is used within the security fencing to secure substations or other facilities, the Department recommends either raising the bottom as described above or installing plastic slats from the ground to approximately 3 feet up to prevent desert kit fox from becoming ensnared, resulting in injury or mortality.

CDFW appreciates the opportunity to comment on the Project to assist the Kern County Planning and Natural Resources Department in identifying and mitigating the Project’s impacts on biological resources. If you have any questions, please contact Jaime Marquez, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014, extension 291, or by electronic mail at Jaime.Marquez@wildlife.ca.gov.

Sincerely,
DocuSigned by:

FA83F09FE08945A...

Julie A. Vance
Regional Manager

cc: United States Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

Comment Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

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Ronelle Rheta Candia
Kern County Planning and Natural Resources Department
July 12, 2021
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Literature Cited

California Department of Fish and Game (CDFG). (2003). Mohave ground squirrel survey guidelines. California Department of Fish and Game.

California Department of Fish and Wildlife (CDFW). 2019. A Conservation Strategy for the Mohave Ground Squirrel *Xerospermophilus mohavensis*. California Department of Fish and Wildlife.

USFWS. (2010). Preparing for any action that may occur within the range of the Mojave Desert tortoise (*Gopherus agassizii*). United States Fish and Wildlife Service.

Response to Letter 1: California Department of Fish and Wildlife (CDFW) (July 12, 2021)

- 1-A:** These comments provide introductory comments including an overview of California Department of Fish and Wildlife's (CDFW) role as a CEQA Trustee Agency and potentially a CEQA Responsible Agency for the proposed project. No further response is necessary.
- 1-B:** This comment provides a summary of the proposed project. No further response is necessary.
- 1-C:** The commenter expresses concerns regarding the adequacy of the proposed mitigation measures for desert tortoise, Mojave ground squirrel, and desert kit fox. The County notes that the project applicant has applied for an Incidental Take Permit (ITP) for the desert tortoise and Mojave ground squirrel. As such, the applicant will be required to comply with any additional conditions or measures required of the ITP. Please refer to Responses 1-D through 1-I.
- 1-D:** The County acknowledges this comment and has revised MM 4.4-8 as follows:
- MM 4.4-8** The project operator and/or contractor shall implement the following during project decommissioning:
- a. (no change)
 - b. A ~~25~~-15 mile-per-hour speed limit on paved or stabilized unpaved roads shall be applied for travel during decommissioning activities. Travel shall be confined to existing roads and previously disturbed areas.
 - c. (no change)
 - d. (no change)
- 1-E:** The commenter expresses concern over desert tortoise protections and recommends additional surveys be performed for the species prior to project construction. As stated in Response 1-C above, the project applicant has applied for an ITP for the desert tortoise prior to any ground- or vegetation disturbance, which would address CDFW's concerns identified in this comment regarding proposed exclusion fencing and timing of additional desert tortoise surveys.
- 1-F:** The commenter notes concern regarding the protection and relocation of desert tortoise during the pre-construction phase. No unauthorized take of desert tortoise is proposed. As stated in Response 1-C, the project applicant has applied for an ITP for the desert tortoise and Mojave ground squirrel. The measures proposed in Mitigation Measure MM 4.4-9(d) for the protection of desert tortoise (i.e., installation of temporary fencing if observed, allowing tortoise to leave the site, resuming of construction activities) are proposed in the unlikely event that a live tortoise is encountered on-site during construction. It is anticipated that further refinement to this measure may occur as part of the conditions of the ITP.
- 1-G:** The commenter expresses concern over protections for desert tortoise during the pre-construction phase pertaining to exclusionary fencing. No unauthorized take of desert tortoise or Mohave ground squirrel is proposed. Final fencing details will be resolved as part of the ITP, which would be obtained prior to the installation of exclusion fencing.
- 1-H:** The commenter notes concern over the enforceability of Mitigation Measure MM 4.4-15(b) proposed for the protection of desert tortoise and Mojave ground squirrel. No unauthorized take of Mohave ground squirrel is proposed. As stated in Response 1-C, the project applicant has applied

for an ITP for desert tortoise and Mojave ground squirrel. The measures proposed in Mitigation Measure MM 4.4-15(b) (ceasing of construction activity, evaluation of appropriate avoidance, minimization, or mitigation measures, documentation of species activity, etc.) are proposed in the unlikely event that Mohave ground squirrel is encountered on-site during construction. It is anticipated that further refinement to this measure may occur as part of the conditions of the ITP.

- 1-I:** The commenter identifies additional concerns pertaining to protection of desert tortoise and Mojave ground squirrel. Please refer to Responses 1-F through 1-H, above.
- 1-J:** The commenter recommends additional measures for fencing of the site to allow for desert kit fox movement in and out of the site. The County acknowledges the comments provided; final fencing details will be resolved as part of the ITP. Mitigation Measure MM 4.4-19(d) which addresses potential project impacts on desert kit fox and/or American badger) has been modified to include the provision recommended by CDFW in this comment as follows:
- d. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers or foxes from reuse during construction. Den excavation shall be prohibited during the pupping season to avoid possible pup mortality resulting from a lack of available refugia.

Local Agencies

Comment Letter 2: Eastern Kern Air Pollution Control District, Glen E. Stephens, PE (June 7, 2021)



Eastern Kern Air Pollution Control District

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

June 7, 2021

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

SUBJECT: Comments for Draft Environmental Report for Aratina Solar project
by 64NB 8ME LLC (PP20401)

Dear Ms. Candia:

Eastern Kern Air Pollution Control District (District) is in receipt of the Draft Environmental Impact Report (EIR) for the project listed above.

The following District requirements were properly addressed in the Draft EIR and are summarized here for reference: 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 solar facility. In addition to the requirements listed above, please note, stationary engines over 50 horsepower (i.e. generator sets, compressors, pumps, etc.) will require a permit to operate from the District prior to installation and operation.

2-A

2-B

Should you have any questions, please contact Miguel Sandoval at (661) 862-5250 or via email at sandovalm@kerncounty.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Glen E. Stephens".

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

GES:MS:tf
Enclosures

*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 Letter 2: Eastern Kern Air Pollution Control District, Glen E. Stephens, PE (June 7, 2021)

- 2-A:** The commenter notes that solar facilities 10 acres and larger are required to submit a Fugitive Dust Emission Control 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 Draft 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 during project construction through implementation of Mitigation Measures MM 4.3-1 to MM 4.3-3 (i.e., construction equipment controls, watering of disturbed onsite soils, monitoring of fugitive dust emissions, restrict worker roundtrips during construction, etc.), which would be implemented in conformance with the applicable EKAPCD plans and regulations and Kern County General Plan Policies 20 and 21. As such, the project proponent would coordinate with the EKAPCD as necessary. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

- 2-B:** The commenter identifies the requirement that any use of stationary engines over 50 horsepower will require a permit to operate from the EKAPCD prior to installation and operation.

As stated above in Response 2-A, the project would comply with applicable EKAPCD plans including any necessary permits, as discussed in Section 4.3, Air Quality, of the Draft EIR. Therefore, the project would comply with this request. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

**Comment Letter 3: Kern County Fire Department, Michael Nicholas, Assistant Fire Marshal
(June 10, 2021)****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



June 10, 2021

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

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 Aratina Solar (SCH#202120513). 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. Solar array projects over 20MW will require special fee calculation from KCFD prior to permit issuance. All Battery Energy Storage Systems must be applied for directly with KCFD for separate permitting and pre-construction approval. All proposed batteries must be UL9540A 2019 Edition tested for large scale burns to determine adequate design and mitigation measures.

3-A

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

3-B

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

Proudly Serving the Cities of Arvin, Bakersfield, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, Wasco, and all Unincorporated Areas of Kern County

Response to Letter 3: Kern County Fire Department, Michael Nicholas, Assistant Fire Marshal (June 10, 2021)

- 3-A:** The commenter 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 commenter states that the project will be required to meet standards set forth by the KCFD and to submit plans and obtain a permit from the KCFD for installation of a battery energy storage system. Additionally, the commenter indicates that the project would be subject to payment of applicable fees prior to permit issuance.

The County acknowledges the comments provided; such requirements as stated will be made Conditions of Approval for the project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record and no revisions to the Draft EIR are necessary.

- 3-B:** The commenter states that the KCFD will provide more detailed review comments at the time of KCFD plan review and building permit issuance.

This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary.

Comment Letter 4: Kern County Public Works Department (KCPWD), Floodplain Management Section, Kevin Hamilton by Brian Blase (June 16, 2021)

Office Memorandum

KERN COUNTY

To: Planning and Natural Resources
Department
Ronelle Candia

Date: June 16, 2021

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
Aratina 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.

4-A

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 Public Works Department, per the Kern County Development Standards.

4-B

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

Response to Letter 4: Kern County Public Works Department (KCPWD), Floodplain Management Section, Kevin Hamilton by Brian Blase (June 16, 2021)

- 4-A:** The commenter notes that the project site is subject to flooding and that runoff of stormwater from the site would increase due to the increase in impervious surface generated by the project.

The Draft EIR acknowledges that project implementation would increase the amount of impervious surfaces on-site, which may result in an increase in stormwater runoff. However, the majority of the project site would remain pervious and would therefore continue to absorb precipitation.

The comments provided do not raise a substantive issue on the content of the Draft EIR. The comments have been noted for the record and no revisions to the Draft EIR are required. Refer also to Response 4-B, below.

- 4-B:** The commenter requests that the project proponent submit a plan for the disposal of drainage waters originating on-site and from adjacent road rights-of-way, as well as incorporating flood hazard requirements into the project design per County standards, and that such actions be made Conditions of Approval for the project.

The site engineering and design plans for the project would conform to requirements of the Kern County Code of Building Regulations, the Kern County Development Standards, and the Floodplain Management Ordinance. Furthermore, site drainage plans would be required to comply with Division Four of the Kern County Development Standards, which provide guidelines including site development standards and mitigation, flood control requirements, erosion control, and on-site drainage flow requirements. Project conformance with such existing regulations pertaining to erosion and site drainage would neither alter the course of a stream or river nor result in substantial erosion on-site or off-site. As described in Section 4.10 of the Draft EIR, implementation of Mitigation Measure MM 4.10-1, which would require preparation and implementation of a stormwater pollution prevention plan, and Mitigation Measure MM 4.10-2, which would require preparation and implementation of a final hydrologic study and drainage plan, would reduce project impacts in this regard to less than significant. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary.

**Comment Letter 5: Kern County, County Surveyor Brian R. Blacklock, PLS, by Mark Braun,
Engineering Technician III (June 7, 2021)**

Office Memorandum – Kern County

TO: RONELLE CANDIA, SUPERVISING PLANNER Date: June 7, 2021
Planning & Natural Resources Department

FROM: BRIAN R. BLACKLOCK, PLS
County Surveyor

By: Mark Braun, Engineering Technician III (661) 862-5051

SUBJECT: Aratina Solar Project by 64 NB 50LW 8ME LLC (8Minute Energy) (SCH # 2021020513)

I have reviewed the above noted project **INITIAL STUDY/NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT** and recommend the following conditions be placed on the Conditional Use Permits:

1. Prior to issuance of a building or grading permit: All survey monuments shall be tied out by a Licensed Land Surveyor. A corner record for each monument or record of survey shall be submitted to the County Surveyor for review and processing, per Section 8771 of the Professional Land Surveyor's (PLS) Act.
2. Prior to Final Inspection: All survey monuments that were destroyed during construction shall be re-set or have a suitable witness corner set. A post construction corner record for each monument re-set or a record of survey shall be submitted to the County Surveyor for processing, per Section 8771 of the Professional Land Surveyor's Act.
3. Upon completion of project: All survey monuments shall be accessible by a Licensed Land Surveyor or their representatives, with prior notice, per Section 8774 of the PLS Act and Civil Code 846.5 (a).

Thank you for the opportunity to review and comment on this project. Should you have any questions please contact me.

5-A

5-B

5-C

5-D

Response to Letter 5: Kern County, County Surveyor Brian R. Blacklock, PLS, by Mark Braun, Engineering Technician III (June 7, 2021)

- 5-A:** The commenter indicates that the County Surveyor has reviewed the project and requests that certain conditions be placed on the Conditional Use Permits for the project.

The County acknowledges this request. Please see specific responses below to each Condition of Approval identified by the commenter.

- 5-B:** The commenter requests the condition that, prior to issuance of a building or grading permit, all monuments be tied out by a Licensed Land Surveyor.

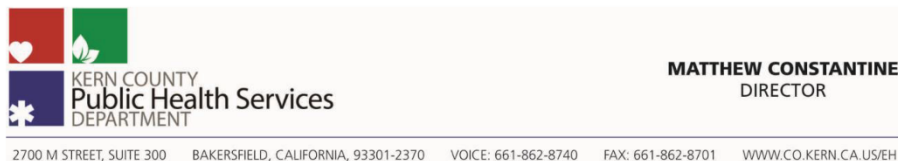
The County acknowledges this request; this requirement will be added as a Condition of Approval for the project, as requested. No change to the Draft EIR is required as a result of this comment.

- 5-C:** The commenter requests the condition that, prior to final inspection, all survey monuments destroyed during project construction be reset or have a suitable witness corner set. A post-construction corner record for each monument reset or a record of survey shall be submitted to the County Surveyor for processing.

The County acknowledges this request; this requirement will be added as a Condition of Approval for the project, as requested. No change to the Draft EIR is required as a result of this comment.

- 5-D:** The commenter requests the condition that, upon completion of the project, all survey monuments be accessible by a Licensed Land Surveyor or their representatives.

The County acknowledges this request; this requirement will be added as a Condition of Approval for the project, as requested. No change to the Draft EIR is required as a result of this comment.

**Comment Letter 6: Kern County Public Health Services Department (KCPHSD), Evelyn Elizalde
(June 23, 2021)****INTEROFFICE MEMORANDUM**

To: Ronelle Candia
From: Evelyn Elizalde
Subject: Draft EIR for Aratina Solar Project by 64 NB 8ME LLC

Date: June 23, 2021

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.

6-A

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.

6-B



Response to Letter 6: Kern County Public Health Services Department (KCPHSD), Evelyn Elizalde (June 23, 2021)

6-A: The commenter indicates that the County Department of Public Health Services Environmental Health Division has reviewed the project and notes the division's authority to enforce State regulations and local codes relevant to waste discharge, water supply, and other issues that affect public health, safety, and the environment.

This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary.

6-B: The commenter requests that certain Conditions of Approval be required for the project and satisfied, prior to the issuance of a building permit. Such conditions include logging on to the California Environmental Reporting System (CERS) website and complying with CERS requirements; gaining County Environmental Health Division approval of proposed water supply and sewage disposal methods; and permitting and destroying any on-site wells discovered during project grading and construction.

As part of the Conditions of Approval, the project proponent will comply with the requirements stated prior to issuance of a building permit. No change to the Draft EIR is required as a result of the comments provided.

Interested Parties and Organizations

Comment Letter 7: Ashpaugh, Millie (July 11, 2021)

From: [Millie Ashpaugh](#)
To: [Ronelle Candia](#)
Subject: Letter to respond to the Proposed Aratina Solar Project & draft EIR & notice of availability for public review - Ar
Date: Sunday, July 11, 2021 9:08:51 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Jul 11, 2021

To: Mrs. Ronelle Candia, Supervising Planner

Re: Aratina Solar Project by 64NB 8 MELL

Dear Mrs. Candia

We received the Notice of Availability for Public Review & Hearing on the Draft Environmental Impact Report for the proposed Aratina Solar Project May of 2021. This letter is in response to that & the draft EIR. I am writing on behalf of my husband, Rob & myself. I've written several letters previously expressing our opposition to this project. I can't believe I need to write another one but apparently it is part of the process. Our stance has not changed. We are still VERY MUCH OPPOSED to this project.

7-A

I've seen articles written on renewable energy sites about this project as if it has already been approved (in spite of the majority of the populace of Boron being opposed to it). I read that it is projected to be online before 2023. I sure hope we still have a fighting chance of keeping this solar field out & away from our town & that I am not writing this letter in vain. I think this proposed project would be a direct assault on our rural community if approved & allowed to go through.

I still think that the location is way too close to Boron. It would have significant & unavoidable negative immediate & long term effects on this quaint mining town for years to come. The mitigation proposed for some of those effects are minimal (example: donate money to a conservation group for what they destroy here, uugh). Behind the scenes, money is being donated (by the solar company's reps) to Boron community events & organizations to gain favor. \$100 here or there barely fills a tank of gas today. The solar company stands to make hundreds of millions of dollars on projects like these by taking advantage of rural underserved communities such as ours. We are being misled into thinking this will provide jobs & tax revenue for this area. The reality is that this project offers nothing positive for the town of Boron. We will have this metal jungle stretching from Edwards Air Force Base property line to the San Bernardino County line covering several thousand acres of open space directly across the street from our neighborhoods. It would prevent any positive development in this area for years to come. The fragile undisturbed desert landscape in our entire surrounding area would be destroyed. There is zero benefit for us on a long term basis.

7-B

If solar energy is the way of the future, it should only be allowed to be installed on rooftops, landfills & other disturbed land in urban areas, not hundreds of miles from the communities that would benefit from the power they generate. Yes, we learned that this Aratina project being built in Kern County will provide discounted energy to the wealthy areas of Monterey Bay & Silicon Valley! Really?? Our fragile undisturbed desert landscapes should not be destroyed to build these giant solar farms that will have unintended consequences of a global magnitude in the future. If we have to start using less fossil fuel, let's gradually do it but in a more responsible way & not at the expense of small rural towns like ours.

7-C

Comment Letter 7: Ashpaugh, Millie (July 11, 2021)

I realize that one of the main reasons this company is pushing so hard to build here is because of the relatively inexpensive land they can lease (a way to save money), the proximity of the Holgate substation they want to tie into (also to save money), & the smaller population we have here to fight their encroachment (another money saving strategy of theirs), but it isn't right! I have a feeling the technology will change & become more efficient in the next few years. Why should we be stuck with these monstrosities for the next 25 years & beyond? I find it interesting that BLM land has denied quite a few solar proposals citing environmental concerns; & that San Bernardino & Los Angeles County have banned large solar fields from being built.

7-D

7-E

There are few reasons to own property & live in areas like Boron. And this project would take away many of those reasons & destroy our way of life here. There would be no more open space, beautiful landscapes, recreational access, natural animal habitats, increased temperatures, potential adverse health effects, lower property values again, etc.

7-F

We are absolutely & positively not for this project. There is a race to build solar power here in the deserts of California. We see it happening all around us at record speed. Please don't let us be the ones to suffer for it.

7-G

We vote for Alternative 1 in the draft EIR. We implore you, once again, not to approve this Aratina Solar Project for Boron, please.

7-H

Sincerely,

Millie Ashpaugh, 805-443-7239

Rob Ashpaugh 805-444-7197

24183 Sage Ave., Boron, CA 93516

Response to Letter 7: Ashpaugh, Millie (July 11, 2021)

- 7-A:** The commenter notes receipt of the notice of availability of the Draft EIR and public hearing and indicates that she has previously provided correspondence expressing opposition to the project. The commenter restates strong opposition to the proposed development. Additionally, the commenter expresses the desire for her concerns to be heard and the opinion that the project would adversely affect the rural community if approved.

This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary. The County continues to conform with the noticing requirements per CEQA to invite public comment through publication of the Notice of Preparation of an EIR (August 14 to September 14, 2020, and February 26 to March 29, 2021), public scoping meetings (September 4, 2020, and March 19, 2021), and 45-day public comment period for the Draft EIR (May 28, 2021 to July 12, 2021). Additional public comment can be provided at both the Planning Commission hearing and subsequent Board of Supervisors hearing, at which the County will consider approval or denial of the proposed project.

- 7-B:** The commenter expresses the opinion that the project location is too close to the community of Boron and that it would have potentially adverse effects. The commenter states that the mitigation proposed is “minimal” and that the project proponent has donated money to local events and organizations and stands to benefit from project implementation. Additionally, the commenter states the opinion that the project would not benefit the community via job opportunities or tax revenue, and that it would prevent future development in the area and adversely affect desert lands.

CEQA requires an analysis of physical impacts to the environment; it does not require an analysis of potential social and economic impacts. Under CEQA, “[a]n economic or social change by itself shall not be considered a significant effect on the environment” (CEQA Guidelines, Sections 15131 and 15382). Effects analyzed under CEQA must be related to a physical change (CEQA Guidelines, Section 15358(b)). The evaluation in the Draft EIR is consistent with the guidance provided in Section 15131. No further response to the comments provided is required.

In response to public input received, the project proponent has redesigned the project to pull development away from the community of Boron and distance existing land uses from the proposed solar fields. In addition, an alternative project location was considered in the Draft EIR and was considered infeasible as alternative sites in the area are likely to have similar project-level and cumulatively significant impacts after mitigation; no suitable sites within the control of the project proponent that would reduce project impacts are available; and alternative sites may not include sites with close proximity to transmission infrastructure. Refer to Section 6.5.3, Alternative Site, in Chapter 6, Alternatives, of the Draft EIR.

Refer also to Draft EIR Section 4.4, Biological Resources, pertaining to potential project effects on the local desert habitat and landscape.

- 7-C:** The commenter expresses the opinion that solar energy generation should be limited to rooftops, landfills, and other disturbed lands, not distanced from the communities they would serve. The commenter states the opinion that the local desert and community should not be “destroyed” to support such solar installations.

The Draft EIR considered a project alternative that would involve development of a number of geographically distributed small to medium solar photovoltaic systems (100 kilowatt-hours to 1 megawatt [MW]) within existing developed areas, typically on the rooftops of commercial and industrial facilities situated throughout western Antelope Valley; refer to Alternative 4, the No Ground-Mounted Utility-Solar Alternative – Distributed Commercial and Industrial Rooftop Solar Only Alternative, in Chapter 6 of the Draft EIR. However, it was determined that this alternative is considered to be impracticable and infeasible to construct within the same time frame and/or with the same efficiency as the project because the project proponent lacks control and access to the sites required to develop 530 MW of distributed solar-generated electricity on building rooftops and the required land to support up to 600 MWh of energy storage. In addition, this alternative would not achieve the project objective of assisting California load-serving entities in meeting their obligations under California’s Renewables Portfolio Standards Program under Senate Bill 350. Refer to Chapter 6, Alternatives, of the Draft EIR for additional discussion.

The comments provided are noted for the record; however, no revisions to the Draft EIR are necessary in response.

- 7-D:** The commenter states the opinion that the project proponent recognizes the opportunity to build in the local community due to availability of inexpensive land, proximity to the Holgate Substation, and a small local population that may be affected.

The comments provided do not raise a substantive issue on the content of the Draft EIR. The comments have been noted for the record; no revisions to the Draft EIR are not necessary.

- 7-E:** The commenter expresses concern that the technology may change or be replaced with more efficient technologies in the near future. The commenter also states the opinion that similar solar projects on Bureau of Land Management Land and in other surrounding counties have been denied for environmental reasons.

The comments provided do not raise a substantive issue on the content of the Draft EIR. Whether or not solar technologies change or improve in the future or whether similar solar projects have been rejected by other public agencies and are not relevant issues of concern with regard to the Aratina Solar Draft EIR, per CEQA requirements. The comments have been noted for the record; no revisions to the Draft EIR are not necessary.

- 7-F:** The commenter states the opinion that the project would adversely affect the Boron community, open space, landscapes, recreational access, and natural habitat, as well as increase temperatures, affect public health, and lower property values.

The commenter does not provide specifics on how the project would adversely affect the issue areas noted. Potential project effects on open space and landscapes are evaluated in Section 4.1, Aesthetics, of the Draft EIR. Mitigation Measures MM 4.1-1 to MM 4.1-3, which require regular site maintenance and upkeep, as well as the use of color treatments and native landscaping techniques to harmonize the facility with the surrounding desert landscape, are identified to reduce project effects to the extent feasible.

As stated in Section 4.14, Transportation, of the Draft EIR, the project is not expected to require the closure of public roads during construction or decommissioning that would inhibit access to any areas used for recreational purposes. To ensure that potential project effects are reduced to the extent feasible, implementation of Mitigation Measure MM 4.14-1 would require preparation of a

Construction Traffic Control Plan that considers access to the project site. Additionally, the project would be constructed on private lands and would not affect access to any public resources or open space lands.

Refer to Responses to Letter 1 from CDFW above pertaining to potential project impacts on area wildlife, including desert kit fox, Mojave ground squirrel, and desert tortoise, among other sensitive species identified in the area. Mitigation measures proposed would reduce project-level impacts to less than significant; refer to Section 4.4, Biological Resources, of the Draft EIR. Refer also to Responses 11-B and 11-C, and Responses to Letter 51, below, pertaining to biological protections

By nature, the solar panels are designed to absorb sunlight and would not cause an increase in local temperatures. This is not an issue of concern relative to CEQA and no further response is required.

The commenter does not specify concerns on how the project would affect public health. Potential effects of the project on public health are evaluated in Section 4.3, Air Quality, and Section 4.9, Hazards and Hazardous Materials, of the EIR. Mitigation Measures MM 4.3-5 through MM 4.3-7, related to public health concerns related to COVID-19 and Valley Fever, are identified and would be implemented in order to reduce project effects to the extent feasible.

Regarding property values, refer to Response 7-B. CEQA requires an analysis of physical impacts to the environment resulting with project implementation; it does not require an analysis of potential social and economic impacts on the affected community. No further response to this comment is required.

- 7-G:** The commenter restates opposition to the proposed project and acknowledges the potential to build solar projects in the desert areas of California.

The comments provided do not raise a substantive issue on the content of the Draft EIR. The comments have been noted for the record and revisions to the Draft EIR are not necessary.

- 7-H:** The commenter expresses support for Alternative 1, No Project Alternative, as evaluated in Section 6.4.1 of the Draft EIR, and restates opposition to County approval of the proposed project.

Refer to Chapter 6, Alternatives, of the Draft EIR for additional discussion. The comments provided are noted for the record; no revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 8: Barnard, Joe (July 10, 2021)

From: jozeonstage@aol.com
To: [Ronelle Candia](#)
Subject: Proposed Solar Fields in Boron
Date: Saturday, July 10, 2021 9:04:09 AM

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Candia

It seems the subject of the solar fields are still an issue in Boron. After you and others assured our citizens that the proposed solar fields would not proceed and would not be going in we now hear that the ill conceived project continues to inch closer to becoming a reality. We've all seen the maps and their proposed locations are PRACTICALLY IN ALL OUR BACK YARDS !! People are very unhappy about this development and they have now created a Facebook group that opposes the current plan as well as creating a petition and collecting donations. This project will FOREVER alter the look of our community and not for the better!!

8-A

To be honest, our people are confused. You seem to not have our best interests and it seems like we're hearing two different stories. It would behoove to get out in front of this, otherwise you're going to have a lot of angry people out here in East Kern. Possibly you or someone come out here, hold a town meeting and speak to us about what's really going on, just the facts. Don't tell us what you think we want to hear but tell us what we need to know. It seems like the solar company is trying to sneak around and do things behind our backs.

8-B

We love our landscape and vistas out here, we don't want it ruined by being completely surrounding our town with these awful looking solar fields and panels. How could they POSSIBLY think it's a good idea to have them placed so very close near where we all live? The current map practically has them going up around our entire town!!

8-C

Please explain something to me, what does the town of Boron gain from ANY of this? The landscape of our town is completely ruined and there's possible hazards to our health and well being, YET we don't get a single cent off our utility bill. All that goes to some other area.

I say NO !! It would seem we get all of the bad and none of the good. That solar field can go SOMEWHERE ELSE !!! There are miles and miles and miles of open land that aren't close to our community, right in our back yards. If they have to run electrical lines way out there for power that's THEIR problem not OUR'S !! This project has no regard for the residents of this community.

8-D

Joe Barnard
Boron, CA

[Sent from the all new AOL app for Android](#)

Response to Letter 8: Barnard, Joe (July 10, 2021)

- 8-A:** The commenter states the opinion that the County previously assured the community that the proposed project would not proceed and notes the proximity of the project site to nearby residential uses. The commenter indicates opposition to the project and notes that a group has been organized and a petition created. The commenter states the opinion that the project will change the look of the Boron community.

Consistent with CEQA requirements, the County has evaluated the potential project impacts relative to aesthetics; refer to Section 4.1, Aesthetics, of the Draft EIR. Mitigation Measures MM 4.1-1 to MM 4.1-6 in Section 4.1 (which would require implementation of a Maintenance, Trash Abatement, and Pest Management Program; County approval of a color scheme and treatment plan; maintenance of onsite natural vegetation; conformance with dark sky protections; and minimization of potential light and glare effects, etc.), and MM 4.3-4 in Section 4.3, Air Quality (which would require installation of a 6-foot tall solid fence or wall to control wind-blown material), of the Draft EIR, would be implemented to reduce project impacts related to aesthetics to the extent feasible; however, as the project would permanently change the character of the site, the analysis determined that impacts would remain significant and unavoidable.

The remainder of the comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

- 8-B:** The commenter states the opinion that local residents are confused about the project and suggests that the County hold a town meeting to better inform residents of the status.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment. It should be noted that further public comment will be allowed at upcoming County Planning Commission and Board of Supervisors hearings at which the project as proposed will be presented and the County will consider whether to certify the EIR and approve or deny the project.

- 8-C:** The commenter states opposition to the project in that it would change the existing landscape and vistas, and questions the proposed location of the solar fields and panels close to town.

Refer to Response 8-A, above. The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

- 8-D:** The commenter questions how the town of Boron benefits from the project and states the opinion that the project would adversely affect the existing landscape and may result in possible hazards to public health. The commenter also states the opinion that the project should be located elsewhere and not close to the community of Boron.

Refer to Response 8-A, above, pertaining to aesthetics. Refer to Responses 2-A and 11-D, which indicate that potential health effects related to fugitive dust, exposure to Valley Fever, and possible effects related to COVID-19 would be reduced to the extent feasible through implementation of Mitigation Measures MM 4.3-1 to MM 4.3-7 (which would require such measures as construction equipment controls; watering of disturbed onsite soils; monitoring of fugitive dust emissions;

restricting worker roundtrips during construction; installation of a solid wall or fence in specified locations to control wind-blown materials; implementing controls to reduce potential exposure to Valley Fever-containing dust and/or COVID-19; and making payment of fees to Valley Fever awareness programs).

Additionally, the Draft EIR evaluated the potential for the project to result in hazards or hazardous conditions. As indicated in Section 4.9, Hazards and Hazardous Materials, of the Draft EIR, Mitigation Measure MM 4.9-1 would require preparation of a Hazardous Materials Business Plan to ensure that any risks to public health or the environment are minimized or avoided during the life of the project. Additionally, Mitigation Measure MM 4.9-2 would control the use of herbicides on-site over the long term to minimize or avoid potential human risk or exposure.

Refer also to Response 7-B regarding evaluation of an alternative location for the proposed project.

The comments provided are noted for the record. No revisions to the Draft EIR are necessary in response.

Comment Letter 9: Black, Lynn (June 2, 2021)**Ronelle Candia**

From: Lynn Black <lynn6373@gmail.com>
Sent: Wednesday, June 2, 2021 2:35 PM
To: Ronelle Candia; district2
Subject: Opposing the solar project surrounding Boron

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Hi to all

This email is to state that I am opposing the proximity of the proposed solar farm to Boron/Desert Lake. There is plenty of Kern county property that can be utilized instead of surrounding a small community. Please consider the residents and the future of this community. Thank you

9-A

Lynn Black

Response to Letter 9: Black, Lynn (June 2, 2021)

9-A: The commenter states opposition to the project and suggests that there are other properties within the County upon which the project could be constructed, rather than adjacent to the existing community.

The comments provided are noted for the record; refer to Response 7-B regarding evaluation of an alternative location for the proposed project. No revisions to the Draft EIR are necessary in response to the comments received.

Comment Letter 10: Brown, Debbie (July 9, 2021)

From: [Debbie Brown](#)
To: [Ronelle Candia](#)
Subject: Solar in Boron
Date: Friday, July 9, 2021 4:40:51 PM

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This is a horrible idea. Boron has not had any growth in many many years but now when we are most vulnerable they want to lock us in with Solar. I'm all for solar but not in anyone neighborhood especially mine. They are wanting to build the only direction we have left. West! We have Borax & their over burden to the north, Edwards Air Force base to the south & San Bernadino County to the East. Solar can build almost anywhere but housing needs to connect. A 1/2 a mile from the current housing (Desert Lake) is not sufficient we want minimum of 1 mile preferably 2 there is plenty of desert for Solar, Mojave & Ridgecrest are allowed room to grow. I don't see this Solar plant be icing Boron in any way. Very few jobs once it's up & running & not many local job to build it. I'm a longtime resident of Boron both my husband & I are retired, we own several properties houses, agriculture property, & commercial building. If this proceeds at current your purposed locations I only see property declining in value due to this project. I spoke with Alex at 8 minute solar a couple months back he stated he understood my concerns but I'm sure he has no influence. All I'm asking is to give us some room to grow. Back your boundary to the west of Borax Rd back to Gephart Rd. We already have a skeletal solar field in our area that's atrocious, causing a horrible felling toward solar fields in general. Feel free to call me 7606440905. Casadepass@gmail.com.

Debbie Brown

10-A

10-B

10-C

Sent from my iPhone

Response to Letter 10: Brown, Debbie (July 9, 2021)

- 10-A:** The commenter states opposition to the proposed project and that the project may affect area growth, in particular to the west where the town of Boron still has room to grow. The commenter states the opinion that locating the project one-half mile from existing housing is inadequate and requests that it be located at least 1 mile away, preferably 2 miles, as adequate desert land is available.

The comments provided are noted for the record; however, no revisions to the Draft EIR are necessary in response. As stated in Response 7-B, an alternative project location was considered in the Draft EIR. However, it was concluded that other alternative sites in the area are likely to have similar project-level and cumulatively significant impacts after mitigation; no suitable sites within the control of the project proponent that would reduce project impacts are available; and alternative sites may not include sites with close proximity to transmission infrastructure. Refer to Section 6.5.3, Alternative Site, in Chapter 6, Alternatives. No revisions to the Draft EIR are necessary in response to the comments received.

- 10-B:** The commenter states the opinion that the solar project would not benefit the town of Boron and that it would generate only a limited number of jobs for construction and operation. The commenter indicates that she owns several properties in the area and feels that her property values would decline due to project implementation.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA. As stated in Response 7-B, CEQA requires an analysis of physical impacts to the environment; it does not require an analysis of potential social and economic impacts. Under CEQA, “[a]n economic or social change by itself shall not be considered a significant effect on the environment” (CEQA Guidelines, Sections 15131 and 15382). Effects analyzed under CEQA must be related to a physical change (CEQA Guidelines, Section 15358(b)). The evaluation in the Draft EIR is consistent with the guidance provided in Section 15131. No further response to the comments provided is required.

- 10-C:** The commenter indicates that she has spoken with the applicant regarding the project. The commenter requests that the project boundary be relocated to the west of Borax Road back to Gephart Road and expresses adverse feelings against solar projects in the general area.

The County acknowledges the comments provided. Refer to Response 10-A above regarding evaluation of an alternative project location. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 11: Burgess, Sharon (July 8, 2021)

From: [Sharon Burgess](#)
To: [Ronelle Candia](#)
Subject: Boron - Aratina Solar Project 2.0 Objection
Date: Thursday, July 8, 2021 3:14:48 PM

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Good afternoon,

I received a disc containing information on the Draft Environmental Impact Report for the Aratina Solar Project. I was unable to open the disc on my computer but my opinion regarding the project remains the same. As stated below in my previous email, I'm totally against the destruction of our beautiful desert, the Joshua trees, and wildlife.

11-A

Please do not approve this project.

Thank you,
Sharon Burgess
27167 Jerome St.
Boron, CA. 93516.

On Mar 5, 2021, at 3:17 PM, Ronelle Candia <Candiar@kerncounty.com> wrote:

Good Afternoon,

Thank you for your comments.

We appreciate your participation in this public process. I want to confirm the Planning and Natural Resources Department did receive your comments and they will be included for consideration during the preparation of the Draft Environmental Impact Report for the Aratina Solar Project 2.0.

Should you have any further questions or comments regarding this project or the California Environmental Quality Act process, please feel free to contact me directly.

Sincerely,
Ronelle

Ronelle R. Candia
Supervising Planner – Advanced Planning Division
Kern County Planning & Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

Comment Letter 11: Burgess, Sharon (July 8, 2021)

Phone: 661.862.8997
Email: CandiaR@KernCounty.com

From: Sharon Burgess <sharon_burgess@hotmail.com>
Sent: Friday, March 5, 2021 2:11 PM
To: Ronelle Candia <Candiar@kerncounty.com>
Subject: Boron - Aratina Solar Project 2.0 Objection

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I'm requesting that Kern County NOT approve the proposed Aratina Solar Project 2.0 in Boron.

11-B

This project would destroy hundreds, if not thousands, of our beautiful Joshua Trees. These Joshua trees are protected under the California Desert Native Plants Act and the California Endangered Species Act, but I have discovered that Aratina has received a waiver and may destroy the amazing trees.

11-C

This project will have a huge impact on wildlife in the area. There are desert tortoises, snakes, lizards, mice, squirrels, bobcats, and coyotes living in this proposed area.

11-D

When the wind blows the sand and dust will hit our areas of Boron and Desert Lake. It could cause Valley Fever and also driving conditions could be affected.

11-E

This proposed project will be devastating to our beautiful desert south of Boron and Desert Lake and it's heartbreaking to think what could happen. Again, please do not approve this project.

11-F

Thank you,
Sharon Burgess
27167 Jerome St
Boron, CA 93516

Response to Letter 11: Burgess, Sharon (July 8, 2021)

- 11-A:** The commenter acknowledges receipt of the Draft EIR for public comment and states that her comments remain the same as those she previously submitted in response to receiving the Notice of Preparation for the EIR (see email dated March 5, 2021). The commenter restates opposition to the project relative to potential aesthetic and biological (Joshua trees and wildlife) impacts.

Refer to Responses 11-B through 11-E which address the commenter's specific concerns.

- 11-B:** The commenter states her opposition to the proposed project.

The commenter's opposition to the proposed project is noted for the record. No revisions to the Draft EIR are necessary in response to the comment provided.

- 11-C:** The commenter previously commented that the project would destroy numerous Joshua trees, and stated her opinion that the project applicant received a waiver and may destroy such resources.

The County recognizes the importance of the Joshua tree as a biological resource. The project applicant did not receive a "waiver" to allow for potential impacts to Joshua trees. As discussed in Section 4.4, Biological Resources, of the Draft EIR, on October 15, 2019, the California Fish and Game Commission (CFGF) received a petition to list the Joshua tree as threatened under the California Endangered Species Act (CESA). In February 2020, the California Department of Fish and Wildlife (CDFW) completed a review of the petition, as well as other scientific information available to CDFW. In its review, CDFW determined that "the petition provides sufficient scientific information to indicate that the petitioned action may be warranted." On September 22, 2020, the CFGF accepted for consideration the petition to list the Joshua tree as threatened or endangered under the CESA and made the Joshua tree a candidate species. Subsequently, the CFGF adopted a regulation authorizing incidental take of Joshua tree during the candidacy period pursuant to Section 2084 of the Fish and Game Code for certain energy projects in Kern and San Bernardino Counties listed in the regulation (the "2084 Rule"). The Aratina Solar Project is one of the projects listed in the 2084 Rule. This conditional incidental take authorization is codified in Section 749.10 of Title 14, California Code of Regulations.

Where direct impacts to Joshua trees are unavoidable, avoidance and/or minimization measures have been identified in the Draft EIR (Mitigation Measure MM 4.4-14) to ensure that project impacts to Joshua tree are reduced through either on-site mitigation in the form of restoration or enhancement, or off-site (if the species is listed as a 'candidate,' 'threatened,' or 'endangered' species under the CESA at the time of issuance of a building or grading permit) by providing evidence to the County that impacts to Joshua tree have been mitigated in accordance with the 2084 Rule, or mitigated through an approved mitigation bank, in-lieu fee program, or other CDFW-approved process. No revisions to the Draft EIR are required in response to the comments provided.

- 11-D:** The commenter states concern that the project would impact area wildlife such as desert tortoise, snakes, lizards, bobcats, coyotes, and other species.

Refer also to Response to Letter 1 from the CDFW, which addresses potential impacts to desert tortoise, desert kit fox, and Mojave ground squirrel, and other wildlife. As indicated in Section 4.4, Biological Resources, of the Draft EIR, potential project impacts on area wildlife have been evaluated and implementation of Mitigation Measures MM 4.4-1 through 4.4-25 (protection of sensitive plant and wildlife species; construction monitoring; worker training programs;

conformance with avoidance and minimization measures; pre-construction surveys; conformance with Migratory Bird Treaty Act, etc.), MM 4.1-4 through MM 4.1-6 (conformance with dark sky protections; minimization for potential of light and glare effects; and use of non-reflective materials; see Section 4.1, Aesthetics); and MM 4.10-1 through MM 4.10-2 (implement a Stormwater Pollution Prevention Plan; prepare final hydrologic study and drainage plan; see Section 4.10, Hydrology and Water Quality) would be required to reduce potential impacts on wildlife species to less than significant on a project level, including desert tortoise, Mohave ground squirrel, and other special-status species; however, when considered with the potential effects of other area development projects, cumulative impacts on such resources would remain significant and unavoidable. Mitigation measures identified would reduce the project's contribution to such resources to the extent feasible. No changes to the Draft EIR are required in response to the comments provided.

- 11-E:** The commenter states the opinion that blowing winds may potentially generate sand and dust that would affect Boron and Desert Lake and cause Valley Fever, as well as affecting driving conditions.

As discussed in Section 4.3, Air Quality, of the Draft 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. Fugitive dust would be reduced through implementation of Mitigation Measures MM 4.3-1 to MM 4.3-3, which would be implemented in conformance with the applicable EKAPCD plans and regulations and Kern County General Plan Policies 20 and 21 and would require construction emission control measures (i.e., equipment controls; minimizing engine idling; routine watering of disturbed onsite soils; implementing a Fugitive Dust Control Plan; reducing worker-related vehicle trips, etc.). As such, the project proponent would coordinate with the EKAPCD as necessary. Project impacts due to blowing dust and sand would be further mitigated with implementation of Mitigation Measures MM 4.3-4 (installation of 6-foot high solid fence or wall in specified onsite locations to control wind-blown material) and MM 4.1-3 (protection of natural onsite vegetation and/or revegetation/restoration), and impacts would be reduced to a less than significant level. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

Implementation of Mitigation Measure MM 4.3-4 would require construction of a 6-foot tall solid barrier as either a solid fence or wall as shown in Figure 4.3-2, *Solid Barrier Location*, of the Draft EIR to mitigate wind blow dust generated by the project to the communities of Desert Lake and Boron. This barrier will be installed prior to operation of the site, with dust control measures being implemented during construction. The portions of the project site where the barrier is not required, will be fenced with chain-link fence. As required by Mitigation Measure 4.4-19, the entire project site shall be fenced with desert tortoise exclusion fencing, including areas with the barrier. As part of routine maintenance, on-site staff will monitor the buildup of wind-blown materials around the base of the barrier and clear out debris and tumbleweeds on an as-needed basis on both sides of the barrier. The barrier shall be maintained in good condition and graffiti free during the life of the project and replaced as needed to remain effective.

Because dust can be an indicator that increased efforts are needed to control other airborne particulates [including inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI) which cause Valley Fever), the project is required to control dust and the potential for exposure to any CI spores as well as provide training and awareness of Valley Fever via Mitigation Measures MM 4.3-2 (implementation of dust and equipment control measures), MM 4.3-4 (installation of 6-

foot tall solid wall or fence in specified onsite locations), MM 4.3-6 (implementation of a COVID-19 Health and Safety Plan), and MM 4.3-7 (one-time payment of fees for Valley Fever awareness programs). With implementation of such mitigation measures, the project would not add significantly to the existing exposure level of construction workers or nearby residences to the CI fungus, and impacts would be less than significant.

Additionally, whether blowing sand or dust would affect local driving conditions is not a topic for evaluation under CEQA; no further response is required.

The County acknowledges the commenter's opposition to the project for the record. No revisions to the Draft EIR are necessary in response to this comment.

- 11-F:** The commenter restates both her opposition to the project and the opinion that the project would adversely affect the desert south of Boron and Desert Lake.

Refer to Responses 11-C to 11-D, above. The County acknowledges the commenter's opposition to the project for the record. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 12: English, Deric (July 9, 2021)

From: [Deric English](#)
To: [Ronelle Candia](#); [Department, Planning](#)
Subject: Opposition to Aratina Solar Project in the Desert Lake/Boron area of Kern County
Date: Friday, July 9, 2021 9:08:12 PM

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July 9, 2021 (second letter of opposition)

Re: Opposition to Aratina Solar Project in the Desert Lake/Boron area of Kern County

To whom it may concern,

As a lifetime Kern County resident, owner of property bordering this proposed project, member of a family residing in the area for almost one hundred years, and one having resided in the potential project area for fifty-eight years, I strongly oppose Aratina's proposed solar project. If not for relatively inexpensive land, a community lacking a huge voting or political bloc, and our proximity to Edison substations, a conversation about electromagnetic fields, transmission lines and environmental devastation would be unnecessary. However, and consequently, it is a crucial, highly needed conversation.

12-A

The proposed area is rich in animal life, existing as a unique biome, and offering the only scarce land sandwiched between Edwards AFB, Rio Tinto Minerals, Interstate Highway 58, San Bernardino County and the Burlington Northern and Santa Fe railroad property. This limited land is key for the development of community commerce, job creation, and potentially offering services when the land is better and more conscientiously developed. Turning this land into a solar field would be economically detrimental to the success of the Desert Lake and Boron communities. The numerous environmental costs could be far worse.

12-B

As a child/teen I would explore this land and was amazed with the desert biome, something I believe many do not fully appreciate. The plant life and animals I would encounter were lessons in the beauty of our desert and its diversity. Walking this path or riding my bicycle/motorcycle between Desert Lake and Boron, I'd see lizards such as the Western Whiptail, Desert Spiny, Banded Rock Lizard, Chuckwalla, Collared Lizard, Horned Lizard, Desert Iguana, Western Banded Gecko, and probably others I can't recall. Rattlesnakes such as the Mojave Green, Diamond Back, Sidewinder; nonpoisonous snakes such as the King, Gopher, Shovel Nose and Red Racer were common. Bobcats, badgers, Kangaroo Rat, Mojave Ground, Antelope Ground and Round Tailed Squirrels inhabited the area or used it as a pathway to somewhere. Owls, Red Tailed Hawk, Falcons and Ravens soared above this land, and numerous migratory birds would stop for brief periods of time. After a rain, it was a delight to see the Desert Tortoises emerging from their burrows and high-stepping it down the dirt road. To say this biome is fragile is an understatement.

12-C

In closing and with extreme seriousness, I'd rather this land remain undeveloped, never become developed, than to see it become a solar field--blight on our landscape and destroyer of a fragile, magical biome. Thank you for your attention to this matter and acceptance of community input--input that I'd venture to say is unanimous in its opposition to the Aratina solar project.

12-D

Deric English
 24261 Sage Avenue
 (Desert Lake, CA)
 Boron, CA, 93516

Response to Letter 12: English, Deric (July 9, 2021)

- 12-A:** The commenter notes that he is a long-time resident and property owner in the area and states his opposition to the project. The commenter expresses concern over electromagnetic fields, transmission lines, and adverse environmental effects, but does not provide specific concerns relative to these issues.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

- 12-B:** The commenter recognizes the biological value of the affected property and notes that area lands are “key for the development of community commerce, job creation,” and potential development for other uses. The commenter states opposition to use of the property for a solar field as “economically detrimental” to the communities of Desert Lake and Boron.

Refer to Response 7-B; CEQA does not require an analysis of potential social and economic impacts of a project. The evaluation in the Draft EIR is consistent with the guidance provided in CEQA Section 15131. The comments provided have been noted for the record; however, such comments do not challenge the adequacy of the Draft EIR relative to CEQA-related environmental issues. No revisions to the Draft EIR are necessary.

- 12-C:** The commenter expresses concern over the potential effects of the project on plants and wildlife in the Boron and Desert Lake areas, including lizards, snakes, bobcats, badgers, squirrels, hawks, desert tortoise, and other animals observed.

The comments provided are noted for the record; refer to Responses to Letter 1, above, and Responses 11-B and 11-C. No revisions to the Draft EIR are necessary in response to this comment.

- 12-D:** The commenter expresses his desire for the affected lands to remain undeveloped and restates that there is local opposition to the project.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 13: Fenner-Mudrak, Janet (June 4, 2021)

June 4, 2021

Kathleen Krauss

Kern County Planning Nat. Resources

Dept. 2700 "M" Street Suite 100

Bakersfield, California 93301

To whom it may concern:

I definitely oppose this action taken by Kern County to place this solar project any where in this vicinity.

My husband and I purchased this property in 1988 for our retirement plans and we have paid the taxes all these yrs. We do not want this project to go forth as outlined in all your letters to us.

I have also placed a phone call to this office stating my "NO VOTE"

Thanks for considering my vote.

Thank you Janet Fenner-Mudrak

RECEIVED
JUN 14 2021
KERN COUNTY PLANNING DEPT

13-A

Response to Letter 13: Fenner-Mudrak, Janet (June 4, 2021)

13-A: The commenter states opposition to the project, including as proposed at the current location. The commenter notes that they have owned their property locally for years and have contacted the County to express their opposition.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 14: Fort, Donna (July 12, 2021)

From: [Donna Fort](#)
To: [Ronelle Candia](#)
Subject: Solar project in Boron
Date: Monday, July 12, 2021 2:12:02 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

I am so disappointed in our system and having to write yet another letter opposing the solar fields that would essentially encase our small community!! 14-A

We as a community oppose an outside company coming in and ruining our natural landscape while killing our joshua trees and many, many animals who live in our desert. 14-B

Our Joshua trees only grow in a couple of places in the WORLD!! Why would Kern County allow them to kill so many of them?!

We have many protected critters who call our desert home. We have the desert tortoise, the burrowing owl, the mojave ground squirrel just to name a few. Why would Kern County allow these creatures to be killed? 14-C

The residents in our community are all but forgotten when it comes to getting services that the other areas of Kern County enjoy. 14-D

It takes an act of Congress to get anything out here. This desert that you want to allow this solar company to destroy is our peace, our serenity and our entertainment! 14-E

They need to put the solar where the people who will reap the rewards live! Leave our beautiful desert alone!! 14-F

Please, help us protect our joshua trees, our native critters and our beautiful scenery!! Dont let this corporation destroy our desert!

Donna Fort
24330 Tamarisk Ave
Boron, CA
760-559-3950
[Sent from Yahoo Mail on Android](#)

Response to Letter 14: Fort, Donna (July 12, 2021)

- 14-A:** The commenter expresses opposition to the proposed project and its proximity to the Boron community.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

- 14-B:** The commenter expresses community opposition to the project and to potential effects on Joshua trees and wildlife such as desert tortoise, burrowing owl, and Mohave ground squirrel.

Refer to Responses to Letter 1 which address potential impacts on desert tortoise, Mojave ground squirrel, and desert kit fox, as well as Responses 11-B and 11-C and Responses to Letter 51, below, pertaining to biological protections. Mitigation Measures MM 4.4-1 to MM 4.4-25 would be implemented to ensure that potential project impacts on biological resources and the desert environment are reduced to the extent feasible; impacts to Joshua tree, desert tortoise, burrowing owl, and Mohave ground squirrel would be reduced to less than significant at the project level. No revisions to the Draft EIR or additional mitigation measures are necessary in response to this comment.

- 14-C:** The commenter expresses the opinion that the local area is lacking in services as compared to other areas of Kern County.

The comments provided are noted for the record; however, the commenter does not raise a specific issue of concern regarding project effects on the physical environment, relative to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

- 14-D:** The commenter expresses the opinion that the project would adversely affect the commenter's "peace," serenity, and entertainment.

The comments provided are noted for the record; however, such comments do not raise a substantive issue of concern relative to CEQA and no further response is required. No revisions to the Draft EIR are necessary in response to this comment.

- 14-E:** The commenter states opposition to the proposed location of the project and potential effects on the desert environment, and states the opinion that the project should be sited where people would benefit from such development.

The comments provided are noted for the record; however, the commenter does not raise a specific issue of concern related to project effects on the desert environment. As stated previously, CEQA does not require analysis of social and economic impacts of a project; refer to Response 7-B. No revisions to the Draft EIR are necessary in response to this comment.

- 14-F:** The commenter expresses concern for protection of Joshua trees, native wildlife, and local scenery.

The comments provided are noted for the record. Refer to Response to Letter 1 and Responses 11-B and 11-C pertaining to biological resources, and Response 7-F pertaining to aesthetics. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 15: Hanson, James (June 11, 2021)

From: [Tena Hanson](#)
To: [Ronelle Candia](#)
Subject: Aratina Solar Project - Boron
Date: Friday, June 11, 2021 1:56:53 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

My name is James Hanson and I live right across the street from where they are wanting to put the solar field. I am opposed to this project for many reasons. There are many miles of open land that are not right against housing and within a community. Why can this project not be built outside of the town instead of against the houses? Does anyone know what the effects of the solar plant being so close to properties could be. It will take the vegetation away and cause the dirt to fill our houses and could affect the health of my family. Also, the reflection of the solar panel on the property and its family members could also cause health issues. It will block dirt roads that are used as exits for the people that live across the railroad tracks when the crossing is blocked. This is important for us to have a second way out in case of an emergency. This will affect the value of my property in a negative way and make it impossible for homes to be sold.

15-A

15-B

15-C

15-D

15-E

15-F

I feel that this project will not be beneficial to our town and should not be allowed to be built.

15-G

James Hanson
Boron Resident

Response to Letter 15: Hanson, James (June 11, 2021)

- 15-A:** The commenter states that he lives across the street from the proposed project location and that he is opposed to the project.

The County acknowledges the comments provided for the record; however, such comments do not raise a substantive issue relative to CEQA. No further response is required.

- 15-B:** The commenter states that there are alternative locations to the project site on open lands not adjacent to existing housing or a community.

The County acknowledges the comments provided. Refer to Response 7-B regarding evaluation of an alternative project location. No revisions to the Draft EIR are necessary in response to this comment.

- 15-C:** The commenter indicates concern over the potential effects of the solar panels on surrounding properties, including potential effects of vegetation removal and public health.

Potential project effects on public health were evaluated per CEQA requirements in Section 4.3, Air Quality, and Section 4.9, Hazards and Hazardous Materials, in the Draft EIR. Refer to Response 11-D, above. Implementation of Mitigation Measures MM 4.3-1 (construction-related equipment and vehicle controls) and MM 4.3-2 (routine watering and/or compaction of disturbed soils; reduced vehicle speeds on unpaved roads; implement a Fugitive Dust Control Plan, etc.) to reduce fugitive dust emissions to the extent feasible. Mitigation Measures MM 4.3-2, MM 4.3-4 (construct a 6-foot tall solid barrier to control wind-blown material), MM 4.3-5 (construction equipment controls; watering of onsite soils; worker training; use of personal protective equipment, etc.), and MM 4.3-7 (one-time payment of fees for Valley Fever awareness programs) would reduce potential impacts relative to Valley Fever to less than significant. Additionally, Mitigation Measure MM 4.9-1 would require preparation and implementation of a Hazardous Materials Business Plan, and Mitigation Measure MM 4.9-2 would provide controls for the use and application of herbicides. Such mitigation would reduce project impacts to less than significant.

- 15-D:** The commenter states concern over potential health effects from reflection off of the solar panels.

As indicated in Section 4.1, Aesthetics, in the Draft EIR, the project would not result in adverse glare effects on surrounding properties; refer also to Appendix B, Glare Analysis Report. To ensure that project impacts related to glare remain less than significant, Mitigation Measure MM 4.1-5 would require the project proponent to demonstrate that the solar panels and hardware are designed to minimize glare, and Mitigation Measure MM 4.1-6 would require the operator to demonstrate that all on-site buildings utilize non-reflective materials. The comments provided have been noted for the record; however, revisions to the Draft EIR are not necessary.

- 15-E:** The commenter expresses concern over whether the project as designed would block access to dirt roads used by locals to avoid the railroad tracks when the crossing is blocked, or for such secondary access to be blocked in the event of an emergency.

As stated in Section 4.14, Transportation, the project is not expected to require the closure of public roads during construction or decommissioning that would inhibit or block local vehicular access or circulation. Nevertheless, during the construction or decommissioning phase of the project, project-related traffic using the local roadways could interfere with emergency response to the project site

(or other surrounding properties). To ensure that potential project effects are reduced to the extent feasible, Mitigation Measure MM 4.14-1 would require preparation of a Construction Traffic Control Plan that considers access for emergency vehicles to the project site. With implementation of the proposed mitigation, project impacts relative to adequate emergency access, as well as any interference with access for other vehicles, would be reduced to less than significant. No new mitigation measures or revisions to the Draft EIR are required as the result of this comment.

- 15-F:** The commenter states the opinion that the proposed project would adversely affect their property value and the potential for area home sales.

The comments provided are noted for the record; however, such comments do not raise a specific concern relative to CEQA. Refer to Response 7-B related to economic benefits of a project relative to CEQA requirements. No further response is required.

- 15-G:** The commenter states the opinion that the proposed project would not benefit the local town and should not be allowed to be built.

The comments provided are noted for the record; as stated in Response 7-B, evaluation of potential social and economic effects of a project are not required relative to CEQA. No further response is required.

Comment Letter 16: Hansen, Tena (June 11, 2021)

From: [Tena Hanson](#)
To: [Ronelle Candia](#)
Subject: Aratina Solar Project (Boron)
Date: Friday, June 11, 2021 1:55:49 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

My name is Tena Hanson and I live right across the street from where they are wanting to put the solar field. I am opposed to this project for many reasons. There are many miles of open land that are not right against housing and within a community. Why can this project not be built outside of the town instead of against the houses. Does anyone know what the effects of the solar plant being so close to properties could be. It will take the vegetation away and cause the dirt to fill our houses and could affect the health of my family. Also, the reflection of the solar panel on the property and its family members could also cause health issues. It will block dirt roads that are used as exits for the people that live across the railroad tracks when the crossing is blocked. This is important for us to have a second way out in case of an emergency. This will affect the value of my property in a negative way and make it impossible for homes to be sold.

I feel that this project will not be beneficial to our town and should not be allowed to be built.

Tena Hanson
Boron Resident

Response to Letter 16: Hansen, Tena (June 11, 2021)

16-A to 16-G: The comments provided are the same as those submitted in Letter 15.

Please refer to Responses 15-A to 15-G, above. No revisions to the Draft EIR are required as the result of the comments provided.

Comment Letter 17: Hobbs, Sidney (July 9, 2021)

From: [sidney.hobbs](#)
To: [Ronelle Candia](#)
Subject: Boron solar project
Date: Friday, July 9, 2021 11:29:36 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

To whom it may concern,

My husband and I Purchased our home at 12466 Sierra view street in desert lake in 2020. We are completely opposed to the building of the solar facility so close to our home. There is more than enough sunlight and empty desert to build elsewhere.

17-A

We plan to attend any meetings that we will be able to voice our concerns and hopefully see a change in the location of the upcoming solar project. Please let us know how else we can be heard.

17-B

Thank you,
Sidney Hobbs
760-223-1848

Response to Letter 17: Hobbs, Sidney (July 9, 2021)

- 17-A:** The commenter identifies herself as a local property owner and states opposition to the proposed project in proximity to her home. The commenter also states the opinion that the project could be constructed elsewhere on available desert lands.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR. No revisions to the Draft EIR are necessary and no further response is required. Refer also to Response 7-B regarding evaluation of an alternative project location.

- 17-B:** The commenter states that she intends to attend local meetings to be able to voice concerns and asks to be informed on how else public concerns may be heard by the County.

The comments provided have been noted for the record. Additional opportunities for public comment will be provided both at the upcoming Kern County Planning Commission hearing and subsequently, at the Board of Supervisors hearing, at which the project will be considered for approval or denial. It should be noted that the commenter will receive notice of future public hearings related to the project.

Comment Letter 18: Hurley, Heather (July 11, 2021)

From: [Heather Hurley](#)
To: [Ronelle Candia](#)
Subject: Solar panels in Boron
Date: Sunday, July 11, 2021 7:59:12 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Please DO NOT put solar panels up in the pristine desert surrounding Boron. As a child my siblings and I explored every hill and valley, knew every creosote ring and sandwash. We saw coyotes, tortoise, black tailed jackrabbits, cotton tails, and occasionally kitfoxes and bobcats. Once or twice we spotted a badger and once my brother photographed a ring tail at my mother's fountain. This wildlife is precious. Don't destroy their habitat. 18-A

Solar panels are great. Put them on top of buildings, roads or parking lots. Just don't bulldoze our hometown. 18-B

Sincerely
Heather R Hurley

Response to Letter 18: Hurley, Heather (July 11, 2021)

18-A: The commenter requests that the project not be installed on the desert lands surrounding Boron. The commenter notes familiarity with local wildlife growing up in the area and requests that the local habitat not be destroyed (with the project).

Refer to Responses to Letter 1; Responses 11-B and 11-C; and Responses to Letter 51 which pertain to potential impacts on sensitive wildlife species and area habitat. Project-level impacts would be reduced to less than significant with implementation of the mitigation measures identified. The comments provided have been noted for the record.

18-B: The commenter suggests that solar panels should be installed on rooftops, roads, or parking lots instead of at the proposed location near Boron.

Refer to Response 7-C. The Draft EIR considered a project alternative that would involve development of a number of geographically distributed small to medium solar photovoltaic systems (100 kilowatt-hours to 1 megawatt [MW]) within existing developed areas, typically on the rooftops of commercial and industrial facilities situated throughout western Antelope Valley; refer to Alternative 4, the No Ground-Mounted Utility-Solar Alternative – Distributed Commercial and Industrial Rooftop Solar Only Alternative, in Chapter 6 of the Draft EIR.

The comments provided have been noted for the record. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 19: International Brotherhood of Electrical Workers (IBEW); Carabasal, Patrick (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,


PATRICK CARABASAL

19-A

Response to Letter 19: International Brotherhood of Electrical Workers (IBEW); Carabasal, Patrick (Illegible) (July 1, 2021)

19-A: The commenter indicates personal membership in the IBEW and familiarity with the project proponent, 8minute Energy. The commenter also acknowledges growth in the renewable energy job market and recruitment of local workers in the energy field, as well as commitment to the advancement of the State's green energy goals. The commenter urges the County to support the project as proposed.

The County acknowledges the comments provided for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the EIR are required as the result of the comments provided.

Comment Letter 20: IBEW; Elliott, Robert (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

Robert Elliott



Loc 428

20-A

Response to Letter 20: IBEW; Elliott, Robert (July 1, 2021)

20-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 21: IBEW; Dolph, Glenn (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

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The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

GLENN DOLPH


21-A

Response to Letter 21: IBEW; Dolph, Glenn (July 1, 2021)

21-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 22: IBEW; Chisholm, Jon (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

JON CHISHOLM


22-A

Response to Letter 22: IBEW; Chisholm, Jon (July 1, 2021)

22-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 23: IBEW; Darringer, Jeremy (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

JEREMY DARRINGER



23-A

Response to Letter 23: IBEW; Darringer, Jeremy (July 1, 2021)

23-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 24: IBEW; Foster, Jared (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

Jared Foster


24-A

Response to Letter 24: IBEW; Foster, Jared (July 1, 2021)

24-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 25: IBEW; Thomas, Dave (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,


DAVE THOMAS

25-A

Response to Letter 25: IBEW; Thomas, Dave (July 1, 2021)

25-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 26: IBEW; Flores, Jose (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



Jose Flores

26-A

Response to Letter 26: IBEW; Flores, Jose (July 1, 2021)

26-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 27: IBEW; Garcia, Danny (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



DANNY GARCIA

27-A

Response to Letter 27: IBEW; Garcia, Danny (July 1, 2021)

27-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 28: IBEW; Rodriguez, Rocky (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,


Rocky Rodriguez

28-A

Response to Letter 28: IBEW; Rodriguez, Rocky (July 1, 2021)

28-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 29: IBEW; Melendiaz, Samuel (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

Samuel Melendiaz



29-A

Response to Letter 29: IBEW; Melendiaz, Samuel (Illegible) (July 1, 2021)

29-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 30: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



30-A

Response to Letter 30: IBEW; (Illegible) (July 1, 2021)

30-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 31: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



31-A

Response to Letter 31: IBEW; (Illegible) (July 1, 2021)

31-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 32: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



32-A

Response to Letter 32: IBEW; (Illegible) (July 1, 2021)

32-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 33: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



33-A

Response to Letter 33: IBEW; (Illegible) (July 1, 2021)

33-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 34: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely, 

34-A

Response to Letter 34: IBEW; (Illegible) (July 1, 2021)

34-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 35: IBEW; Rogers, Terry (July 1, 2021)

July 1, 2021

Dear Ronelle Candia and Clerk of the Board,

I am writing to let you know that my career in the solar industry has given me great opportunity and helped me support my family. I am in support of the Aratina solar project that will continue to advance excellent careers for women like me.

Solar energy jobs are for anyone and everyone interested in having a well-paying career while making a difference in the world.

Sincerely,



Terry Rogers
Phone: 661-863-8393

35-A

Response to Letter 35: IBEW; Rogers, Terry (July 1, 2021)

35-A: The commenter states support of the proposed project relative to personal career advancement and opportunities for employment in the solar energy field.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 36: IBEW; Baltazar, Rodney (No Date)

Kern County Planning and Natural Resources Department
ATTN: Ronelle Candia, Supervising Planner
2700 "M" Street, Suite 100
Bakersfield, CA 93301
E-mail: candiar@kerncounty.com

Kern County Board of Supervisors
ATTN: Clerk of the Board
1115 Truxtun Avenue, 5th Floor
Bakersfield, CA 93301
E-mail: caomailbox@kerncounty.com

Dear Ms. Candia and Clerk of the Board,

My name is Rodney Baltazar, an IBEW union member and veteran, and I enthusiastically support the Aratina Solar Project by 8minute Solar Energy currently under consideration in Kern County.

I am writing to urge Kern County to approve the Aratina Solar Center. If approved, Aratina would help our state achieve its green energy goals while diversifying Kern's energy economy. The project will also provide jobs for veterans like me. My job in the solar industry has provided me with the strong career that many veterans aren't fortunate enough to have. As a soldier, I fought for my country. In solar, I fight against climate change.

We need this project now to help ensure a thriving, future focused Kern County with strong careers for workers and veterans like me. I urge you to approve the Aratina Solar Center today.

Sincerely,



Rodney Baltazar
661.599.1421

36-A

Response to Letter 36: IBEW; Baltazar, Rodney (No Date)

36-A: The commenter identifies himself as an IBEW member and indicates support of the proposed project. The commenter states the opinion that the project would help to assist the State in achieving its energy goals; diversify the County's energy economy; and provide jobs, including jobs for veterans.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 37: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



37-A

Response to Letter 37: IBEW; (Illegible) (July 1, 2021)

37-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 38: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



38-A

Response to Letter 38: IBEW; (Illegible) (July 1, 2021)

38-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 39: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,



39-A

Response to Letter 39: IBEW; (Illegible) (July 1, 2021)

39-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 40: IBEW; (Illegible) (July 1, 2021)

July 1, 2021

Kern County Planning and Natural Resources Department, ATTN: Ronelle Candia
Kern County Board of Supervisors, ATTN: Clerk of the Board

Dear Ronelle Candia and Clerk of the Board,

RE: Support for Aratina Solar Project

We are writing today as members of the International Brotherhood of Electrical Workers (IBEW) in support of the Aratina Solar Project.

IBEW has had a long-term relationship with 8minute over the years and together we are committed to advancing workforce opportunity in clean energy.

The market for renewable energy is growing quickly with lots of demand for more work. We have partnered with 8minute to host job fairs in Kern County so we can recruit locally and put more members to work in well-paying jobs while continuing to advance our state's green energy goals.

We urge you to support the Aratina Solar Center as proposed in the Draft EIR.

Sincerely,

A handwritten signature in black ink, appearing to be a stylized name, possibly "Ronelle Candia", written over a horizontal line.

40-A

Response to Letter 40: IBEW; (Illegible) (July 1, 2021)

40-A: The letter provided expresses similar concerns and project support as stated in Letter 19. Please refer to Response 19-A for County responses to the comments submitted with this letter.

Comment Letter 41: Job, Crystal (July 12, 2021)

From: [Crystal Job](#)
To: [Ronelle Candia](#)
Subject: Aratina Solar Project in Boron,
Date: Monday, July 12, 2021 3:08:10 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

To Whom it May Concern,

I am a long time resident and homeowner in Boron, CA. I live here for the beautiful wide open spaces and the peace and quiet that comes with a small desert town. I frequently enjoy walking and enjoying the beautiful desert landscape that we have here. I love the Joshua Trees, the sagebrush, and the wildflowers that pop up every spring. 41-A
The Aratina Solar Project will negatively affect all of the desert. It will uproot Joshua trees that have been growing for hundreds of years. It will force wildlife out of their homes, and it will create more dirt and dust for residents and school children. It will be an eyesore to our home which is very close to the proposed site. It will ruin my daily walks along the desert. It will bring more heat and dirt. In short it will have all negative affects to our small town. 41-B
There are thousands of miles of empty desert where they can build their solar farms without causing issues for homeowners and the school children. Why here? Why Boron? I see nothing that this project will do that will enhance the community in which I live. Everything about it is detrimental to the beautiful place that I call home. 41-C
Please note that I am completely opposed to this project for many valid reasons. This project can be done elsewhere with zero impact to people who live in a desert community. We do not want this eyesore that will create issues for us. We want to keep our desert beautiful and pure. Uninterrupted by man made solar panels that will disrupt the wildlife and people of this community. 41-D
Thank you for your time.
Best,
Crystal Job

Sent from my iPhone

Response to Letter 41: Job, Crystal (July 12, 2021)

- 41-A:** The commenter identifies herself as a local resident and homeowner, and her appreciation for the existing character of the small desert town, landscape, and plant life.

The comments provided have been noted for the record. Such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

- 41-B:** The commenter states the opinion that the proposed project would negatively affect the desert, disturb Joshua trees, force out wildlife, create an “eyesore,” and generate “more dirt and dust for residents and school children.”

Refer to Response 8-A pertaining to potential aesthetic effects of the project. Additionally, mitigation measures are proposed and would be implemented relative to aesthetics, air quality, biological resources, and hazards in order to minimize potential environmental effects to the extent feasible. Refer also to Responses to Letters 1 and Letter 51 relative to project impacts on biological resources, and Responses 2-A, 11-D, and 15-C relative to air quality/dust and hazards.

- 41-C:** The commenter suggests that there are other lands where the project could be built with lesser impacts on homeowners and school children of the Boron community. The commenter states the opinion that the project would not enhance the community and that the project would be “detrimental.”

The Draft EIR evaluated the potential to locate the project on an alternative site and determined such an alternative to be infeasible; refer to Response 10-A for additional discussion. The County acknowledges the commenter’s opinion that the project would not enhance the community and that the project would be “detrimental”; however, such comments are not related to a specific physical impact on the environment pursuant to CEQA requirements. No further response to the comments provided is required.

- 41-D:** The commenter states opposition to the proposed project and suggests that the project could be built elsewhere with less impact on the desert community and its aesthetics, wildlife, and local residents.

Refer to Responses 41-B and 41-C, above, relative to potential project effects related to aesthetics, biological resources, air quality, and hazards.

Comment Letter 42: Keller-Gage, Shelley (No Date)

P. O. Box 626, Boron CA 93596

Shelley Keller-Gage
(760) 553-5457skellergage@gmail.com

Kern County Planning and Natural Resources Department
ATTN: Ronelle Candia, Supervising Planner
2700 "M" Street, Suite 100
Bakersfield, CA 93301
E-mail: candiar@kerncounty.com

Kern County Board of Supervisors
ATTN: Clerk of the Board
1115 Truxtun Avenue, 5th Floor
Bakersfield, CA 93301
E-mail: caomailbox@kerncounty.com

Dear Ms. Candia and Clerk of the Board,

I am a long-time resident of Boron, and I support the Aratina Solar Project by 8minute Solar Energy currently under consideration in Kern County.

42-A

While I am sad to see some of our desert being used for solar energy projects, I feel that by scaling back the footprint of the original proposed project, Aratina is making an attempt in good faith to compromise with the community to balance their concerns and the project benefits.

42-B

If approved, Aratina will help California achieve its green energy goals while diversifying Kern's energy economy, and help move away from the dependence on oil for much of the County economy. The project will increase direct economic spending in the community and raise valuable tax revenues for services like local education, public safety and street services.

42-C

It is my understanding that Solar Companies have been excluded from paying property taxes, or are paying a reduced rate. It is also my understanding the Aratina will be paying these taxes, which will be a boon to the County budget. If this is the case, I hope that the RENEWBIZ Program that has been so beneficial to the unincorporated communities of Kern can be put back in place.

42-D

I would like to add my voice to those in favor of this Solar Project and I urge you to approve the Aratina Solar Center.

42-E

Sincerely,

Shelley Keller-Gage
Boron resident

Response to Letter 42: Keller-Gage, Shelley (No Date)

- 42-A:** The commenter indicates that she is a long-time resident of Boron and states support for the proposed project.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

- 42-B:** The commenter acknowledges that the project would affect local desert lands but recognizes the applicant's prior efforts taken to reduce the original project footprint in response to community concerns.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

- 42-C:** The commenter expresses the opinion that the project would help to achieve State green energy goals and diversify the economy by reducing County dependence on oil. Additionally, the commenter states the opinion that the project would increase local economic spending and raise tax revenues for local services.

The comments provided have been noted for the record. However, as stated previously, CEQA requires an analysis of physical impacts to the environment; it does not require analysis of social and economic impacts. The comments provided do not challenge the adequacy of the EIR relative to CEQA-related environmental issues, and no revisions to the Draft EIR are necessary. Refer also to Response 7-B.

- 42-D:** The commenter states an understanding that solar projects are exempt from paying property taxes or that owners of such developments make such payments at a reduced rate, and that the project proponent would be required to pay such taxes, thereby supporting the Kern County budget. The commenter expresses the desire to have the RENEWBIZ program reinstated to assist unincorporated communities within the County.

Refer to Response 42-C pertaining to consideration of social and economic issues relevant to CEQA. This comment does not challenge the adequacy of the EIR relative to CEQA-related environmental issues, and no revisions to the Draft EIR are necessary. The comments provided are, however, noted for the record.

- 42-E:** The commenter restates support for the project and encourages the County to approve the Aratina Solar facility.

The comments provided have been noted for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 43: Kennedy, Charles (June 11, 2021)

From: [Tena Hanson](#)
To: [Ronelle Candia](#)
Subject: Aratina Solar Project - Boron
Date: Friday, June 11, 2021 1:57:46 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

My name is Charles Kennedy and I live right across the street from where they are wanting 43-A
to put the solar field. I am opposed to this project for many reasons. 43-B
There are many miles of
open land that are not right against housing and within a community. Why can this project not
be built outside of the town instead of against the houses. 43-C
Does anyone know what the effects
of the solar plant being so close to properties could be. It will take the vegetation away and
cause the dirt to fill our houses and could affect the health of my family. 43-D
Also, the reflection of
the solar panel on the property and its family members could also cause health issues. 43-E
It will
block dirt roads that are used as exits for the people that live across the railroad tracks when
the crossing is blocked. This is important for us to have a second way out in case of an
emergency. 43-F
This will affect the value of my property in a negative way and make it impossible
for homes to be sold.

I feel that this project will not be beneficial to our town and should not be allowed to be built. 43-G

Charles Kennedy
Boron Resident

Response to Letter 43: Kennedy, Charles (June 11, 2021)

43-A to 43-G: The letter provided is identical to Letter 15. Please refer to Responses 15-A to 15-G for County responses to the comments submitted with this letter.

Comment Letter 44: Kennedy, Melba (June 11, 2021)

From: [Tena Hanson](#)
To: [Ronelle Candia](#)
Subject: Aratina Solar Project - Born
Date: Friday, June 11, 2021 1:58:31 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

My name is Melba Kennedy and I live right across the street from where they are wanting to put the solar field. I am opposed to this project for many reasons. There are many miles of open land that are not right against housing and within a community. Why can this project not be built outside of the town instead of against the houses. Does anyone know what the effects of the solar plant being so close to properties could be. It will take the vegetation away and cause the dirt to fill our houses and could affect the health of my family. Also, the reflection of the solar panel on the property and its family members could also cause health issues. It will block dirt roads that are used as exits for the people that live across the railroad tracks when the crossing is blocked. This is important for us to have a second way out in case of an emergency. This will affect the value of my property in a negative way and make it impossible for homes to be sold.

44-A

44-B

44-C

44-D

44-E

44-F

I feel that this project will not be beneficial to our town and should not be allowed to be built.

44-G

Melba Kennedy
Boron Resident

Response to Letter 44: Kennedy, Melba (June 11, 2021)

44-A to 44-G: The letter provided is identical to Letter 15. Please refer to Responses 15-A to 15-G for County responses to the comments submitted with this letter.

Comment Letter 45: Kometas, Barbara (June 11, 2021)

21 JUN 14 PM 2:13

FILE
THE
RV

June 11. 2021

Dear Sir,

First I must say: The solar plant is a good project. As I study these maps - some of the these dimensions on it do not seem accurate in dimensions. It seems at Bron are and TMT road, sec-2-1-6 are not accurate. Museum, housing area, does this to all be bought by Aratina, it line on Ferguson St is it extending to that housing area? On paper it is a good. The area and is not clear, I have at the time no map of the area where the houses are. This map seems to be not accurate in site # and location. Please have architect draw something more accurate in dimension. Respectfully submitted

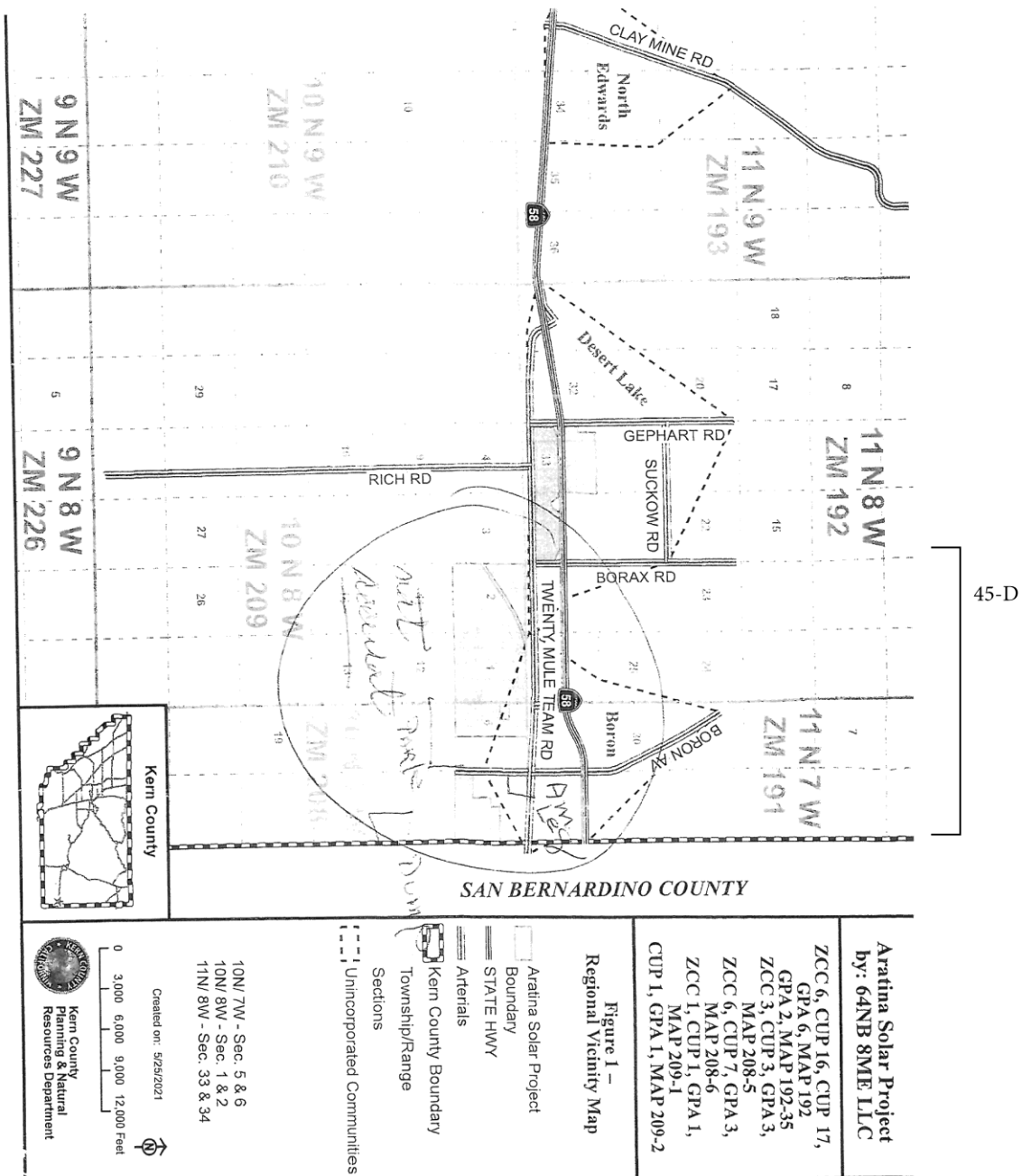
Barbara Kometas

45-A

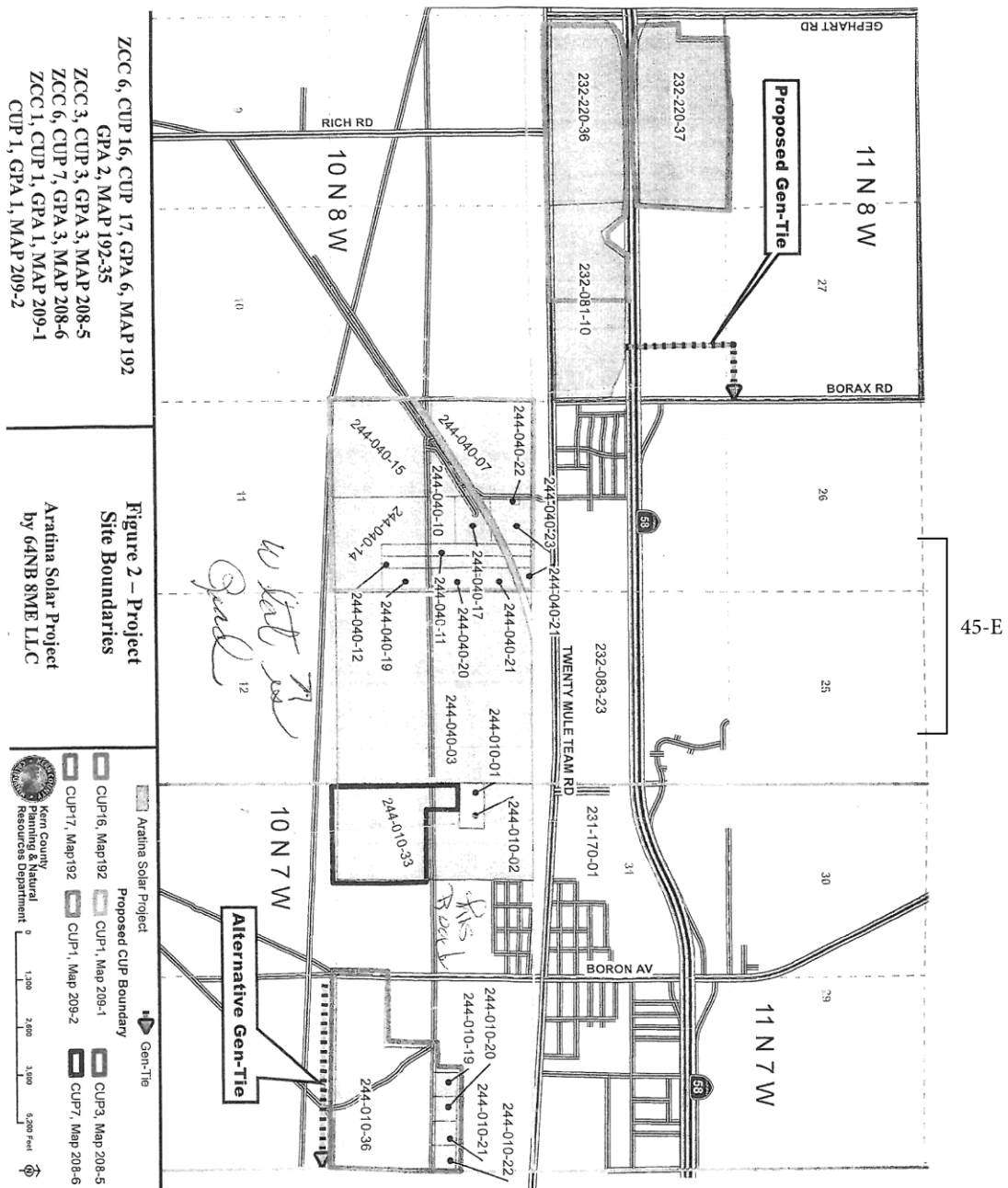
45-B

45-C

Comment Letter 45: Kometas, Barbara (June 11, 2021)



Comment Letter 45: Kometas, Barbara (June 11, 2021)



Response to Letter 45: Kometas, Barbara (June 11, 2021)

Please note that Letter 45 (Kometas (Illegible), Barbara P.; June 11, 2021) has been retyped below for clarity. Illegible text is italicized and may not accurately represent the commenter's language; however, a best attempt has been made to interpret the written comments provided in order to allow for meaningful County response.

Dear Sir:

First I must say the solar plant is a good project. As I study these maps – some of (*illegible*) these dimensions are or do not seem accurate in dimensions. It seems at Boron are and TMT (*Twenty Mule Team*) Road, Sec-2-1-6 are not accurate. *Presume (illegible)* housing area, is this to all be bought by Aratina. I live on Ferguson St(reet) is it extending to that housing area? On (*illegible*) Street there is a park. The area circled is not clear. I have at the time no map of the area where the houses are. This map seems to me not accurate in site # and location. Please have architect draw something more accurate in dimension.

Respectfully submitted, Barbara P. Kometas (*illegible*)

45-A: The commenter expresses support for the project.

The County acknowledges the comments provided for the record; however, such comments do not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the EIR are required as the result of the comments provided.

45-B: The commenter states that some dimensions on the Draft EIR figures provided seem to have inaccuracies with regard to certain dimensions, non-labeling of an existing park and dump, and location of existing houses.

The commenter has provided several figures that appear to have been excerpted from the Initial Study recirculated with the Notice of Preparation of an EIR, not from the Draft EIR, and questions the accuracy of certain dimensions and/or that they do not identify certain land uses such as an existing park and dump. Figures 3.10A to 3.10L of the Draft EIR clearly show the proposed project development boundaries for Sites 1 to 5 relative to the location of existing housing in the nearby communities, as well as the specific improvements proposed. The Site Plans (Figures 3.10A to 3.10L of the Draft EIR) also provide dimensions of the proposed improvements. Further, project proximity to any existing sensitive resources in the surrounding area (residential units, schools, etc.) is considered, as appropriate, in Sections 4.3, Air Quality, and 4.12, Noise, among others, in the Draft EIR. No further response to the comments provided is required relative to CEQA.

45-C: The commenter states the opinion that the area circled on page 2 of the letter (Figure 1, Regional Vicinity Map) is unclear in site number and location and that the area where existing housing is located is not clear. The commenter requests that the applicant provide a map more accurate in dimension.

Refer to Response 45-B. As stated above, the figures provided are from the Initial Study, not the Draft EIR. The comments provided on the figure do not raise a substantive issue relevant to CEQA requirements, and no change to the Draft EIR is required. No further response to the comments provided is required.

- 45-D:** The commenter has circled an area on Figure 1, Regional Vicinity Map, taken from the recirculated Initial Study (not the Draft EIR) and indicates that the map is inaccurate. The commenter notes the location of a public park and a dump on the figure.

Refer to Response 45-C. The County acknowledges the comments provided; however, the figure (Figure 1) is accurate in scale and in depicting the project and surrounding roadway system. No revisions to the Draft EIR are necessary in response to this comment and no further response is required.

- 45-E:** The commenter provides a copy of Figure 2, Project Site Boundaries, from the recirculated Initial Study (not the Draft EIR); however, the comment provided is illegible. The commenter appears to be questioning the name of the road to which the arrow is pointing.

The line to which the arrow is pointing is an unnamed dirt road; refer also to Response 45-B regarding the available project Site Plans. This comment does not raise a substantive issue on the content of the Draft EIR pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 46: Moore, Jonathan (July 12, 2021)

From: [jonathan.moore](#)
To: [Ronelle Candia](#)
Subject: Noooo Solar for boron
Date: Monday, July 12, 2021 7:27:01 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Candia

It seems the subject of the solar fields are still an issue in Boron. After you and others assured our citizens that the proposed solar fields would not proceed and would not be going in we now hear that the ill conceived project continues to inch closer to becoming a reality. We've all seen the maps and their proposed locations are **PRACTICALLY IN ALL OUR BACK YARDS !!** People are very unhappy about this development and they have now created a Facebook group that opposes the current plan as well as creating a petition and collecting donations. This project will **FOREVER** alter the look of our community and not for the better!!

46-A

To be honest, our people are confused. You seem to not have our best interests and it seems like we're hearing two different stories. It would behoove to get out in front of this, otherwise you're going to have a lot of angry people out here in East Kern. Possibly you or someone come out here, hold a town meeting and speak to us about what's really going on, just the facts. Don't tell us what you think we want to hear but tell us what we need to know. It seems like the solar company is trying to sneak around and do things behind our backs.

46-B

We love our landscape and vistas out here, we don't want it ruined by being completely surrounding our town with these awful looking solar fields and panels. How could they POSSIBLY think it's a good idea to have them placed so very close near where we all live?

46-C

The current map practically has them going up around our entire town!!

Please explain something to me, what does the town of Boron gain from ANY of this? The landscape of or town is completely ruined and there's possible hazards to our health and well being, YET we don't get a single cent off our utility bill. All that goes to some other area.

I say **NO !!** It would seem we get all of the bad and none of the good. That solar field can go **SOMEWHERE ELSE !!!** There are miles and miles and miles of open land that aren't close to our community, right in our back yards. If they have to run electrical lines way out there for power that's **THEIR** problem not **OUR'S !!** This project has no regard for the residents of this community.

46-D

Jonathan Moore
Boron, CA

[Sent from Yahoo Mail for iPhone](#)

Response to Letter 46: Moore, Jonathan (July 12, 2021)

46-A to 46-D: The comments submitted in this letter are identical to those provided in Letter 8 (Joe Barnard; July 10, 2021).

Please refer to Responses 8-A to 8-D for County responses to the comments submitted with this letter.

Comment Letter 47: Richards, Roy (July 11, 2021)

From: [Roy Richards](#)
To: [Ronelle Candia](#)
Subject: Opposition to Aratina 2.0
Date: Sunday, July 11, 2021 7:05:07 PM

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Hello Ronelle,

I am writing to voice my opposition to the Aratina 2.0 project. I have reviewed the EIR posted to the planning department website and this has only strengthened my opposition to this project. Within this report there are a number of troubling items:

- Page 59 (1-17), 84 (1-42); it is indicated that the air quality will be "significant and unavoidable". Since the placement of this project is upwind of our community, this means our town's air quality will be affected. My wife, father and myself all suffer from asthma. The change in air quality could make our homes unlivable for my family. This destabilization of the soil by this project also increases the likelihood of blowing sand and dust. This can lead to traffic accidents due to visibility being obstructed. Both the main road into Boron (Twenty Mule Team Road) and 58FWY are downwind of this project. And when I say downwind, please check prevailing winds, specifically 20+mph. These almost always come from the West and SouthWest. 47-A
- Page 64 (1-22), alternate site is dismissed because it would not avoid the environmental damage that is going to occur. This seems invalid because they do not consider use of damaged land. Old farmland or previously developed land would not lead to the same environmental destruction. The real reason this was not considered is because they want to utilize the utility infrastructure in the Boron area. 8 Minute is only concerned with profits. They have an agreement to sell energy to the Silicon Valley and Monterey areas. The land is mostly owned by a large land corporation. Basically all these corporations are sacrificing our town and desert for profit. Our town is a blue collar community with a 35% poverty rate. We are being sacrificed so one of the richest areas in the world can have cheaper electricity. 47-B
- Boron is a desert town. The removal of 4000 joshua trees and the only remaining unobstructed horizon with native desert would forever change the feel of the town. This would change the emotional feel of the inhabitants and any potential for tourism. 47-C
- The process of clearing this size of land by mowing does not take into account that most of the wildlife is nocturnal and live in burrows. Those animals that are not killed immediately will find themselves without any means of sustenance. They will starve to death. 47-D
- There is potential for a migration of animals into the community due to this activity. This wildlife would include rattlesnakes and scorpions. Increase of these wildlife in close proximity of people is a dangerous situation. 47-E
- Traffic increase will lead to increased risk for our residents. Many of the entrances to the project are near or in neighborhoods. How would you like to have 1000 construction works and all the materials for a giant solar field going past your home, parks and schools. The roads in Boron are not new. There are significant cracking and structural deficiencies that our current traffic level leads to potholes and buckling on a regular basis. Finally, a large section of the project is South of the railroad tracks. 47-F
- 47-G
- 47-H
- 47-I

Comment Letter 47: Richards, Roy (July 11, 2021)

These crossings are heavily travelled by trains and can lead to traffic being backed up to the main road on a regular basis. Now add 1000 construction workers, it does not make sense.

47-1
cont'd

Thank you for the opportunity to share my comments. Please contact me if there are any questions.

Best regards,
Roy Richards
P.O. Box 724
Boron, CA 93596
661-754-9035

Response to Letter 47: Richards, Roy (July 11, 2021)

47-A: The commenter indicates that he has reviewed the Draft EIR and states his opposition to the project.

The comments provided do not raise a substantive issue on the content of the Draft EIR. The comments have been noted for the record and revisions to the Draft EIR are not necessary.

47-B: The commenter notes the finding of significant and unavoidable finding for air quality (fugitive dust) and expresses concern that the project may adversely affect local air quality and exacerbate public health issues (such as asthma).

Refer to Response 11-D pertaining to potential fugitive dust and Valley Fever effects. The comments provided have been noted for the record and revisions to the Draft EIR are not required.

47-C: The commenter expresses concern that the project may result in soil destabilization and increase the potential for blowing sand and dust. The commenter suggests that such conditions could lead to traffic accidents due to low visibility. The commenter identifies several roads downwind of the project site that may be affected and states that prevailing winds generally come from the west and southwest in the area.

Refer also to Response 11-D pertaining to fugitive dust. As discussed in Section 4.3, Air Quality, of the Draft 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. Fugitive dust would be reduced through implementation of Mitigation Measures MM 4.3-1 to MM 4.3-3 (which would require construction emission control measures such as equipment controls; minimizing engine idling; routine watering of disturbed onsite soils; implementing a Fugitive Dust Control Plan; reducing worker-related vehicle trips, etc.) which would be implemented in conformance with the applicable EKAPCD plans and regulations and Kern County General Plan Policies 20 and 21. As such, the project proponent would coordinate with the EKAPCD as necessary. Project impacts due to blowing dust and sand would be further mitigated with the implementation of Mitigation Measures MM 4.3-4 (installation of a 6-foot solid barrier in specified locations onsite) and MM 4.1-3 (implementation of a Maintenance, Trash Abatement, and Pest Management Program), and impacts would be reduced to a less than significant level. This comment has been noted for the record and revisions to the Draft EIR are not necessary.

Implementation of Mitigation Measure MM 4.3-4 would require construction of a 6-foot tall solid barrier as either a solid fence or wall as shown in Figure 4.3 2, *Solid Barrier Location*, of the Draft EIR to mitigate wind blow dust generated by the project to the communities of Desert Lake and Boron. This barrier will be installed prior to operation of the site, with dust control measures being implemented during construction. The portions of the project site where the barrier is not required, will be fenced with chain-link fence. As required by Mitigation Measure 4.4-19, the entire project site shall be fenced with desert tortoise exclusion fencing, including areas with the barrier. As part of routine maintenance, on-site staff will monitor the buildup of wind-blown materials around the base of the barrier and clear out debris and tumbleweeds on an as-needed basis on both sides of the barrier. The barrier shall be maintained in good condition and graffiti free during the life of the project and replaced as needed to remain effective.

Section 4.3 of the Draft EIR also describes how undisturbed soil and vegetation have the natural ability to prevent wind erosion. Therefore, implementation of Mitigation Measure MM 4.1-3 would

be required, which states that wherever possible, within the proposed project boundary, the natural vegetation shall remain undisturbed unless mowing is necessary for placement of the project components. All-natural vegetation adjacent to the project boundary shall remain in place as permitted by the County Fire Code.

Additionally, as noted in Section 4.7, Geology and Soils, of the Draft EIR, per Mitigation Measure MM 4.7-1, the project proponent would be required to submit grading plans accompanied by a soils engineering report, engineering geology report, and drainage calculations pursuant to the Kern County Grading Code (Section 17.28.070) to the Kern County Engineering and Survey Services Department in order to obtain required grading permits. Compliance with Mitigation Measure MM 4.7-1 would ensure that excessive grading does not occur. Erosion control and best management practices to be implemented may include but are not limited to the application of straw mulch, hydroseeding, and the use of geotextiles, plastic covers, silt fences, and erosion control blankets. Such mitigation would reduce project effects related to erosion to less than significant.

- 47-D:** The commenter disagrees with dismissal of an alternative location for the project and notes that the use of disturbed farmland or previously developed land may potentially result in reduced environmental impacts. The commenter states the opinion that the project proponent wants to build in the area to access area utility infrastructure. Additionally, the commenter implies that the energy generated by the project would be sent elsewhere and not used locally, yet would affect the local desert and community.

Refer to Response 7-B. An alternative project location was evaluated in the Draft EIR and was considered infeasible, as stated by the commenter, as alternative sites in the area are likely to have similar project-level and cumulatively significant impacts after mitigation. Additionally, the evaluation found that no suitable sites within the control of the project proponent that would reduce project impacts are available, and that alternative sites may not include sites with close proximity to transmission infrastructure. Refer to Section 6.5.3, Alternative Site, in Chapter 6, Alternatives, of the Draft EIR.

Additionally, the project site was partially selected due to available access to existing utility infrastructure already present in the area. It should be noted that additional adverse environmental effects on affected lands would likely occur if the project proponent was required to instead construct all such facilities (substation, etc.) in support of the solar facility.

Whether the energy generated by the project is sent elsewhere or used to serve a local community is not a topic requiring evaluation under CEQA. No further response is required to this comment.

The comments provided have been noted for the record. No change to the Draft EIR is required in response to the comments received.

- 47-E:** The commenter states the opinion that the project would remove “4,000 Joshua trees” and that the project would change views of the unobstructed horizon and character of the town experienced by residents and tourists.

Consistent with CEQA requirements, the County has evaluated potential project impacts relative to aesthetics; refer to Section 4.1, Aesthetics, of the Draft EIR. Mitigation Measures MM 4.1-1 to MM 4.1-6 (which would require implementation of a Maintenance, Trash Abatement, and Pest Management Program; County approval of a color scheme and treatment plan; maintenance of onsite natural vegetation; conformance with dark sky protections; and minimization of potential

light and glare effects, etc.), and MM 4.3-4 (installation of a 6-foot tall solid barrier at specific onsite locations for control of wind-blown materials; see Section 4.3, Air Quality) would be implemented to reduce project impacts related to aesthetics to the extent feasible; however, as the project would permanently change the character of the site, the analysis determined that impacts would remain significant and unavoidable.

Refer also to Response to Letter 51 and Response 11-B pertaining to potential impacts on Joshua trees resulting with project implementation.

The comments provided have been noted for the record. No change to the Draft EIR is required in response to the comments received.

- 47-F:** The commenter states the opinion that clearing of the project site may cause damage to wildlife burrows and potential effects such as starvation.

Refer to Response to Letters 1 and 51, and Responses 11-B and 11-C pertaining to biological protections. Potential direct and indirect effects of project implementation have been evaluated in Section 4.4, Biological Resources, of the EIR. Mitigation measures are identified to reduce potential effects to sensitive species and habitat due to construction, operation, and decommissioning. All project-level impacts can be reduced to less than significant through the mitigation identified. No revisions to the Draft EIR or additional mitigation measures are necessary in response to the comments provided.

- 47-G:** The commenter expresses concern that project grading and construction activities may cause the migration of wildlife (which may include poisonous animals) into the community, thereby posing potential danger to nearby residents.

The comments provided are noted for the record; however, it would be speculative to estimate any specific wildlife behavior that might potentially involve intrusion into a residential site. No revisions to the Draft EIR are necessary in response to this comment.

- 47-H:** The commenter states the opinion that the project would increase area traffic and increase public safety risks as project entrances would be located near existing neighborhoods. Additionally, the commenter states concern that project-generated construction traffic may cause damage to local roadways.

As stated in Section 4.14, Transportation, of the Draft EIR, the project would generate a maximum of 2,220 daily passenger equivalent trips during the construction phase; however, the Draft EIR determined that the increase in traffic from project construction would not cause the operation of any affected area roadway or intersection to be reduced from a satisfactory level of service to an unsatisfactory level of service. Impacts would be less than significant and no mitigation measures are required. Additionally, project materials would be delivered to the sites and staged on the respective properties in order to reduce potential daily trips generated to/from the site during the construction phase. A Traffic Control Plan would also be implemented (Mitigation Measure MM 4.14-1) to ensure that public safety and emergency access are maintained at all times. During project operations, average daily trips would be reduced to less than 50 during the AM and PM peak hours, thereby minimizing potential effects on local roadways.

As identified in the Draft EIR, Mitigation Measure MM 4.14-1 would also require the project proponent to enter into a secured agreement with Kern County to ensure that any County roads that

are demonstrably damaged by project-related activities are promptly repaired and, if necessary, paved, slurry-sealed, or reconstructed as per requirements of the State and/or Kern County. No further response to this comment is required.

- 47-I:** The commenter states that a portion of the project site is located south of the existing railroad tracks and that train crossings can lead to the queueing of vehicles. The commenter states that the project would add construction vehicle trips that may further contribute to such traffic backups.

Refer to Response 47-H, above pertaining to traffic effects resulting with project construction and operations. The comments provided have been noted for the record; no changes to the Draft EIR are required as a result.

Comment Letter 48: Singer, Kristy (July 11, 2021)

From: [KRISTY SINGER](#)
To: [Ronelle Candia](#)
Subject: Solar field In Boron
Date: Sunday, July 11, 2021 6:37:49 PM

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We have all kinds of desert could you please place the solar field away from town.

48-A

Sent from my iPhone

Response to Letter 48: Singer, Kristy (July 11, 2021)

48-A: The commenter notes the availability of other desert lands in the area and requests that the project be located away from Boron.

The comments provided are noted for the record. Refer to Response 7-B regarding evaluation of an alternative project location pursuant to CEQA. No revisions to the Draft EIR are necessary in response to this comment.

Comment Letter 49: Smith, Nancy (July 12, 2021)

From: [Nancy Smith](#)
To: [Ronelle Candia](#)
Subject: Opposed to Solar project in Desert Lake and Boron Ca
Date: Monday, July 12, 2021 11:07:27 AM

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Hello.. Im Nancy Smith property owner of the Desert Lake Apartments. Its a 60 unit complex right across from the proposed solar site. Im deeply opposed to this project going in.

Why does it have to be so close to our housing? I'm largely concerned this will affect my 2.5 acre residential housing properties value. None of us want to see this ugly eye sore. We love the beauty of the desert and enjoy all the beauty of it. Our children play there. We walk our pets and enjoy watching glorious sunsets. Now all we will see is shiny solar panels.

49-A

Im concerned about Erosion and the runoff. It will adversely effect the ground and surrounding wildlife.

49-B

Please find another area where it isn't positioned against and affecting an entire community. We don't have much in our little town but we value what we do and this would be a ugly sore. The Consensus is that no one wants this solar plant here.

49-C

Sent from my iPhone

Response to Letter 49: Smith, Nancy (July 12, 2021)

- 49-A:** The commenter identifies herself as a local property owner and states her opposition to the project. The commenter questions proximity of the project location to existing local housing and how the project would affect her property value. The commenter also expresses concern for potential visual effects of the development on the community.

Refer to Response 7-B regarding evaluation of an alternative project location pursuant to CEQA. As noted previously, the project proponent has redesigned the project in response to community concerns to further distance the development from surrounding uses (i.e., homes) in the surrounding area. Refer also to Response 8-A pertaining to potential effects on aesthetics as a result of the proposed project.

As indicated in Response 7-B, CEQA requires an analysis of physical impacts to the environment; it does not require an analysis of potential social and economic impacts. No further response to such comments is therefore required.

The comments provided are noted for the record. No changes to the Draft EIR are needed in response to this comment.

- 49-B:** The commenter expresses concern regarding potential erosion and runoff, as well as project effects on wildlife.

Refer to Responses 4-B and 47-C pertaining to the potential for erosion and hydrological effects and related mitigation measures to reduce impacts that could result from the proposed improvements. Additionally, refer to Response to Letters 1 and 51, and Responses 11-B and 11-C relative to potential effects on area wildlife and habitat; all such project-level impacts on biological resources would be reduced to less than significant with implementation of the mitigation measures proposed.

The comments provided are noted for the record. No changes to the Draft EIR are needed in response to this comment.

- 49-C:** The commenter requests that an alternative location be considered and indicates local opposition to the project.

Refer to Response 7-B regarding consideration of an alternative project location. The comments provided are noted for the record. No changes to the Draft EIR are needed in response to this comment.

Letters Received After July 12, 2021, Close of Public Comment Period

Comment Letter 50: California Department of Conservation – Geologic Energy Management Division; by Vianzon, Dante for Ghann-Amoah, Mark, District Deputy (July 21, 2021)

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California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

07/21/2021

Ronelle Candia
2700 M Street, Suite 100, Bakersfield, CA 93301, USA
candiar@kerncounty.com

Construction Site Well Review (CSWR) ID: 1012268

Assessor Parcel Number(s): 24401019, 24401020, 24401021, 24401022, 24401036, 24401033, 24404003, 24404007, 24404010, 24404011, 24404012, 24404014, 24404015, 24404017, 24404019, 24404020, 24404021, 24404022, 24404023, 23208110, 23222036, 23222037

Property Owner(s): Various Owners

Project Location Address: Along State Route 58 between, Gephart Road and the San Bernardino County line, Boron, California, 93516

Project Title: Aratina Solar Project by 64NB 8ME LLC - SCH #2021020513 - Boron, CA

Public Resources Code (PRC) § 3208.1 establishes well reabandonment responsibility when a previously plugged and abandoned well will be impacted by planned property development or construction activities. Local permitting agencies, property owners, and/or developers should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil, gas, and geothermal wells.

50-A

The California Geologic Energy Management Division (CalGEM) has received and reviewed the above referenced project dated 7/20/2021. To assist local permitting agencies, property owners, and developers in making wise land use decisions regarding potential development near oil, gas, or geothermal wells, the Division provides the following well evaluation.

The project is located in Kern County, within the boundaries of the following fields:

Our records indicate there are 0 known oil or gas wells located within the project boundary as identified in the application.

- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 0
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0

50-B

As indicated in PRC § 3106, the Division has statutory authority over the drilling, operation,

50-C

Comment Letter 50: California Department of Conservation – Geologic Energy Management Division; by Vianzon, Dante for Ghann-Amoah, Mark, District Deputy (July 21, 2021)

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California
Department of Conservation
Geologic Energy Management Division

Gavin Newsom, Governor
David Shabazian, Director
801 K Street, MS 18-05
Sacramento, CA 95814
T: (916) 445-9686

maintenance, and abandonment of oil, gas, and geothermal wells, and attendant facilities, to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil, gas, and geothermal deposits; and damage to underground and surface waters suitable for irrigation or domestic purposes. In addition to the Division's authority to order work on wells pursuant to PRC §§ 3208.1 and 3224, it has authority to issue civil and criminal penalties under PRC §§ 3236, 3236.5, and 3359 for violations within the Division's jurisdictional authority. The Division does not regulate grading, excavations, or other land use issues.

50-C
cont'd

If during development activities, any wells are encountered that were not part of this review, the property owner is expected to immediately notify the Division's construction site well review engineer in the Inland district office, and file for Division review an amended site plan with well casing diagrams. The District office will send a follow-up well evaluation letter to the property owner and local permitting agency.

50-D

Should you have any questions, please contact me at (661) 529-5859 or via email at Dante.Vianzon@conservation.ca.gov

Sincerely,

Mark Ghann-Amoah
District Deputy

Response to Letter 50: California Department of Conservation – Geologic Energy Management Division; by Vianzon, Dante for Ghann-Amoah, Mark, District Deputy (July 21, 2021)

50-A: The comments provided are introductory and reference relevant regulations pertaining to groundwater wells. The commenter indicates that the Division has reviewed the project application and is providing an evaluation of local wells relevant to the project site.

This comment does not raise a substantive issue on the content of the Draft EIR. The County acknowledges the information provided in its consideration for development of the subject site as proposed. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary.

50-B: The commenter identifies the project as being in Kern County and having no known oil or gas wells within the boundaries of the site.

This comment does not raise a substantive issue on the content of the Draft EIR. The comments provided have been noted for the record and revisions to the Draft EIR are not necessary.

50-C: The commenter indicates the Division’s authority relevant to potential disturbance or damage to oil, gas, and geothermal wells and attendant facilities.

The comments provided do not raise a substantive issue on the content of the Draft EIR. Such comments have been noted for the record and revisions to the Draft EIR are not necessary.

50-D: The commenter states that if any wells are discovered during project construction that the project proponent shall immediately contact the Division and file for review an amended site plan with casing diagrams.

The project proponent will comply with the stated required actions in the event that any wells are encountered during project construction. The County acknowledges the comments provided; such requirements as stated will be made Conditions of Approval for the project. This comment does not otherwise raise a substantive issue on the content of the Draft EIR. No revisions to the Draft EIR are necessary.

**Comment Letter 51: California Native Plant Society (CNPS) and Defenders of Wildlife;
Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)**



July 15, 2021

Kern County Planning and Natural Resources Department
Attn: Ronelle Candia
2700 M Street, Suite 100
Bakersfield, CA 93301
Sent via email to: CandiaR@kerncounty.com

Re: Comments on the Draft Environmental Impact Report for the proposed Aratina Solar Farm Project 2.0

Dear Ms. Candia:

Thank you for the opportunity to review and submit comments on the Draft Environmental Impact Report (DEIR) for the proposed Aratina Solar Farm Project 2.0 (Project). This comment letter is submitted by Defenders of Wildlife (Defenders) on behalf of its 2.2 million members and supporters in the U.S., including 323,000 in California, and the California Native Plant Society (CNPS) on behalf of its more than 10,000 members in 35 local California Chapters.

Defenders is a national conservation organization founded in 1947 and dedicated to protecting all wild animals and plants in their natural communities. To this end, we employ science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

CNPS is a statewide, non-profit organization, dedicated to conserving California native plants and their natural habitats, and to increase the understanding, appreciation, and horticultural use of native plants. CNPS works closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices.

Brief description of the Project: The Project is a 530 MW photovoltaic facility located on approximately 2,317 acres of undeveloped private land west of Kramer Junction and adjacent to Highway 58 near the community of Boron, California. It would occupy five individual sites all in relatively close proximity. Permanent facilities of the Project include photovoltaic solar panel arrays, service roads, power collection system, communication cables, overhead and underground transmission lines, electrical switchyards, substations, inverters, battery storage, and operations and maintenance facilities. The Project site would be cleared of natural vegetation, graded, and surrounded by a chain-link security fence.

Our comments on the DEIR for the Project are as follows:

Comment Letter 51: California Native Plant Society (CNPS) and Defenders of Wildlife; Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)

1. Project Relationship to the Desert Renewable Energy Conservation Plan (DRECP): There are several references in the DEIR to the DRECP and its relationship to the Project, which state, *Additionally, the project site is located within the DRECP planning area, which means that the area is expected to support fewer sensitive status species than areas identified with conservation potential and is therefore more likely to be appropriate for renewable energy development. However, the DRECP at this time only applies to federal public lands managed by the BLM and is not an adopted habitat conservation plan or natural community conservation plan. The proposed project would be developed on private land and, therefore, is not subject to the DRECP.*

The fact the Project is located within the DRECP planning is not evidence or an indication that the site supports fewer sensitive or special status species. The DRECP planning area encompasses approximately 25 million acres of land comprised of federal, state and private lands. The DRECP adopted by the BLM pertains to approximately 12 million acres of public land, of which approximately half was designated for conservation purposes, and approximately 388,000 acres for streamlined development of renewable energy projects called Development Focus Areas or DFAs.

The Interagency Preferred Alternative in the 2014 Draft DRECP identified the Project area as a Conservation Planning Area because of the presence of special status species and their habitats. If the area generally lacked these biological resources and was not deemed important for regional conservation, it would have been identified as a DFA due to existing transmission infrastructure near Kramer Junction. Indeed, both the Draft DRECP and the DRECP adopted by BLM revealed that the Project area is located within a Key Population Center and Linkage for the state listed threatened Mohave ground squirrel (*Xerothermophilus mohavensis*), or MGS.

Associated Project lands are in private ownership and the DRECP in its current form does not apply to them. These lands are potentially available for renewable energy development under the Kern County General Plan and its subcomponents, called Specific Plan Areas. The DEIR reveals that the Project lands are occupied by numerous sensitive or special status species of plants and animals, indicating that special measures will need to be adopted to render impacts to sensitive species and their habitats less than significant.

We recommend the statements in the DEIR be deleted or revised consistent with the above information we have provided, particularly the following:

“Additionally, the project site is located within the DRECP planning area, which means that the area is expected to support fewer sensitive status species than areas identified with conservation potential and is therefore more likely to be appropriate for renewable energy development.”

2. Impact Analysis: DEIR Section 1.6.3 includes a list of project-level impacts that have been determined by the Kern County Planning and Natural Resources Department (Planning Department) to be Less-than-Significant, which includes Biological Resources. The Less-than-Significant determination is based on application of proposed mitigation measures (MM 4.1-4 through MM 4.1-6, MM 4.4-1 through MM 4.4-25, MM 4.9-1, MM 4.10-1 and 4.10-2).

Based on our analysis of the effects of the project on movement corridors or linkages and important population areas for the MGS, we recommend that the effects of the project biological resources be changed to Significant unless additional analysis and mitigation measures are available and proposed to render impact to these biological resources features less than significant. Details regarding the presence of these features are presented in item 3.

Defenders and CNPS Comments on Aratuna Solar Project 2.0 DEIR

51-A

51-B

2

Comment Letter 51: California Native Plant Society (CNPS) and Defenders of Wildlife; Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)

3. Wildlife Corridors, Movements and Native Species: Section 4.4-4 of the DEIR addresses effects of the Project on wildlife movements, wildlife corridors or linkages and wildlife production areas or *nursery sites*. The DEIR states:

“The project site is not identified as a major terrestrial wildlife movement corridor. No wildlife nursery sites have been identified on or in the vicinity of the project site.”

We disagree with this statement. Defenders submitted information on the presence of a recognized MGS Key Population Center and Linkage in our comment letter on the Notice of Preparation and Initial Study for the Project on March 25, 2021.

It appears the Planning Department subjectively determined that the corridor or linkage documentation we provided in our March 25th letter did not meet the definition or criteria of a “**major terrestrial wildlife movement corridor**.” A wildlife movement corridor is defined on page 4.4-22 of the DEIR:

“Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. The project site does not lie within a recognized wildlife connectivity area as mapped by the California Essential Habitat Connectivity Project.”

We also disagree with the Planning Department’s assessment of impacts to wildlife corridors or linkages for multiple reasons. First, **the Project area is located within a linkage included in the California Essential Habitat Connectivity Project.**¹ Based on our review of the linkages, it is clear **Project sites 1, 2 and the eastern half of Site 3, fall within the mapped linkage.** The Project and the Reduced Acreage Alternative would result in complete loss of habitat within the linkage at these three sites.

In addition, according to the map of Habitat Linkages and Wildlife Movement Corridors in the DRECP, the Project is located within a portion of the Desert Linkage Network (Attachment A). The DRECP linkages map is available on DataBasin:
(<https://databasin.org/maps/ncw#datasets=85d73316b5ab4816b56cd21787cd78a2>).

This linkage is identified in “A Linkage Network for the California Deserts”² and is within a crucial linkage for the MGS. A description of this species and its linkage is provided on pages 88-90 of the linkage report.

Important habitats and populations of MGS were identified in Figures C-39 and D-18 of the DRECP (Attachments B and C). All linkages included in the DRECP were reviewed and adopted by state and federal agencies charged with preparing the plan: California Energy Commission, California Department of Fish and Wildlife (CDFW), Bureau of Land Management, U.S. Fish and Wildlife Service (USFWS). Several drafts of the plan and the full Draft DRECP were available for public review and comment, including Kern and other counties.

The Planning Department stated in the DEIR that *No wildlife nursery sites have been identified on or in the vicinity of the project site*. We disagree with this statement because the Project site is located within a Key Population

¹ California Department of Fish and Wildlife. 2021. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Headquarters. Sacramento, California.
<https://wildlife.ca.gov/Conservation/Planning/Connectivity/CEHC>.

² Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona
<http://oak.ucc.nau.edu/pb1/>.

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Center that is overlain with a Linkage for the MGS. Key Population Centers are areas known to support persistent MGS populations over time based on repeated live-trapping and camera surveys. Information documenting this fact was included in our March 25th letter to the Planning Department.

51-C
cont'd

4. MGS Impact Mitigation Measures: We are pleased that the Planning Department recognizes the project area is inhabited by MGS based on previously documented observation, and proposes mitigation measures intended to avoid, minimize or mitigate for impacts to the species and its habitat, including acquisition of habitat compensation lands by the project applicant based on requirements established by CDFW. Also required will be any measures required by CDFW as part of an MGS incidental take permit per the California Endangered Species Act (CESA). It is likely that compensatory mitigation required by CDFW for the Project will be at a ratio of at least 3:1.

51-D

Proposed impact mitigation measure MM 4.4-15 requires the project applicant or operator to ensure that the Lead Biologist for the Project perform a *clearance survey* after the perimeter fence is installed to ensure that MGS, Agassiz's desert tortoises and other wildlife are not trapped within the fenced project area when construction begins. Although standard clearance survey protocols exist for desert tortoise, **there are no protocols for performing an MGS clearance survey**. Any such requirements should be left to the CDFW to determine as part of the incidental take permit process undertaken for the threatened MGS.

5. Desert Tortoise (*Gopherus agassizii*) Impact Mitigation Measures: We are pleased the Planning Department proposes to require compensatory mitigation for loss of suitable desert tortoise habitat, and that additional desert tortoise surveys within the project areas after the perimeter fence is installed and that those surveys will conform to USFWS protocols. Furthermore, if a tortoise is found, the project applicant or developer is required to contact the CDFW and USFWS and inquire about the need to obtain an incidental take authorization for the species. Tortoise surveys of all project areas have not detected any live individuals, but one old carcass and several deteriorated burrows were observed. The survey results indicate that the habitat is suitable for the species but that it is unlikely that live individuals remain on site. However, the applicant should be informed that in the unlikely event a tortoise is found within the project area and needs to be relocated, authorization from the CDFW and USFWS would be required, which could entail the need to obtain an incidental take permit, and potentially delay the project.

51-E

6. Western Joshua Tree (*Yucca brevifolia*) Impact Mitigation: We recommend that the project applicant or developer contact the CDFW Regional Office in Fresno, California, to discuss specific requirements to comply the impact mitigation measures for Western Joshua tree either as a Candidate for listing under the CESA or if the species is listed prior to issuance of grading permits for the Project. In either instance, the applicant or developer will need to obtain an incidental take permit, which under CESA candidate emergency rules requires compensatory mitigation lands be acquired at a 1.5 ratio, plus other fees.

51-F

7. Special Status Plants and Sensitive Natural Communities

Special Status Plants: The DEIR fails to quantify impacts to most of the special status plant species that will be impacted by the project. The DEIR only quantifies impacts to western Joshua tree, stating "As proposed, the project would impact approximately 88 acres of western Joshua tree habitat." (DEIR p. 4.4-37). However, the DEIR does not quantify the impacts to any of the other special-status species located in the project area: desert cymopterus (*Cymopterus deserticola*, California Rare Plant Rank (CRPR) 1B.2), Barstow woolly sunflower (*Eriophyllum mohavense*, CRPR 1B.2), Mojave spineflower (*Chorizanthe spinosa*, CRPR 4.2) and crowned muilla (*Muilla coronata*, CRPR 4.2). The DEIR discloses the number of individuals that occur in the project area (Table 4.4-3), but these figures alone do not shed light on how many of those individuals are

51-G

4

Defenders and CNPS Comments on Aratina Solar Project 2.0 DEIR

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within the project footprint and cannot be avoided. The DEIR makes no effort to model or otherwise describe how and to what extent construction or other aspects of the project will impact individual plant species.

The DEIR should be revised to disclose precisely how many individuals and acres of each special-status plant species will be *impacted* by the project plan, not just the number that occur in the project area. An EIR fails as an informational document if it does not provide “information about how adverse the adverse impact will be.” (*See Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831.)

Decisionmakers and the public need to be able to evaluate the extent of the project’s impacts to evaluate the effectiveness of the proposed mitigation measures. (*See City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 889, 901 [proposed mitigation must contain sufficient information to enable the public to discern the analytic route traveled from evidence to action]). This is particularly important for this project because the proposed mitigation measures are triggered and defined by the number of plants that cannot be avoided.

The proposed mitigation measures for special status plants, MM 4.4-12, in particular, require avoidance of special-status plants. If the plants cannot be avoided, a special Habitat Mitigation Plan must be created. MM 4.4-12 further provides that if more than 10% of a local plant population would be eliminated, additional measures must be taken, including on- or off-site preservation, compensatory replacement at a ratio of 1:1, and a five-year monitoring plan. (DEIR, p. 4.4-47—4.4-48). As such, it is crucial that decisionmakers and the public are provided with the full extent of impacts to special-status plants, i.e., the number of acres and/or individuals that will be impacted, so that they can make informed decisions about the environmental effects of the project and the scope of the mitigation that will be necessary to address those impacts.

Simply proposing mitigation measures is not a substitute for a legally adequate analysis of the projects’ impacts. *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 663 (“A mitigation measure cannot be used as a device to avoid disclosing project impacts.”).

Sensitive Natural Communities: Similarly, the DEIR does not quantify impacts to sensitive natural communities (“SNCs”). Three SNCs have been documented on the project site: *Atriplex spinifera* shrubland alliance (spinescale scrub), successional spinescale scrub, and *Yucca brevifolia* woodland alliance (Joshua tree woodland). (DEIR, p. 4.4-3).

The DEIR gives estimates for the number of acres of each SNC, except Joshua tree woodland alliance (see pp. 4.4-3—4.4-6), but does not disclose how many acres are within the project footprint and cannot be avoided. Again, this information is critical because MM 4.4-14, designed to reduce impacts to SNCs, is based on the area of SNCs that will be lost.

Like MM 4.4-12, if SNCs cannot be avoided, compensatory mitigation and a Habitat Mitigation and Monitoring Plan must be implemented. Simply stating the number of acres within the project area without disclosing how many of those acres cannot be avoided obfuscates the true impact of the project and the extent of the mitigation that will be required and does not allow for informed decisionmaking.

Furthermore, Joshua tree woodland alliance was not even mapped during the vegetation community assessment (DEIR, p. 4.4-5). The DEIR provides no reason for why the community was not mapped but implies that it is because individual Joshua trees were recorded and mapped when the special-status plant surveys were conducted (*Id.*).

51-G
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Mapping individual Joshua trees does not justify the omission of analysis of impacts to Joshua tree woodland. Individual Joshua trees are not interchangeable with acres of Joshua tree woodland alliance and mitigating impacts to individual Joshua trees is not sufficient to mitigate impacts to the entire vegetation community. Accordingly, Joshua tree woodland needs to be mapped so that impacts to the alliance can be assessed and mitigated.

Quantifying the impacts to special-status species and SNCs – not just the number of individuals found in the project area – is essential for informing decisionmakers and the public about the true environmental impact of the project. It is impossible to know the extent of the mitigation this project will entail because of the way the proposed mitigation measures are currently drafted. There is no reason that the DEIR should not already have quantified the amount of habitat and species that will be lost because of the project. Biological surveys have been completed and the presence of special-status plants and SNCs on the project site has been assessed. The DEIR should disclose the species and amount of habitat that will be lost and provide an analysis of the mitigation that will be required to compensate for that loss.

51-G
cont'd

8. Ten Percent Threshold for Habitat Loss Is Arbitrary and Not Sufficient to Ensure Less than Significant Impacts

The DEIR proclaims a significance threshold of 10% habitat loss before mitigation measures are triggered: “Loss of more than 10 percent of habitat occupied by on-site special-status plant species (i.e., desert cymopterus, Barstow woolly sunflower, Mojave spineflower, and crowned muilla), where present within the project area or potentially occurring within the project area, would be considered significant.” (DEIR, p. 4.4-36).

However, it is unclear why 10% was selected as a significance threshold. Desert cymopterus and Barstow woolly sunflower have a California Rare Plant Rank of 1B.2, and loss of habitat for these species could be significant even if the loss was less than 10%. The DEIR provides no analysis or evidence for where this 10% threshold is derived or whether it is sufficient to guarantee that the impact will be less than significant.

51-H

The 10% threshold also seems to be used as a blanket threshold for all special-status species. Again, the DEIR makes no effort to analyze what the appropriate significance threshold is for each species. The conclusion that a 10% threshold is appropriate for each of the special-status species and SNCs lacks evidentiary support. The DEIR should disclose the analytical route that led to this figure and provide evidence of the conclusion that a 10% threshold is appropriate for each species that will be impacted.

9. DEIR Needs to Provide an Accurate Accounting and Mapping of Special-Status Plants

The DEIR is inconsistent in its report of the number and location of special-status plants in the project area. Inaccurate accounting and mapping of special-status plant species diminishes the informational value of the DEIR and misrepresents the environmental impact of the project and the mitigation measures that will need to be implemented. These inconsistencies need to be corrected so that the DEIR provides an accurate count and location of all special status plants in the project area.

51-I

Inconsistent Accounting of California Desert Native Plants Act (CDNPA) Plants: The DEIR appears to underreport the number of CDNPA plants in the project area. Plants protected under the CDNPA are considered special-status and were therefore considered in the DEIR. The DEIR states that there are 4,500 individuals of four species of CDNPA plants surveyed in the project area: Joshua tree, silver cholla (*Cylindropuntia echinocarpa*), diamond cholla (*Cylindropuntia ramosissima*), beavertail (*Opuntia basilaris* var. *basilaris*)

6

Defenders and CNPS Comments on Aratina Solar Project 2.0 DEIR

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(DEIR, p. 4.4-13). However, the DEIR states that the number of Joshua tree individuals alone is 4,722 (DEIR, p. 4.4-9). If this is true, the total number of CDNPA plants must be greater than 4,500.

The DEIR should be corrected to state the true number of CDNPA plants that occur in the project area and an accurate breakdown of the number of individuals of each of the four CDNPA species.

Inconsistencies Related to Rare Plant Species: The DEIR also gives inconsistent reports of the number of Joshua trees (which, as previously noted, is protected as a candidate species under CESA) in the project area. Table 4.4-3 says there are 4,267 Joshua trees, while Table 4.4-4 says there are 4,722. The DEIR needs to be accurate about how many Joshua tree individual trees are in the area for there to be an accurate analysis of impact to Joshua tree, and to calculate the appropriate compensatory mitigation.

Additionally, the DEIR gives conflicting statements about the location of Mojave spineflower in the gen-tie area. On page 4.4-36, the DEIR states that “All four of [the] special-status plant species [including Mojave spineflower] are present within the solar facility, with no special-status plants present within the gen-tie.” Yet, in the preceding paragraph, the DEIR states that “4,000 Mojave spineflower were found in the gen-tie.” Contradictory statements like this must be rectified.

The DEIR must provide accurate accounting and mapping of rare and special-status species. The DEIR relies heavily on the proposed mitigation measures to minimize the environmental effects of this project. Avoidance and no-disturbance buffers are essential components of the proposed mitigation measures, which require avoidance of special-status species to the extent feasible.³ The location of special-status species is critical, because special-status species cannot be properly avoided if there is conflicting information about where they are located within the project footprint.

10. Mitigation Ratio of 1:1 for Special-Status Species and SNCs Is Insufficient

MM 4.4-12 and 4.4-14 propose that compensatory mitigation should be provided at a 1:1 ratio. The DEIR provides no analysis or evidence for how this ratio was determined and whether it is appropriate for each species or community that will be impacted. The DEIR should be revised to individually analyze the appropriate mitigation ratio for each plant species and SNC that was identified in the project area.

The DEIR should also articulate a methodology for determining appropriate mitigation ratios for special-status species and SNCs that have not been documented on the project site but may be discovered during preconstruction surveys. Consulting with CDFW on all proposed mitigation ratios is highly recommended.

Conclusion

Defenders and CNPS have carefully reviewed the Project DEIR and found numerous deficiencies which we have fully described in this letter along with recommended actions to resolve them. Absent revisions to the impact analysis and incorporation of additional impact avoidance, minimization and mitigation measures to address numerous impacts to biological resources, we do not agree with the conclusion that DEIR as currently written would reduce these impacts to an insignificant level.

We hope our comments are helpful to the Planning Department in the preparation of the Final Environmental Impact Report for the Project.

³ See also CDFW March 29, 2021 scoping comments, which recommend a 50ft. no-disturbance buffer around all special-status plants except Joshua tree, for which CDFW recommends a 290ft. buffer.

51-I
cont'd

51-J

51-K

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Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)**

Sincerely,



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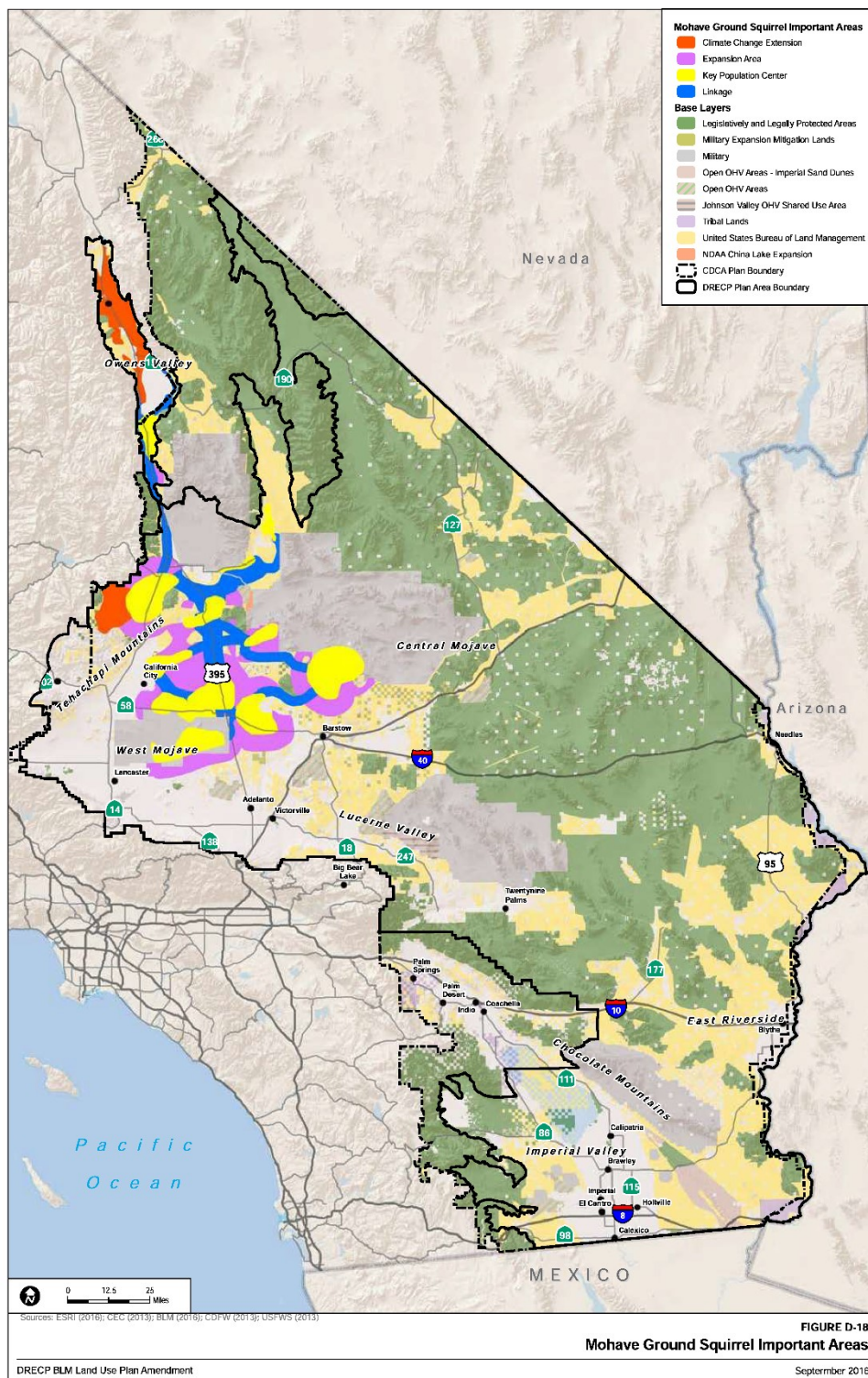
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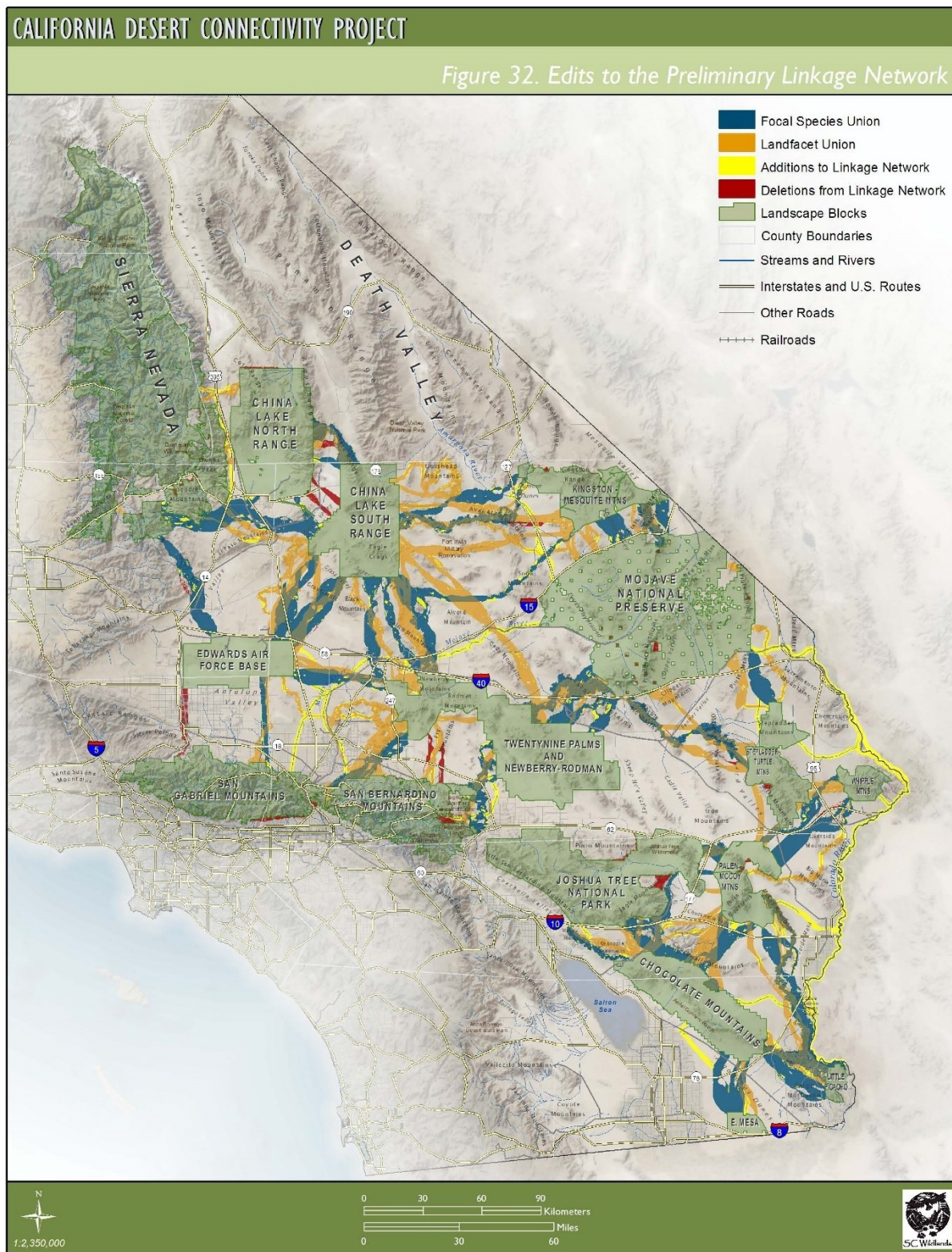
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Attachments: A) Desert Linkage Network map, B) Figure C-39 and C) Figure D-18

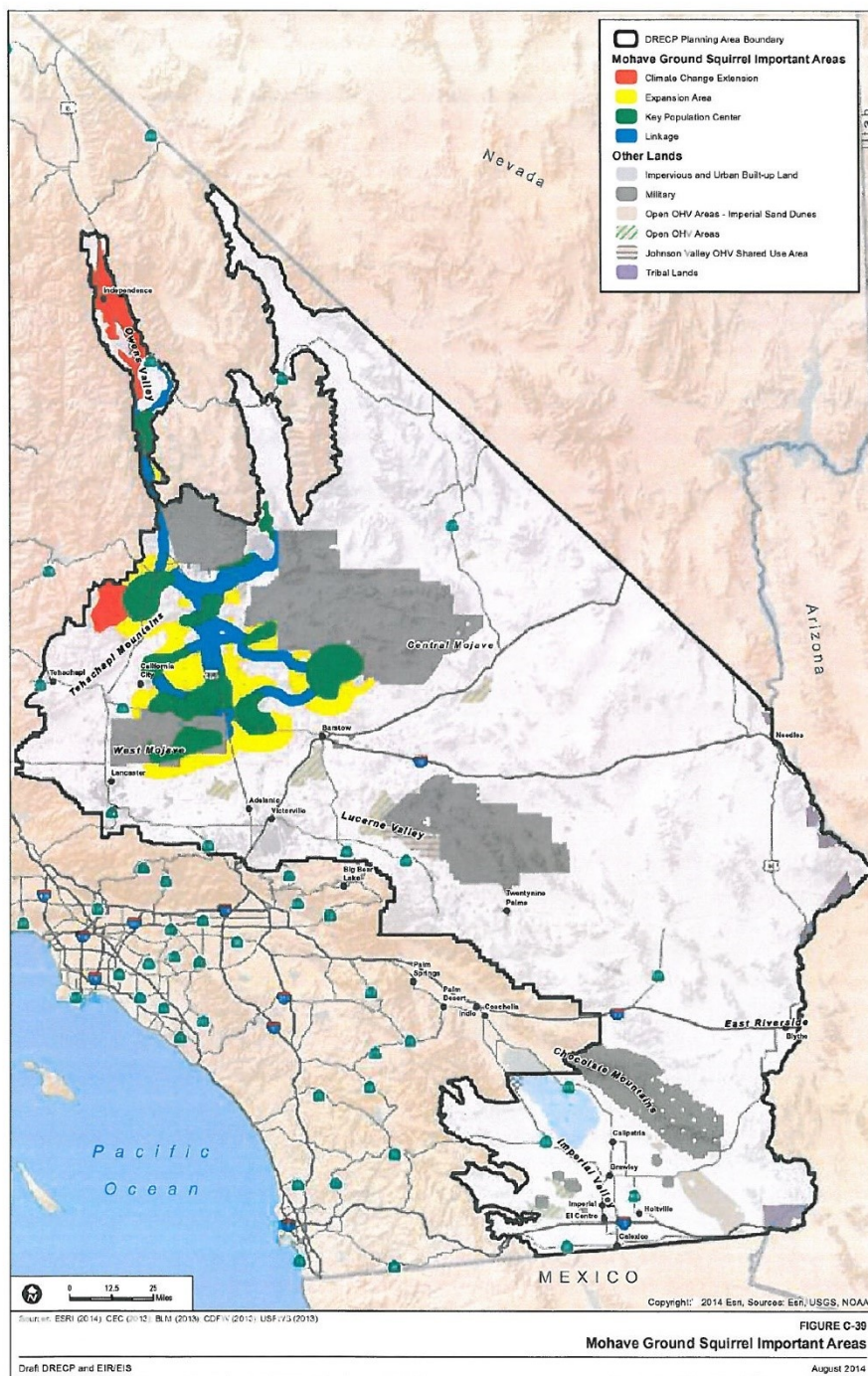
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Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)**



**Response to Letter 51: California Native Plant Society (CNPS) and Defenders of Wildlife;
Aardahl, Jeff; Egan, Tom; and Langone, Isabella (July 15, 2021)**

51-A: The County acknowledges that the DRECP is focused on public lands, and because the proposed Aratina Solar project is not located on public lands it is not subject to the DRECP. The text on Draft EIR page 4.4-35 addresses whether the project would “conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.” The relative quantitative comparison provided in the Draft EIR has no basis in the conclusion that “No impact would occur as the proposed project would not conflict with the provisions of an adopted habitat conservation plan.” As such, the text on Draft EIR page 4.4-35 has been revised as follows:

The project is considered to be consistent with the Land Use, Open Space, and Conservation Element of the Kern County General Plan. The project site is located within the Desert Renewable Energy Conservation Plan (DRECP) planning area, ~~which means that the area is expected to support fewer sensitive status species than areas identified with conservation potential and is therefore more likely to be appropriate for renewable energy development.~~ However, the DRECP at this time only applies to federal public lands managed by the Bureau of Land Management and is not an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The proposed project would be located on private land and therefore is not subject to the DRECP. There are no other adopted conservation plans for protection of biological resources governing the project area. No impact would occur as the proposed project would not conflict with the provisions of an adopted habitat conservation plan. No further analysis in the Draft EIR is warranted.

51-B: Draft EIR Section 1.6.3 is a component of Chapter 1 Executive Summary of the Draft EIR, which includes a broad overview of the project and a summary of environmental conclusions. Specifically, Table 1-3 is intended to provide a summary of project impacts that are less than significant, or less than significant with mitigation, and identifies the specific mitigation measures. As stated in the Draft EIR Section 1.6.3, “Sections 4.1 through 4.17 of this EIR present detailed analysis of these impacts and describe the means by which the mitigation measures listed in Table 1-3, *Summary of Project Impacts That Are Less than Significant or Less than Significant with Mitigation*, would reduce impacts to a less-than-significant level.” The project site occupies an area with a couple of Mojave ground squirrel observations, so it is occupied by this species. However, there are a number of factors which contribute to the project site as not being considered high quality Mojave ground squirrel (MGS) habitat. There include numerous dirt roads with off-highway vehicle traffic (e.g., recreational vehicles), the presence of trash, a landfill with an invasive California ground squirrel population, and adjoining residential areas with free-ranging dogs and cats. The mitigation measures identified in Draft EIR Section 4.4 Biological Resources have been determined to be adequate to address potential impacts to MGS in consideration of the overall habitat quality of the project site and surrounding area.

Please refer to Responses 51-C through 51-J.

51-C: The County acknowledges that the project site is located within an area identified and mapped as “Focal Species Union” and “Land Facet Union” per the California Essential Habitat Connectivity (CEHC) Project. The project site is not located within an area identified and mapped as “Natural

Landscape Block” or “Essential Connectivity Area” per the CEHC. The text of Draft EIR page 4.4-22 has been modified to clarify the project sites location with respect to the CEHC as follows:

Wildlife movement corridors, also referred to as dispersal corridors or landscape linkages, are generally defined as linear features along which animals can travel from one habitat or resource area to another. The project site ~~does not lie within a recognized wildlife connectivity area~~ is located within an area identified and mapped as “Focal Species Union” and “Land Facet Union” as mapped by the California Essential Habitat Connectivity (CEHC) Project. However, the project site is not located within a Natural Landscape Block or Essential Connectivity Area as mapped in the CEHC.

It appears that some discussions of MGS population centers and movement corridors go back to an MGS status report published by Leitner in 2008 (see *Attachment A* at the end of these responses to comments). This status report included a map outlining an MGS population area that was carefully located north of SR 58 in the Boron area. Somehow, a map (MGS Important Areas) included in DRECP publications showed a “key population center” that included Boron and the proposed Aratina site. There is no known evidence that supports these areas as “key population centers.” Additionally, there is the map from the “California Desert Connectivity Project” that shows a “Focal Species Union” and a “Landfacet Union” running north-south through the Aratina project area (as recognized in the proposed revised Draft EIR text above). The County notes that these “linkages” are mapped directly through the giant borax mine north of Boron, which is an obvious and very large obstruction to wildlife movement. The most recent and probably most accurate map is Figure 1 in the 2019 CDFW MGS Conservation Strategy (see *Attachment B* at the end of these responses to comments), which should be the most current figure, supported by a more thorough understanding of the specific conditions located in the area. This figure shows the Aratina area as a “Peripheral Population Area,” which the County considers reasonable in consideration of the forementioned conditions of the project site and the surround area. Current conditions analysis of the project site and surrounding area clearly illustrates that the project area is not an important north/south connector because of the expansive borax mine located to the north. The project site is also not critical as an east/west connector because there is plenty of habitat to the immediate south on EAFB that can accommodate east/west movement.

Further, Draft EIR page 4.4-22 further discusses the project sites’ connectivity and acknowledges that the project site and surrounding area contain expanses of open habitat with little development and the site lacks any significant barriers to local wildlife movement. However, SR 58, the Borax Mine and surrounding communities of Boron and Desert Lake may deter wildlife movement in the surrounding area. Further as discussed on Draft EIR page 4.4-22, “Wildlife would be expected to traverse the project site unimpeded during foraging and dispersal. Various species may travel between and among surrounding areas of low disturbance (predominantly present immediately to the east, south, and west of the project site), and drainage features such as Twenty Mule Team Creek. The most likely areas for wildlife movement in this portion of the Mojave Desert would be within larger drainages, uninterrupted spans of native vegetation (creosote scrub, Joshua tree woodland, etc.), or along the foothills of the Tehachapi Mountains to the west, or San Gabriel Mountains to the south.”

The County acknowledges the project’s location in the context of the DRECP. As discussed in Response 51-B, the proposed Aratina Solar project is not located on public lands; therefore, it is not subject to the DRECP.

Regarding, wildlife nursery site, per Beck et al. (2001; see *Attachment C* at the end of these responses to comments): “a habitat is a nursery for juveniles of a particular species if its contribution per unit area to the production of individuals that recruit to adult populations is greater, on average, than production from other habitats in which juveniles occur.” Beck et al. (2001) also argue that “the ecological processes operating in nursery habitats, when compared to other habitats, must support greater contributions to adult recruitment from any combination of 4 factors: (1) density, (2) growth, (3) survival of juveniles, and (4) movement to adult habitats.” The project site does not exhibit these characteristics, and therefore, is not considered a wildlife nursery site.

(Source: Beck MW, Heck KL, Able KW, Childers DL and 9 others (2001) The identification, conservation, and management of estuarine and marine nurseries for fish and invertebrates. *BioScience* 51(8):633–641).

- 51-D:** The project applicant has applied for an Incidental Take Permit (ITP) with the CDFW for potential impacts to Mojave ground squirrel (MGS) and desert tortoise (DT). The County acknowledges that the applicant will be required to adhere and implement measures specifically required as part of the ITP. This would include agreement on compensatory mitigation ratio and clearance survey requirements specific for MGS.
- 51-E:** Although no live desert tortoise were detected on the project site, the applicant has applied for an ITP, which would provide appropriate measures in the unlikely event that a desert tortoise is found within the project area and needs to be relocated.
- 51-F:** Project-related impacts to the western Joshua tree are covered in accordance with Section 2084 of the California Fish and Game Code. As discussed on Draft EIR pages 4.4-5 and 4.4-6, the California Fish and Game Commission (CFGF) adopted a regulation authorizing incidental take of Joshua tree during the candidacy period pursuant to Section 2084 of the Fish and Game Code for certain energy projects in Kern and San Diego Counties listed in the regulation (the “2084 Rule”). The Aratina Solar Project is one of the projects listed in the 2084 Rule. This conditional incidental take authorization is codified in Section 749.10 of Title 14, California Code of Regulations (CFGF 2020b).
- 51-G: Special Status Plants:** Draft EIR Table 4.4-3 “Special-Status Plant Species and CDNPA Plants Occurring in the Project Area” identifies the number of plants for each special-status species located within each CUP site. It is assumed that the project footprint (area of disturbance) encompasses the entirety of the project site; therefore, Draft EIR Table 4.4-3 provides a quantification of impacts to each plant species. Figure 4.4-1 depicts the distribution of the vegetation communities on-site.

Regarding Mitigation Measure MM 4.4-12, this measure requires that a Habitat Mitigation Plan be created “if avoidance or minimization measures are implemented on-site to ensure adequate management and conservation of botanical resources on-site over the long term.” Because the project area of disturbance will encompass the entirety of the project site, avoidance is not feasible. Therefore, mitigation will be off-site. So, no Habitat Mitigation Plan is necessary.

Sensitive Natural Communities: Draft EIR Table 4.4-1 “Acreage of Vegetation Communities and Unvegetated Features in the Project Area” identifies the acreages of the vegetation communities located within each CUP site. It is assumed that the project footprint (area of disturbance)

encompasses the entirety of the project site; therefore, Draft EIR Table 4.4-1 provides a quantification of impacts to each vegetation community.

Draft EIR Figure 4.4-4 Joshua Tree Survey identifies the distribution of Joshua trees on the project site. Joshua tree woodland occurs in areas where Joshua tree is an emergent small tree over a shrub or grass canopy, is evenly distributed, and has $\geq 1\%$ cover (*A Manual of California Vegetation, 2nd Edition* [Sawyer et al. 2009]). In the DRECP Joshua tree woodland habitat was not recognized on the project site. Therefore, during the vegetation mapping of the project site, it was assumed that the vegetation mapping for the DRECP was fairly accurate, so a quantitative analysis to determine if Joshua trees actually had a one percent or more cover value was not conducted. However, it is recognized that Joshua tree woodland could occur in small patches throughout the site. Please also refer to response to comment 51-F.

- 51-H:** Because the Draft EIR analysis assumes that the entirety of the project site is located within the footprint of disturbance, significantly more than 10% (in most cases 100%) of the on-site populations would be impacted; therefore, the 10% threshold as described in Mitigation Measure MM 4.4-12 is not relevant for purposes of mitigating impacts to sensitive plants on the project site. Further, an on-site Habitat Mitigation Plan is not proposed, as off-site mitigated would be required.
- 51-I:** As stated in response to comment 51-G, Draft EIR Table 4.4-3 “Special-Status Plant Species and CDNPA Plants Occurring in the Project Area” identifies the number of plants for each special-status species located within each CUP site.

Inconsistent Accounting of California Desert Native Plants Act (CDNPA) Plants: In response to the terms and conditions of the 2084 Rule for western Joshua tree incidental take authorization, the Western Joshua Tree Census Report was prepared (Draft EIR Appendix D-3). This data represents the most refined data for Joshua tree located within the proposed project footprint, with a total of 4,722 trees identified (as presented in EIR Table 4.4-4 Number of Joshua Trees in the Project Area).

Draft EIR page 4.4.-13 has been revised to reflect the corrected Joshua tree census as follows:

Four CDNPA-protected species were recorded in the project areas: Joshua tree, silver cholla, diamond cholla, and beavertail. A total of ~~4,500~~ 4,946 CDNPA plants were recorded in the project area during ~~the survey~~ biological surveys of the project area (Table 4.4-3).

Inconsistencies Related to Rare Plant Species: Please refer to response to comment 51-I regarding Joshua tree census.

The County acknowledges that Mojave spineflower is present within the gen-tie alignment, consistent with that stated on Draft EIR page 4.4-36. The text of EIR page 4.4-36 has been revised as follows:

Loss of more than 10 percent of habitat occupied by on-site special-status plant species (i.e., desert cymopterus, Barstow woolly sunflower, Mojave spineflower, and crowned muilla), where present within the project area or potentially occurring within the project area, would be considered significant. However, this potentially significant impact can be mitigated to less than significant through the implementation of Mitigation Measure MM 4.4-12 which would require pre-construction plant surveys (dependent upon construction

timing) and protections for such species if identified onsite. ~~All four of these special-status plant species are present within the solar facility, with no special-status plants present within the gen-tie.~~

- 51-J:** Mitigation ratios proposed are consistent with the ratios accepted by resource agencies (Department of Fish and Wildlife and U.S. Fish and Wildlife Service). The 1:1 ratio is a replacement ratio for occupied habitat lost unless a lower mitigation ratio and/or alternative mitigation is agreed to in coordination with California Department of Fish and Wildlife as part of the ITP.
- 51-K:** The commenters indicate that the Defenders and CNPS have reviewed the Draft EIR and feel there are deficiencies for which they have provided recommended actions to resolve them. The commenters state the opinion that unless revisions are made to the impact analysis and measures identified to address project effects on biological resources, that they do not agree with the findings of less than significant made in the Draft EIR.

The County acknowledges the information provided in its consideration for development of the subject site as proposed. The comments provided have been noted for the record and revisions to the Draft EIR will be made as shown in Responses 51-A to 51-I, above; refer also to Section 7.2, Revisions to the Draft EIR, of this Chapter.

Table 1. Aratina Joshua Tree Census Results

| Project Area | <1 meter | 1 to <5 meters | >=5 meters | Grand Total |
|---------------------|--------------------|--------------------------|----------------------|--------------------|
| Holgate Gen-tie | 1 | 0 | 0 | 1 |
| Collectors | 0 | 5 | 1 | 6 |
| Kramer Gen-tie | 6 | 12 | 9 | 27 |
| Project Area 1 | 76 | 260 | 35 | 371 |
| Project Area 2 | 661 | 1842 | 337 | 2840 |
| Project Area 3 | 185 | 813 | 104 | 1102 |
| Project Area 4 | 34 | 215 | 27 | 275 |
| Project Area 5 | 20 | 57 | 22 | 98 |
| Grand Total | 983 | 3204 | 535 | 4722 |

Table 2. Aratina Joshua Tree Project Impact Area

| Project Area | Impact Area (acres) |
|---------------------|----------------------------|
| Collectors | 0.17 |
| Holgate Gen-tie | 0.00 |
| Kramer Gentie | 1.17 |
| Project Area 1 | 6.54 |
| Project Area 2 | 52.56 |
| Project Area 3 | 19.40 |
| Project Area 4 | 5.11 |
| Project Area 5 | 3.00 |
| Grand Total | 87.95 |

ATTACHMENT A: Current Status of the Mojave Ground Squirrel (Leitner, Phillip 2008)**CURRENT STATUS OF THE MOHAVE GROUND SQUIRREL**

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ABSTRACT: The Mohave ground squirrel (*Spermophilus mohavensis*) is found only in the western Mojave Desert of California. Although it is listed as Threatened by the State of California, there is little published information regarding its current distribution and status. I have assembled a comprehensive database covering unpublished field studies, surveys, and incidental observations conducted over the 10-year period from 1998-2007. This database contains records of 1140 trapping sessions, only 102 of which were successful in capturing ≥ 1 Mohave ground squirrels. In addition, there are 96 incidental observations in which the species was detected. An analysis of these 198 positive records identifies 4 core areas that continue to support relatively abundant Mohave ground squirrel populations and 4 other areas in which there are multiple recent records of the species. Although the southern portion of the range has been most intensively sampled, the only recent occurrences there are from a single core population on Edwards Air Force Base plus an additional 4 detections from Victor Valley. There are extensive areas within the geographic range where the status of the species is unknown, especially on the China Lake Naval Air Weapons Station and Fort Irwin. I present recommendations for surveys in areas where no recent studies have been carried out. I also identify potential corridors between known populations and recommend studies to determine if these connections are actually occupied by the species. Finally, I indicate conservation measures needed to ensure that known populations and corridors are adequately protected from habitat loss and degradation.

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Key words: Mohave ground squirrel, *Spermophilus mohavensis*, California, Mojave Desert, threatened species, core populations, corridors, conservation

The Mohave ground squirrel (*Spermophilus mohavensis*) is found only in the western Mojave Desert of California (Best 1995). Its historic range (Figure 1) totaled about 20,000 km² (Gustafson 1993). It has been found from the area of Palmdale and Victorville in the south to Owens Lake in the north. The eastern escarpment of the Sierra Nevada forms much of the western boundary of its range, while in the east its distribution extends to the Mojave River Valley and to the Fort Irwin military reservation. This region has experienced rapid growth over the past few decades. Urban development in the Antelope Valley, Indian Wells Valley, and along the Mojave River from Victorville to Barstow has resulted in a human population in excess of 700,000. Three large military bases conduct extensive training and testing operations. Much of the western Mojave Desert is used for motorized outdoor recreation, mining, and livestock grazing. There is an expanding transportation infrastructure, including highways, railroads, airports, pipelines, and electric transmission lines. Recent government policies have stimulated great interest in siting renewable energy facilities in this region, especially wind farms and solar installations.

Because of these multiple development pressures, there has been significant and on-going loss of wildlife habitat in the western Mojave Desert as well as widespread habitat degradation and fragmentation.

There has been concern about the conservation status of the Mohave ground squirrel since 1971, when it was first listed as Rare under the California Endangered Species Act (CESA). After the reauthorization of CESA in 1984, the species was classified as Threatened. Its subsequent regulatory history has been highly controversial. In 1993, the California Fish and Game Commission acted to remove it from the list of threatened species, a decision that was set aside in 1997 following judicial review. A petition to list the Mohave ground squirrel under the federal Endangered Species Act (ESA) was rejected by the US Fish and Wildlife Service in 1995. The US Fish and Wildlife Service is currently (2008) reviewing a new petition to list the species as endangered under the ESA.

In 2006, the US Bureau of Land Management (BLM) approved the West Mojave Plan, which was designed to conserve a number of sensitive species throughout the western Mojave Desert, with special emphasis on the desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (Bureau of Land Management 2006). The alternative version of the plan as adopted established a Mohave Ground Squirrel Conservation Area consisting of 6,988 km² of public lands managed by the BLM. (Fig. 1) These conservation measures do not apply to private and military lands within the historic range of the species.

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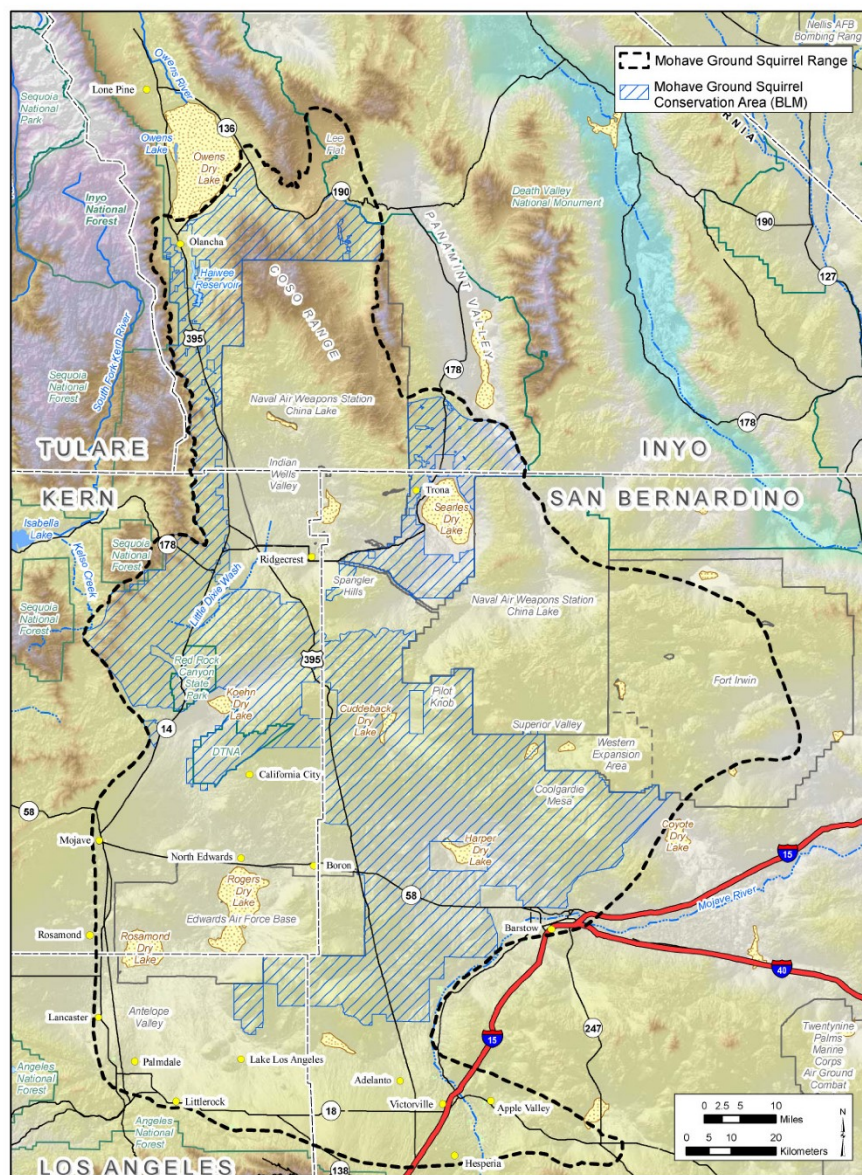


Figure 1. The historic range of the Mohave ground squirrel in the western Mojave Desert of California, with important place names indicated. The Mohave Ground Squirrel Conservation Area is shown as established in the West Mojave Plan (U.S. Bureau of Land Management (2005)).

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Although the Mohave ground squirrel has been designated as a state-listed species since 1971 and has been the focus of a major conservation planning effort by the BLM, there is still little published information on its distribution, abundance, and population trends. Brooks and Matchett (2002) reviewed 19 reported studies of the species, covering the period from 1918 to 2001. Only 2 of these studies were published in scientific journals. Since this review by Brooks and Matchett, a great deal of new information has become available, most of it unpublished. Two radiotelemetry studies describing home range dynamics and juvenile dispersal were recently published in peer-reviewed journals (Harris and Leitner 2004, 2005). Several state and federal agencies, as well as private conservation groups, have sponsored field research designed to determine the status of the species in particular areas. In addition, the California Department of Fish and Game (CDFG) requires trapping surveys at proposed development sites according to a prescribed protocol (CDGF 2003).

This paper brings together the data from unpublished field studies and surveys conducted during the 10-year period from 1998-2007. I have obtained reports for all sponsored research surveys and have received information on protocol trapping surveys from many consulting biologists. The information presented here includes both positive records documenting Mohave ground squirrel occurrence and negative results from trapping surveys in which the species was not detected. The objectives of this review are to:

1. Document the geographic distribution of Mohave ground squirrel occurrences,
2. Summarize the distribution and relative intensity of survey efforts,
3. Identify important areas and corridors for conservation based on available occurrence data, and
4. Recommend areas where additional survey effort is needed.

METHODS

I utilized 4 sources of information regarding the distribution and occurrence of the Mohave ground squirrel during the period 1998-2007: the California Natural Diversity Database, regional field studies, protocol trapping at proposed development sites, and incidental observations as reported by field biologists.

The California Natural Diversity Database (CNDDB) is a state-wide inventory of the status and locations of rare species and natural communities. The CDFG produces and regularly updates this computerized catalog, which contains records of occurrence submitted by state and federal agencies, consulting firms, and individual biologists. It contains positive records of

occurrence only and generally does not include data documenting the absence of a species from a particular locality.

The CNDDB contained a total of 293 occurrence records for the Mohave ground squirrel as of August 4, 2007 (CNDDB 2007). Twenty-eight new occurrences were submitted during the period from 1998-2007 and there were also 2 new records at previously known locations for the species. These records were obtained from regional field studies, protocol trapping, and incidental observations. I incorporated these 30 records into the data base used in this analysis.

A number of regional field studies have been conducted during the past 10 years, many of them funded by public agencies and private conservation groups. I have reviewed 19 unpublished reports that describe the results of such trapping surveys and have also obtained data from several biologists whose surveys have not been documented in formal reports (Appendix A).

The third source of data was trapping surveys carried out at proposed development sites, as required by the CDFG (CDGF 2003). The CDFG guidelines specify that surveys be conducted on proposed project sites that support desert scrub vegetation and are within or adjacent to the Mohave ground squirrel geographic range. The surveys must be carried out by a qualified biologist operating under authority of a Memorandum of Understanding (MOU) with CDFG. The protocol mandates an initial visual survey of the project site. If no Mohave ground squirrel is detected visually, live-trapping is required for up to 3 sessions of 5 consecutive days each. The trapping sessions must be conducted during the periods March 15-April 30, May 1-31, and June 15-July 15. Trapping grids normally consist of 100 traps arranged in a 4x25 array (linear projects) or in a 10x10 array (other projects).

If a Mohave ground squirrel is detected on the site, the project proponent must apply to CDFG for an Incidental Take Permit and provide compensation, usually in the form of mitigation lands. If no Mohave ground squirrel is observed or captured, it is not necessarily evidence that the site is unoccupied or is not potential habitat. Nonetheless, CDFG will stipulate for a period of 1 year that the project site harbors no Mohave ground squirrels. Most protocol surveys carried out in recent years have not resulted in detection of the species.

In order to obtain the results of protocol trapping surveys for the period 1998-2007, I contacted all biologists who were known to possess an MOU authorizing take of Mohave ground squirrels. The great majority responded by providing their survey data, including dates of trapping sessions, coordinates of grid centers, number of trap-days of sampling effort, and

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whether or not Mohave ground squirrels were detected. Although I have not obtained data for all protocol trapping efforts, I have collected a total of 943 records that represent 426,615 trap-days of sampling. I estimate that I obtained records for >95% of the total protocol trapping effort for the period 1998-2007.

I have classified as incidental observations all reports by biologists who observed or captured Mohave ground squirrels incidental to other field studies. This category includes visual and auditory detections, captures made while trapping for other species, and highway mortalities.

For regional and protocol surveys, a record is defined as a single trapping session, usually consisting of 5 successive days. Records from trapping surveys can be negative, with no Mohave ground squirrel captures, or positive, indicating a session with at least 1 capture. On the other hand, records from incidental observations were always positive, indicating the detection of at least 1 Mohave ground squirrel at a specific location. Table 1 lists the number of records obtained for this review from regional surveys, protocol trapping, and incidental observations. The regional and protocol trapping surveys provided a total of 1,038 negative records, as compared to only 102 trapping sessions in which at least 1 Mohave ground squirrel was captured. Although the regional studies involved only 21.6% of the total trapping effort, they accounted for 69.6% of the positive records. On

the other hand, the protocol surveys made up 78.4% of trapping effort, but contributed only 30.4% of Mohave ground squirrel detections.

I entered data from all sources into an Excel spreadsheet and then imported that into an Access database. This permitted data to be manipulated and extracted through the query process. A series of base maps covering the geographic range of the Mohave ground squirrel was developed using Geographic Information System (GIS) techniques. All records, both positive and negative, were plotted on these digital maps for visual analysis. In this way, the distribution of Mohave ground squirrel occurrences for the last 10 years could be visualized in relation to the distribution of sampling effort.

RESULTS

General Distribution of Mohave Ground Squirrel Records

The geographic distribution of both positive and negative Mohave ground squirrel records over the period 1998-2007 is shown in Figure 2. There has been no attempt at either systematic or random range-wide sampling and the records tend to be concentrated in certain well-defined regions. The great majority of trapping effort has been conducted in the southern part of the geographic range, south of State Route 58. In spite of this very intensive sampling, Mohave ground squirrels have been detected in only 2 areas south of State Route 58, one on Edwards Air Force Base and the other in the vicinity of Victorville. The northern part of the geographic range is in Inyo County, where almost all trapping has been conducted in the Coso region on China Lake Naval Air Weapons Stations (China Lake NAWS) and in the vicinity of Olancho and Haiwee Reservoir. Outside of these 2 areas, there have been only 5 widely scattered detections in the entire northern part of the range over the past 10 years. In the central part of the range, from Ridgecrest south to State Route 58, most positive records have been concentrated in 6 distinct regions. Trapping in the vicinity of Ridgecrest has resulted in the capture of a number of Mohave ground squirrels and there are abundant records for the extensive valley (Little Dixie Wash) between Inyokern and Red Rock Canyon State Park. To the south, there is a cluster of detections associated with the Desert Tortoise Natural Area (DTNA) and another in the Pilot Knob region east of Cuddeback Dry Lake. There are many records from the broad plateau that lies north of Barstow (Coolgardie Mesa and Superior Valley) and there are also several detections in the area just north of Boron.

It is clear that there are extensive areas within the range of the Mohave ground squirrel that have not been

Table 1. A summary of the data sources used for this review. For regional and protocol surveys, a record is defined as a single trapping session (usually 5 days) at a specific grid location. If no Mohave ground squirrels were detected, such records were considered negative, while a positive record was a trapping session in which ≥ 1 Mohave ground squirrels were captured. For incidental observations, all records are positive. Each record indicates the detection of ≥ 1 Mohave ground squirrels at a particular location. The sampling effort for regional and protocol surveys is calculated as the number of traps operated per day times the number of days per trapping session summed over all trapping sessions.

| Type of Data | Total | Positive Records | Trap-days |
|-------------------------|-------|------------------|-----------|
| Regional Surveys | 197 | 71 | 111,710 |
| Protocol Surveys | 943 | 31 | 426,615 |
| Incidental Observations | 96 | 96 | N/A |
| Totals | 1,236 | 198 | 538,325 |

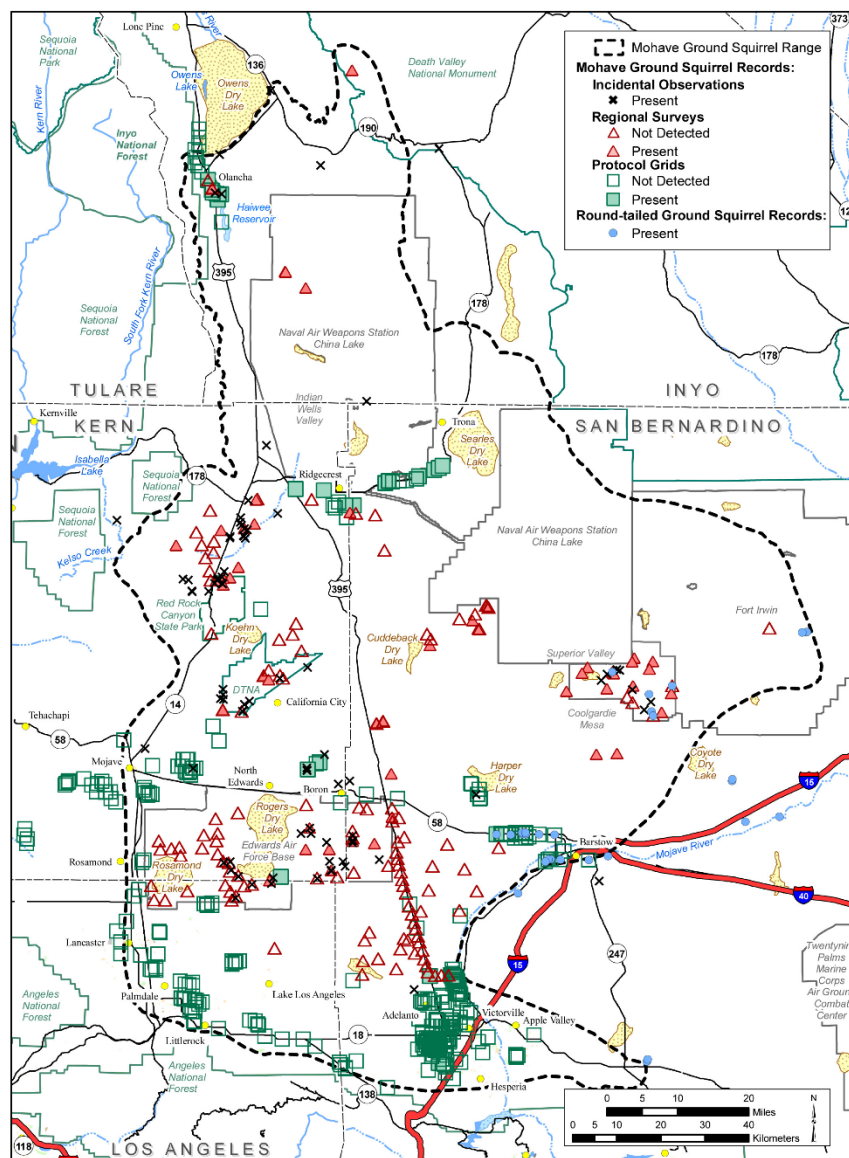


Figure 2. The geographic distribution of all Mohave ground squirrel records for the period 1998-2007. A total of 1,236 records are plotted, which include 1,140 trapping sessions conducted for regional and protocol surveys and 96 incidental observations. Solid triangles and squares represent locations of trapping grids at which ≥ 1 Mohave ground squirrels were captured. Crosses show sites of the 96 incidental observations at which ≥ 1 Mohave ground squirrels were detected.

effectively sampled. Figure 3 shows a 10x10 km sampling frame superimposed on the geographic range, with the sampling units color-coded to indicate the number of records (both positive and negative) for each unit during the period 1998-2007. It can be seen that sampling efforts have been heavily concentrated in the southern part of the range, especially to the west and north of Victorville, in the Palmdale-Lancaster area, around Barstow, and in the vicinity of the town of Mojave. Approximately 67% of all trapping efforts have been located in the region from State Route 58 south. The lack of recent data on Mohave ground squirrel occurrence in the northern part of the range is obvious, but there are also large gaps in our knowledge in the central part of the range. Except for the Coso area, there have been no surveys on either the north or south ranges of China Lake NAWS during the past 10 years. The Western Expansion Area of Fort Irwin has been well sampled using a randomized method of selecting trapping sites. However, only 1 trapping attempt has been recorded elsewhere on Fort Irwin over the period 1998-2007. In contrast, Edwards Air Force Base has sponsored extensive surveys on a randomized sampling basis, so that the distribution of the species is known there in great detail.

Regional Analysis of Mohave Ground Squirrel Records

In this section, I present detailed information on Mohave ground squirrel distribution and abundance during the period 1998-2007 for a number of regions within the geographic range. This regional analysis is supported by a series of 7 maps that are available as Supplemental Online Material at the website of The Western Section of The Wildlife Society: http://twswest.org/transactions/TWSWS_Transactions_directory.htm

Inyo County. — Inyo County includes the northernmost region occupied by Mohave ground squirrels. Records are concentrated in the area between Olancho and Haiwee Reservoir and in the Coso Range, within the China Lake NAWS. The species has been detected at 5 protocol trapping grids to the south of Olancho, beginning in 2002. Mohave ground squirrel populations at 2 sites in the Coso Range have been monitored by regular spring trapping sessions. Animals have been captured on both grids at every trapping occasion. In 2007, a Mohave ground squirrel was captured at Lee Flat just inside the boundary of Death Valley National Park, which marks the northernmost record for the species. The other 4 records for Inyo County are incidental observations, including an individual that was stuck by a vehicle in northern Panamint Valley, several kilometers east of the generally-accepted limits of the range.

Ridgecrest Area.—Trapping has been conducted at 10 grids in the vicinity of Ridgecrest, with Mohave ground squirrels detected at 5 of these sites. In addition, protocol trapping at 10 grids along State Route 178 east of Ridgecrest in 2006 yielded captures at 6 locations. However, no Mohave ground squirrels were captured in 2002 at 2 sites in the Spangler Hills southeast of Ridgecrest.

Little Dixie Wash.—The Little Dixie Wash region is a broad valley extending from Inyokern southwest to Red Rock Canyon State Park. Two extensive trapping studies have detected Mohave ground squirrels throughout this region. In 2002, the species was captured at 6 of 7 grids widely scattered across this valley. There have been more than 20 incidental observations as well, suggesting that Mohave ground squirrels are widely distributed here. In 2007, a visual sighting established the first record to the west of the mountain crest in the Kelso Creek drainage.

Fremont Valley to Edwards Air Force Base.—The Fremont Valley extends northeast from the vicinity of Cantil toward Garlock and Johannesburg. No Mohave ground squirrels have been detected here during the past 10 years, despite trapping efforts at 6 grids. There are 13 positive records around the periphery of the DTNA and out a few kilometers to the east. No trapping has been carried out in the interior of the DTNA, but it is likely that Mohave ground squirrels are present there as well. Two incidental records exist for the area just to the north and east of the town of Mojave, but repeated protocol trapping efforts here have been unsuccessful. Finally, there are 10 trapping records and incidental observations in the area to the north of Boron and Kramer Junction. These records suggest a fairly widespread population across this region.

Wind Farm Area Southwest of Mojave.—Protocol trapping surveys have been conducted at 24 grids located on wind energy development sites southwest of the town of Mojave. Although this area is outside the generally-accepted boundaries of the geographic range, much of the habitat here seems suitable for the species. To date, no Mohave ground squirrels have been detected during these trapping efforts. Two recent visual observations are listed in the CNDDDB, but confirmation through trapping is needed.

Edwards Air Force Base.—Edwards Air Force Base has been carrying out an extensive monitoring program to document the distribution of Mohave ground squirrels within the military reservation. From 2003 through 2007, trapping has been conducted at 40 randomly-located grids across the base, resulting in detection of the species at 6 of these sites. In combination with other trapping efforts and incidental observations, this program has clearly defined the area in which Mohave ground squirrel populations are present.

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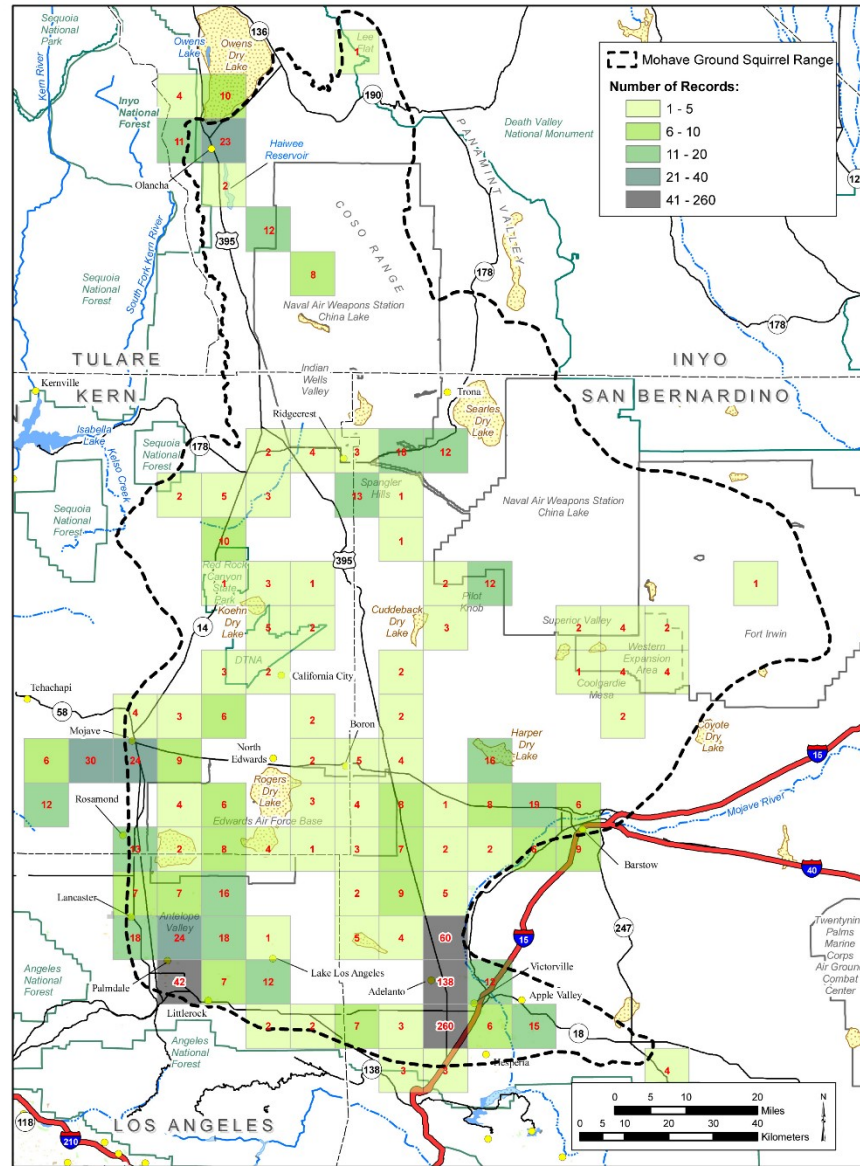


Figure 3. The distribution of sampling effort throughout the historic range of the Mohave ground squirrel for the period 1998-2007. A 10 x 10 kilometer sampling frame is set over the region and the total number of records (both positive and negative) are indicated for each 10 x 10 km block. These records are the trapping sessions conducted for regional and protocol surveys. Incidental observations are not plotted here.

Los Angeles County.—Protocol trapping has been conducted at 52 grid locations in the desert portion of Los Angeles County during the period 1998-2007, but no Mohave ground squirrels have been detected by this method. The only positive records in Los Angeles County have been 4 detections in a small area near Rogers Dry Lake on Edwards Air Force Base.

Victor Valley to Barstow.—Intensive protocol trapping has been conducted in the Adelanto area and on the western outskirts of Victorville, resulting in the capture of Mohave ground squirrels at 3 separate locations. The 2 trapping records north of Adelanto plus a visual sighting just to the west suggest the presence of a residual population in this area. Capture of a juvenile female well to the south near the intersection of US 395 and I-15 indicates that another population may exist here as well. There have been no records east of the Mojave River since 1955 but, as shown in Figure 2, this area has not been effectively sampled in the last 10 years. Three major trapping studies have been conducted from El Mirage Dry Lake north and east toward Barstow. There have been no detections of Mohave ground squirrels over this extensive area.

Barstow Area.—There were only 3 Mohave ground squirrel records in the Barstow area during the period 1998-2007. In 2005, a Mohave ground squirrel was observed about 6 km south of Barstow near the city landfill, in an area outside the generally-accepted range boundary. Two other occurrences were documented in 2007 to the west of Barstow. Mohave ground squirrels were detected at the edge of an alfalfa field near Harper Dry Lake and 1 was trapped about 10 km west of Hinkley near State Route 58.

Coolgardie Mesa and Superior Valley.—To the north of Barstow is a broad, gently-sloping plateau that extends from Coolgardie Mesa in the south to Superior Valley in the north. Three trapping studies have been conducted in this region over the past 10 years and all have documented Mohave ground squirrel occurrences. There have also been at least 7 incidental observations.

Pilot Knob Area.—Trapping studies in the Pilot Knob area, from Cuddeback Dry Lake east to the boundary of China Lake NAWA, have detected Mohave ground squirrels at 5 different sites.

Contact Zone with Round-tailed Ground Squirrel

The Mohave ground squirrel and the round-tailed ground squirrel (*Spermophilus tereticaudus*) are closely related (Hafner and Yates 1983). The 2 species are very similar in general appearance, the most obvious difference being the much longer tail of the round-tailed ground squirrel. The round-tailed ground squirrel is found throughout the eastern Mojave Desert of California and its geographic range adjoins that of the Mohave

ground squirrel. The contact zone between the 2 species extends from Lucerne Valley along the Mojave River to Barstow and then northeast through Fort Irwin (Fig. 4). During the period 1998-2007, a total of 30 round-tailed ground squirrel occurrences have been recorded in this contact zone. Round-tailed ground squirrels are common in the area around Barstow, especially in disturbed habitats. The species has also been observed in Lucerne Valley, near Hodge on the Mojave River, near Coyote Dry Lake, and on the eastern side of Fort Irwin. In addition, round-tailed ground squirrels have been detected in 2 areas well within the historic range of the Mohave ground squirrel. There have been 5 reports from the Western Expansion Area of Fort Irwin, as much as 24 km inside the generally-accepted boundary of the Mohave ground squirrel range. The other area of interest is west of Barstow along State Route 58, where round-tailed ground squirrels were trapped at 8 sites in 2006 and 2007. Individuals of both species were captured on a grid about 20 km west of the range boundary. Lack of historical baseline data makes it impossible to determine if the round-tailed ground squirrel is actively extending its distribution at the expense of the Mohave ground squirrel.

DISCUSSION

General Distribution of Mohave Ground Squirrel Records

It is important to be clear about the significance of positive records that indicate Mohave ground squirrel presence during the past 10 years. These positive records are highly concentrated in just 8 distinct areas, in which 93.4% (185/198) of all Mohave ground squirrel occurrences have been documented (Fig. 5). It is of interest that there are at least some Mohave ground squirrel records prior to 1998 in each of these 8 areas, suggesting that recent trapping effort has focused on areas with historic records. However, much of the Mohave ground squirrel range has never been surveyed. This is especially true in Inyo County, which includes large areas where no surveys or protocol trapping have ever been carried out. The situation is similar, although not as extreme, in the central part of the range. There are 6 areas here where recent evidence indicates the presence of Mohave ground squirrel populations. However, little trapping has been conducted outside the areas that support these known populations. In the southern part of the range, south of State Route 58, there has been much greater trapping effort and the sampling has been much more widely distributed. Even here, there are still a few relatively restricted areas that have not been surveyed since 1998. In all 3 sections of the Mohave ground squirrel range, additional populations may well

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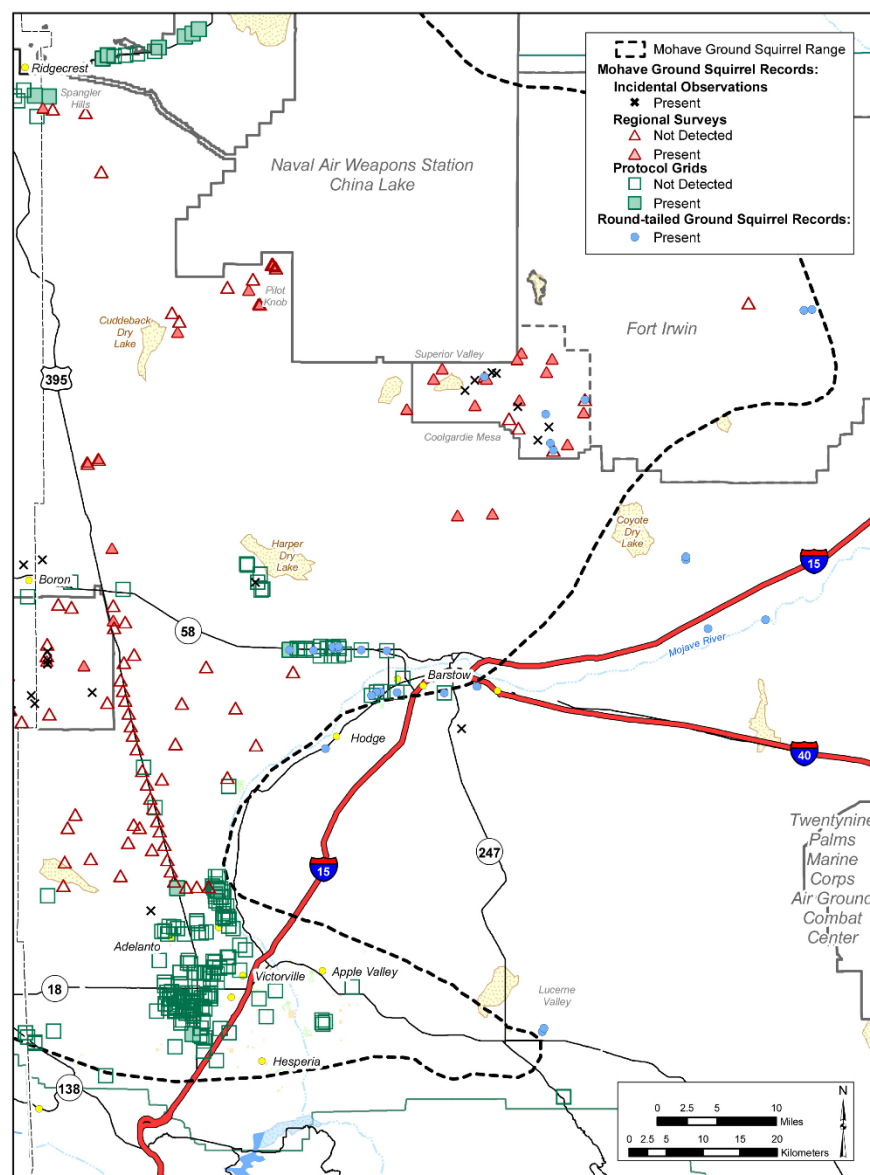


Figure 4. The contact zone between the Mohave ground squirrel and the round-tailed ground squirrel. This shows the distribution of trapping sessions conducted for regional and protocol surveys, as well as incidental observations of Mohave ground squirrels. Circles show sites where round-tailed ground squirrels have observed or captured. These data cover the period 1998-2007.

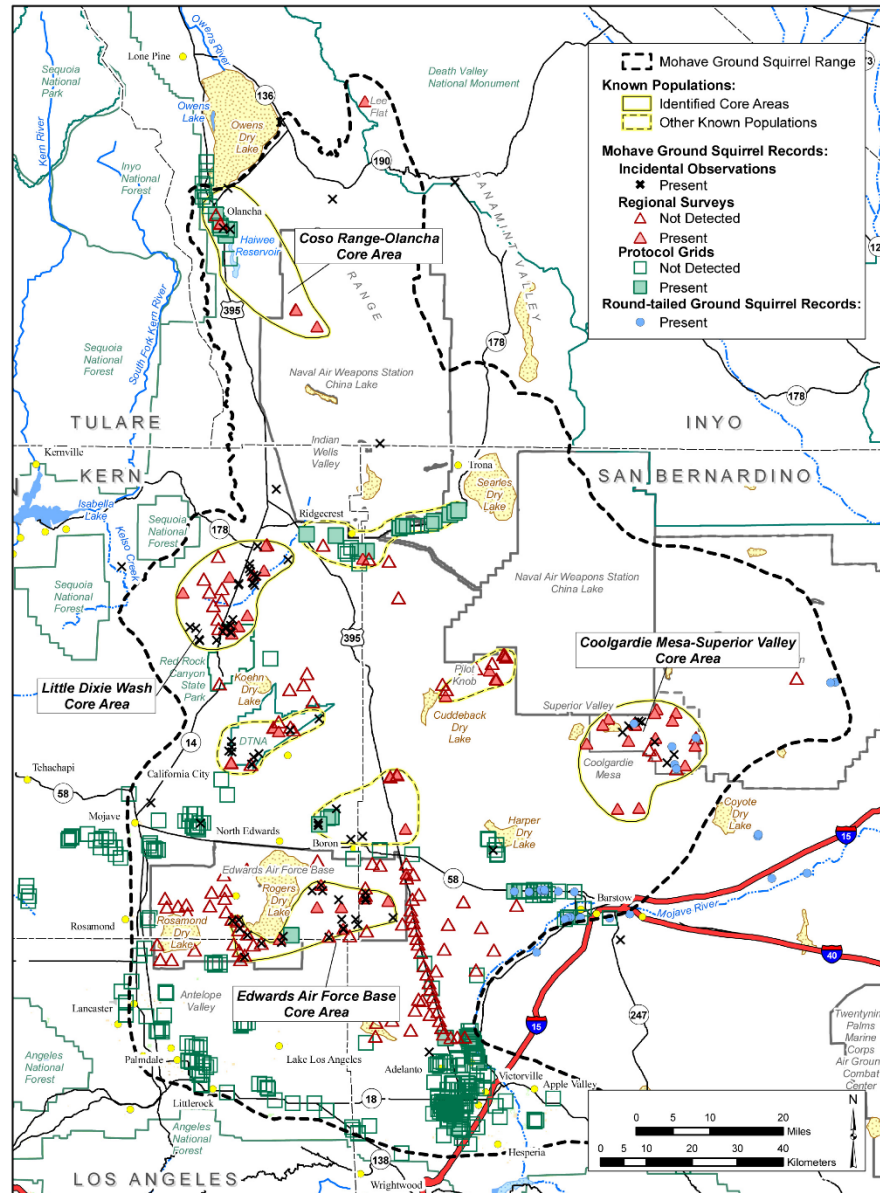


Figure 5. The geographic locations of currently known Mohave ground squirrel populations, including 4 identified core populations and 4 other populations.

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exist outside the 8 areas in which recent positive records are concentrated.

The significance of negative records must be interpreted carefully as well. When regional surveys or protocol trapping fail to detect Mohave ground squirrels, it is important to keep in mind that this in itself cannot be used as evidence that the species is absent or that the area does not provide habitat for the species. There are a number of other circumstances that could result in lack of captures, such as locating a trapping grid in a small patch of marginal or unsuitable habitat, abundance of natural foods that reduce the attractiveness of the bait, low population density due to a series of dry years, or trapping early in the season before juveniles begin their dispersal movements. If trapping grids are not randomly sited, it is not valid to infer from a lack of captures at the grid sites that Mohave ground squirrels are absent in the surrounding habitat. Any conclusions would apply only to the grid sites themselves. In general, the most that can be concluded from lack of captures is that the negative results provide no evidence that the species is present. However, if repeated trapping efforts over a period of several years fail to detect Mohave ground squirrels, it becomes more and more probable that the species is very rare, if not absent, from the study area.

The distribution of trapping effort among private, military, and public land ownerships has been distinctly uneven over the past 10 years. Almost all protocol trapping surveys have been conducted on private lands or on highway rights-of-way, because of the regulatory requirement to determine presence or absence of the Mohave ground squirrel on proposed project sites. Military lands make up about 37% of the land surface

within the range boundaries, but have been the locations for only 7.4% of all trapping records (Table 2). While Edwards Air Force Base and the Western Expansion Area of Fort Irwin have been sampled intensively, very little trapping effort has been expended on the remainder of Fort Irwin or on China Lake NAWS.

Core Areas

Data collected over the past 10 years has made it possible to identify 4 areas within the range of the Mohave ground squirrel that still support relatively abundant and widespread populations. These core areas are defined by 3 criteria. First, there must be evidence that Mohave ground squirrel populations have persisted for a substantial period of time, on the order of 2-3 decades. Second, the species must be currently found at a minimum of 6 locations throughout the area. Third, the total number of individuals detected since 1998 must be ≥ 30 . The 4 areas that are currently known to satisfy these criteria are Coso/Olancha, Little Dixie Wash, Coolgardie Mesa/Superior Valley, and Edwards Air Force Base (Fig. 5). These 4 core areas total about 1,672 km², or about 8.4% of the entire historic range (Table 3). During the period 1998-2007, there have been 135 positive records in core areas, accounting for 68.2% of the total 198 positive records. It is important to emphasize that these identified core areas are simply the only important population centers that have been identified thus far. There are very likely to be other core areas in parts of the geographic range that have not been adequately sampled in the last 10 years.

Coso/Olancha Core Area.—China Lake NAWS sponsored field studies of the Coso Hot Springs area

Table 2. An analysis of trapping effort on military lands within the range of the Mohave ground squirrel (MGS) during the period 1998-2007. The number of sites refers to the number of distinct trapping grid locations, while the number of records is the total number of trapping sessions at all sites, regardless of whether Mohave ground squirrels were captured.

| Military Base | Area (km ²) | % MGS Range | No. Sites | No. Records | % Records |
|-----------------|----------------------------|-------------|-----------|-------------|-----------|
| China Lake NAWS | 4400 | 22% | 2 | 20 | 1.8% |
| Fort Irwin | 1800 | 9% | 18 | 19 | 1.7% |
| Edwards AFB | 1200 | 6% | 43 | 43 | 3.9% |
| Totals | 7400 | 37% | 63 | 82 | 7.4% |

in 1978 that detected 35 Mohave ground squirrels at a number of sites through trapping and visual observations (Zemba and Gall 1980). In the following year, trapping was carried out at 8 sites throughout the Coso Range and in Rose Valley to the west (Leitner 1980). A total of 124 individual Mohave ground squirrels were captured at 7 of the 8 trapping grids. A monitoring program in the Coso Range and Rose Valley from 1988 through 1996 resulted in the capture of over 1400 juvenile and adult Mohave ground squirrels (Leitner and Leitner 1998). Aardahl and Roush (1985) failed to trap the species at a site near Olancha in 1980, but did observe several individuals in the same general area.

During each of the past 7 years (2001-2007), Mohave ground squirrels have been trapped at 2 permanent grids in the Coso Range (Leitner 2001, 2006, 2008). A total of 89 adults have been captured over this period. The species has also been detected regularly in the Olancha area, where 29 adult captures were recorded at 5 sites from 2002 to 2005. The Coso/Olancha area clearly qualifies as an important core area, based upon the persistence of Mohave ground squirrel populations here for 30 years, the presence of the species at many sites, and the number of animals detected.

Little Dixie Wash Core Area.—Mohave ground squirrels were first recorded in the Little Dixie Wash region in 1931 and 1932, when specimens were collected at Freeman Junction and on the east side of Walker Pass (CNDDDB Occ. #21 and #52). Trapping surveys by the BLM in 1974 and 1975 resulted in 17 captures at 7 localities in Dove Springs Canyon and Bird Spring Canyon (CNDDDB Occ. #84, #174, #175, and #191-194). Aardahl and Roush (1985) reported capturing a total of 94 individuals (both adults and juveniles) at 6 grids in the Little Dixie Wash area from April-July 1980. Finally, trapping at 2 sites in 1994 yielded a total of 12 Mohave ground squirrels (Scarry et al. 1996). Additional occurrences were documented at 10 other locations in this region during the period 1974-

1990. Thus, Mohave ground squirrels were recorded at 27 locations in the Little Dixie Wash area from 1931 through 1996.

Recent field studies have been conducted in the Little Dixie Wash area during the period 2002-2007. In 2002, a total of 19 adult Mohave ground squirrels were captured at 6 of 7 grid locations (Leitner 2008). This was followed by more intensive studies at the Freeman Gulch site, with a total of 108 adults and 101 juveniles recorded from 2003 through 2007. Pit-fall trapping for reptiles in the Dove Springs Open Area resulted in the incidental capture of 6 Mohave ground squirrels at 4 different locations. Finally, a trapping survey in 2007 yielded 7 adults at 4 grids near the northern boundary of Red Rock Canyon State Park (Leitner 2008). The Little Dixie Wash core area has supported Mohave ground squirrel populations for over 70 years and recent records confirm that the species is abundant and widespread here.

Coolgardie Mesa/Superior Valley Core Area.—Mohave ground squirrels were first discovered in 1977 north of Barstow on the plateau that stretches from Coolgardie Mesa north to Superior Valley (Wessman 1977). The species was detected at 9 locations, with 1-3 individuals reported at each site. In 1980, Aardahl and Roush (1985) trapped 2 grids in Superior Valley, capturing 24 individuals (both adults and juveniles). A total of 24 Mohave ground squirrels were subsequently recorded at 5 sites in 1981 and 1982 (CNDDDB Occ. #206-210). In 1994, 4 individuals were captured at 2 trapping grids in this area (Scarry et al. 1996).

Two recent surveys have been carried out in the Coolgardie Mesa/Superior Valley area. Trapping at 4 sites in 2002 yielded Mohave ground squirrel captures at each location for a total of 14 adults. A more extensive survey of the Western Expansion Area of Fort Irwin in 2006 and 2007 resulted in 36 individuals captured at 10 of 12 trapping grids. There is clear evidence that Mohave ground squirrels have persisted here for at

Table 3. The estimated sizes of the 4 identified core areas, as measured in square kilometers and in acres. The number of positive Mohave ground squirrel records for the period 1998-2007 is given for each core area.

| Core Area Name | Area (km ²) | Area (acres) | Number of Positive Records |
|-----------------------------------|-------------------------|--------------|----------------------------|
| Coso / Olancha | 452 | 111,690 | 33 |
| Little Dixie Wash | 393 | 97,172 | 44 |
| Coolgardie Mesa / Superior Valley | 516 | 127,450 | 23 |
| Edwards Air Force Base | 311 | 76,761 | 35 |

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least 30 years. Recent surveys have documented that the species was present at 14 of 16 trapping sites and in several cases a substantial number of individuals was captured. This core area is at the eastern edge of the range and several captures or observations of animals that appear to be round-tailed ground squirrels have been recorded here. The potential for hybridization in this area between these 2 closely related species should be carefully investigated.

Edwards Air Force Base Core Area.—A number of surveys have documented the past occurrence of Mohave ground squirrels on Edwards Air Force Base, with most records located to the north, east, and south of Rogers Dry Lake. The earliest observations were made during the period 1973-1977 in the area south of Rogers Dry Lake (CNDDDB Occ. #265). Seventeen Mohave ground squirrels were trapped in 1988 at 3 sites northeast of Rogers Dry Lake (ERC Environmental and Energy Services Company 1989). Additional trapping in 1993 in this same area resulted in captures of many adults and juveniles (Deal et al. 1993, Mitchell et al. 1993). Surveys at Mt. Mesa to the southeast of Rogers Dry Lake yielded 9 Mohave ground squirrels in 1992 (U.S. Fish & Wildlife Service 1993) and over 30 individuals in 1993 (Deal et al. 1993, Mitchell et al. 1993). A total of 13 Mohave ground squirrels were trapped in 1994 at 4 sites in halophytic saltbush scrub to the south and southwest of Rogers Dry Lake (Buescher et al. 1995). The species was recorded at 4 additional locations to the east of Rogers Dry Lake during the period 1981-1991.

Recent field studies have clearly delineated a core area on Edwards Air Force Base, with all Mohave ground squirrel records since 2000 localized to the east and south of Rogers Dry Lake. Trapping surveys were conducted at 19 grids in this area during the period 2000-2005, with a total of 29 adults and 4 juveniles captured at 8 of the study sites (Vanherweg 2000, Leitner 2003, Air Force Field Test Center 2004 and 2005, Leitner 2008). Although no captures were recorded at the 8 grids south of Rogers Dry Lake in 2005, Mohave ground squirrels are known to be present here, based upon 6 incidental observations. Mohave ground squirrel populations have been known in this core area for over 30 years and the large numbers of recent records demonstrate that the species is still well-distributed here. To date, this is the only core area known to exist in the southern part of the range.

Connectivity between Core Areas

The 4 core areas are isolated from each other by distances ranging from 48-80 km. It will be an important conservation goal to ensure sufficient connectivity between them to allow gene flow. Figure 6 shows the

locations of the core areas with possible habitat corridors illustrated.

The potential corridor between the Coso/Olancha core area and Little Dixie Wash follows a narrow strip of public land between the Sierra escarpment and the boundary of China Lake NAWS. It is not clear that this corridor is effective because of its minimal width (1-4 km) and because there is no firm evidence that it is currently occupied. There may well be an alternative corridor through China Lake NAWS, but the U.S. Navy cannot guarantee permanent protection and, again, there is no proof that continuous Mohave ground squirrel populations exist here.

Connectivity between the Little Dixie Wash core area and Edwards Air Force Base is most likely to be achieved by protection of a north-south habitat corridor along US Highway 395. This linkage appears to provide the highest quality habitat connection between these 2 core areas. It would also help to provide connectivity among other known populations in the Ridgecrest area, the DTNA, Pilot Knob, and the Boron region. There are no recent Mohave ground squirrel records along much of this corridor, so it is not clear that it is currently occupied.

The most effective corridor linking the Coolgardie Mesa/Superior Valley core area with other populations is probably thorough the Pilot Knob region. This connection is relatively short and crosses apparently good quality habitat. Although the most direct route is across a corner of the China Lake NAWS, public lands just to the south could also provide connectivity. An alternative linkage would be to the southwest toward Edwards Air Force Base across the broad valley centered on Harper Dry Lake. However, this route is lower in elevation, receives less rainfall, and habitat here is of lesser quality.

The lack of data concerning the existence or status of Mohave ground squirrel populations in these potential corridors is a serious problem. While these routes may seem geographically appropriate in providing linkages between populations, it will be important to conduct field studies to determine whether or not they are actually occupied.

MANAGEMENT RECOMMENDATIONS

The database of Mohave ground squirrel records that has been assembled for this analysis should be maintained by CDFG or another suitable public agency and made available for on-line access by interested researchers, agency staff, consultants, and conservation organizations. An interactive mapping system should be developed in conjunction with the database, so that

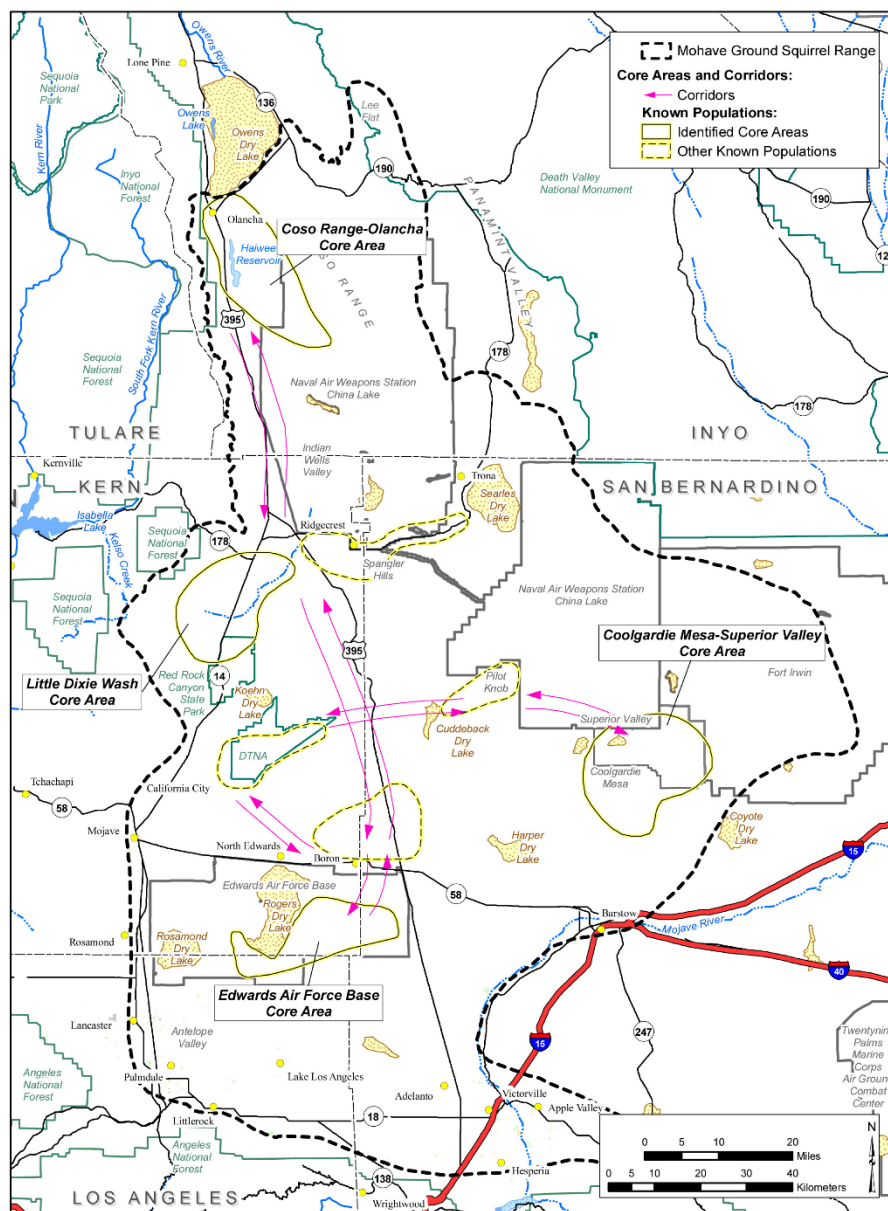


Figure 6. Map of potential habitat corridors that may provide connectivity between identified core areas and other known Mohave ground squirrel populations.

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users could obtain map displays of areas of interest. As recommended by Brooks and Matchett (2002), a system should be developed to collect both positive and negative data on a continuing basis from biologists, agency staff, and consultants. It would be desirable to issue an annual report with appropriate maps to provide updated information on Mohave ground squirrel occurrences.

It is clear that additional field surveys are urgently needed to provide a more comprehensive picture of Mohave ground squirrel occurrence and status throughout its range. It is also clear that surveys to date have been seriously inadequate in documenting patterns of Mohave ground squirrel distribution because trapping sites have for the most part not been selected according to a randomized scheme. In the absence of a randomized sampling procedure, the results of such surveys apply only to the trapping site and cannot be extrapolated to the general region. It is recommended that a range-wide survey be conducted, with sampling locations determined on a randomized basis. Since this would be an expensive and logistically difficult undertaking, it

may be more realistic to develop a survey plan that could be implemented gradually over several years as funding becomes available. The first step could be to establish a sampling frame covering the entire Mohave ground squirrel range, with the area divided into sampling units, perhaps 10 x 10 km or smaller. When a survey is planned for a particular region, trapping grids could be sited in sampling units chosen at random. This system would be quite flexible, since it could be implemented at different scales as appropriate for the purposes of the sponsoring organization. It is recommended that the Mohave Ground Squirrel Technical Advisory Group develop such a range-wide randomized sampling plan and submit it to the CDFG, BLM, and military installations for consideration.

It appears to be of critical importance to acquire more data concerning the status of the species in the northern and central parts of its range (Fig. 7). Surveys should be carried out on both the north and south ranges of China Lake NAWS, on Fort Irwin, and along the corridor north from EAFB to Ridgecrest. There has

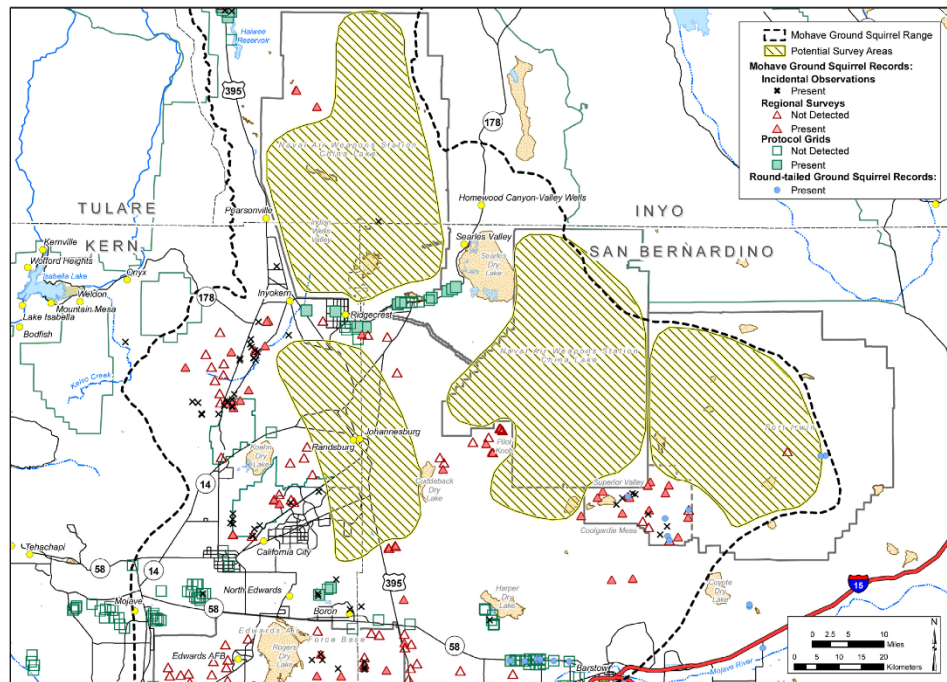


Figure 7. Potential survey areas in the northern and central portions of the Mohave ground squirrel range, showing their geographic relationship to survey efforts during the period 1998-2007.

been little or no sampling during the period 1998-2007 in these 4 extensive areas. A careful study plan should be developed to ensure adequate survey coverage within each area.

It is also recommended that field surveys be conducted in key areas within the southern range of the species in order to determine whether viable populations still remain outside of EAFB (Fig. 8). The trapping surveys could focus on public lands, but a serious attempt should be made to obtain permission for surveys on private lands as well. Because of the pace of development within the southern portion of the Mohave ground squirrel range, this exploratory work needs to be carried out with urgency.

The region southwest of the town of Mojave was identified in the West Mojave Plan (BLM 2003) as the Kern County Study Area. The West Mojave Plan recommended that Mohave ground squirrel trapping surveys be conducted here on public lands. The possibility was left open that the boundary of the Mohave

Ground Squirrel Conservation Area could be modified to include these public lands if justified by survey results. A number of protocol trapping surveys have recently been carried out on private land in this area in connection with proposed wind energy projects. Although no Mohave ground squirrels have been trapped thus far, there have been 2 reported visual detections. It is recommended that additional trapping surveys be authorized on both public and private property, especially in areas that have not yet been investigated.

More information is needed about the relationship between the Mohave ground squirrel and its sibling species, the round-tailed ground squirrel. There are recent reports of round-tailed ground squirrel occurrences well inside the historic Mohave ground squirrel range to the west of Barstow and in the Western Expansion Area of Fort Irwin. Round-tailed ground squirrels seem well-adapted to land disturbance in agricultural areas and on the outskirts of towns. It is possible that hybridization is occurring where the 2 species come in contact. It is

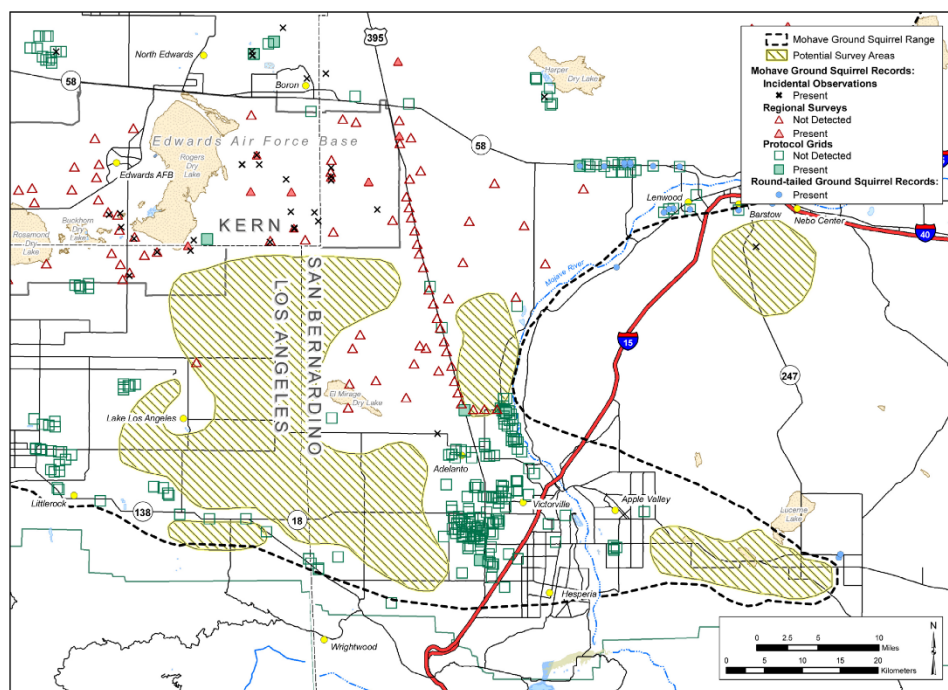


Figure 8. Potential survey areas in the southern portion of the Mohave ground squirrel range, showing their geographic relationship to survey efforts during the period 1998-2007.

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recommended that surveys be carried out to determine the current eastern limits of the Mohave ground squirrel range and establish a baseline so that future westward movement of round-tailed ground squirrels could be detected. It is also recommended that genetic studies be undertaken in the contact zone to investigate the extent of hybridization where the 2 species co-occur.

Although trapping is the most effective method of identifying areas that support Mohave ground squirrel populations, it is recommended that certain modifications of current trapping procedures be tested. Trained wildlife dogs could be used to screen large areas and help focus trapping efforts on the most promising sites. Most trapping efforts to date have used large 100-trap grids. It would be of interest to try other trap configurations, such as more numerous small grids (for example, arrays of 20 traps) and long (>1000 meter) linear transects. Finally, such alternative trap configurations could be used in combination with adaptive cluster sampling (Thompson et al. 1998), which would allow for increased effort adjacent to a sampling unit where a Mohave ground squirrel is detected.

It is essential to protect BLM lands within the Mohave Ground Squirrel Conservation Area by enforcing the 1% limitation on ground disturbance (Fig. 1) called for under the West Mojave Plan (BLM 2005). In addition, acquisition of private lands that are included within the boundaries of the Conservation Area should be pursued aggressively, especially land that is included within known core areas. Finally, there may be important Mohave ground squirrel populations outside the Conservation Area that could be protected by acquisition of private lands and careful management of BLM lands. The area stretching from the DTNA southeast toward Boron may be a good example of such a conservation opportunity.

ACKNOWLEDGMENTS

This review was funded by Edwards Air Force Base through a subcontract with Tetra Tech, Inc. I am very grateful to Shannon Collis and Donald Clark for their support and guidance throughout this project. Carrie Munill provided outstanding assistance with the GIS mapping effort. A number of biologists generously contributed their data, including Mark Allaback, Patrick Kelly, Tom Kucera, David Laabs, Denise LaBerteaux, Steven Myers, Michael O'Farrell, William Vanherweg, and Ryan Young. The following agencies and organizations gave permission to include data collected in studies that they sponsored: California Department of Fish and Game, California Department of Parks and Recreation, California Department of Transportation, Desert Tortoise Preserve Committee, Edwards Air Force Base, Fort Irwin, and US Bureau of Land Management.

I greatly appreciate the helpful comments on the manuscript by B. Cypher, J. Harris, and 1 anonymous reviewer.

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APPENDIX 1
UNPUBLISHED REPORTS OF REGIONAL
TRAPPING STUDIES
CONDUCTED DURING THE PERIOD 1998-2007

- Air Force Flight Test Center. 2004. Inventory for Presence of Mohave Ground Squirrel at Edwards Air Force Base, California. 26 pp. + appendices.
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- Starr, Michael J. 2001. Population Distribution and Abundance of Antelope Ground Squirrels (*Ammospermophilus leucurus*) and Mohave Ground Squirrels (*Spermophilus mohavensis*), in the Western Mojave Desert, Spring 2001. 9 pp. + appendix.
- Starr, Michael J. 2006. Population Distribution and Abundance of Antelope Ground Squirrels (*Ammospermophilus leucurus*) and Mohave Ground Squirrels (*Spermophilus mohavensis*), in the Western Mojave Desert, Spring 2006. 10 pp. + appendix.
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ATTACHMENT B: 2019 CDFW Mojave Ground Squirrel Conservation Strategy (Figure 1)

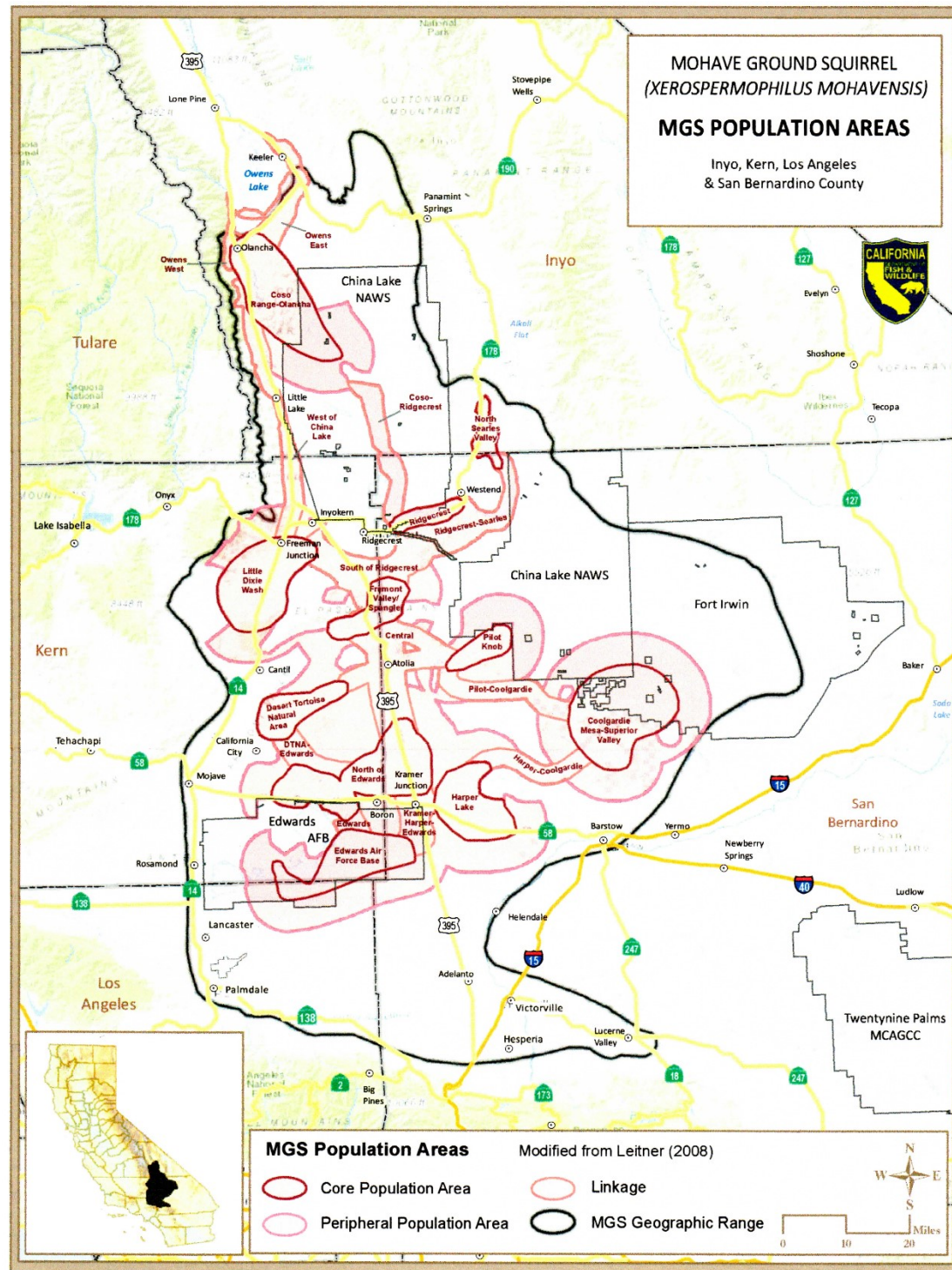


Figure 1. MGS population areas (Source: Modified from Leitner, 2008a)

ATTACHMENT C:

The Identification, Conservation, and Management of Estuarine and Marine Nurseries for Fish and Invertebrates (Beck MW, Heck KL, Able KW, Childers DL and others (2001))

The Identification, Conservation, and Management of Estuarine and Marine Nurseries for Fish and Invertebrates

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Nearshore estuarine and marine ecosystems—e.g., seagrass meadows, marshes, and mangrove forests—serve many important functions in coastal waters. Most notably, they have extremely high primary and secondary productivity and support a great abundance and diversity of fish and invertebrates. Because of their effects on the diversity and productivity of macrofauna, these estuarine and marine ecosystems are often referred to as nurseries in numerous papers, textbooks, and government-sponsored reports (Boesch and Turner 1984, NRC 1995, Butler and Jernekoff 1999). Indeed, the role of these nearshore ecosystems as nurseries is an established ecological concept accepted by scientists, conservation groups, managers, and the public

A BETTER UNDERSTANDING OF THE HABITATS THAT SERVE AS NURSERIES FOR MARINE SPECIES AND THE FACTORS THAT CREATE SITE-SPECIFIC VARIABILITY IN NURSERY QUALITY WILL IMPROVE CONSERVATION AND MANAGEMENT OF THESE AREAS

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and cited as justification for the protection and conservation of these areas. Nonetheless, the nursery-role concept has rarely been stated clearly, even in papers that purport to test it. This ambiguity hinders the effectiveness of the nursery-role concept as a tool for conservation and management. We seek to redress that ambiguity by briefly tracing the history of the concept, developing a clear hypothesis with testable predictions, and discussing how this work can focus efforts in research, conservation, restoration, and management.

History of the nursery-role concept

The nursery-role concept was first applied nearly a century ago to motile invertebrates and fishes with complex life cycles, in which larvae are transported to estuaries, metamorphose, grow to subadult stages, and then move to adult habitats offshore. Gunter (1967) traces this idea to work on blue crabs on the Atlantic coast of the United States (Hay 1905), penaeid shrimp on the Gulf of Mexico coast, and finfish on both of these coasts (Hildebrand and Schroeder 1928). The concept became so pervasive that it has been termed a "law" (Gunter 1967). For example, Deegan (1993, p. 74) states that "estuarine fish faunas around the world are dominated in numbers and abundance by species which move into the estuary as larvae, accumulate biomass, and then move offshore."

In early papers the estuary as a whole was considered to be the nursery. In subsequent works, however, the focus shifted to specific areas within estuaries as nurseries, especially wetlands (herein marshes and mangrove forests) and seagrass meadows, because evidence suggested that they supported much greater densities of organisms than adjacent unvegetated (i.e., without macrophytes) substrates (Williams 1955, Hutchings and Reher 1974, Turner 1977, Orth et al. 1984, Minello 1999). We concentrate on seagrass meadows and wetlands because most research to date has addressed their potential to serve as nurseries. Examples are drawn from other ecosystems when possible and we note that the potential nursery value of some of them, for example oyster reefs, has not received due recognition. Throughout the paper, the term *ecosystem* is used to identify characteristic assemblages of plants and animals (e.g., marshes or oyster reefs). The term *habitat* refers to the area used by a species, with modifiers added to identify the particular habitats used by an animal. For example, the blue crab, *Callinectes sapidus*, has a seagrass habitat and a marsh habitat, which refer to particular portions of seagrass and marsh ecosystems, respectively, used by the crab.

We also focus on the direct effects of ecosystems on the productivity of individual species as opposed to their contributions to the productivity of coastal oceans. Seagrass meadows and wetlands have been identified as nurseries in part because they export vast quantities of carbon, nitrogen, and phosphorus to coastal food webs. This export may occur through the direct transfer of animal biomass via movement of individuals, predation, or outwelling of dissolved and particulate organic matter (Teal 1962, Nixon 1980, Deegan 1993, Lee 1995,

Childers et al. 2000). This transfer of productivity from coastal ecosystems to food webs is undoubtedly important. Nonetheless, there is a separation in the conceptual underpinnings and testing of hypotheses about the effects of ecosystems on the productivity of individual species versus their effects on the productivity of estuaries and coastal oceans in general. An analysis of these effects is beyond the scope of this paper, but they will be addressed in a future work.

Most studies of the nursery-role concept have examined the effects of seagrass meadows or wetlands on either the density, survival, or growth of juveniles on the species' movement to adult habitats (Figure 1; Heck et al. 1997, Butler and Jernakoff 1999, Minello 1999). Some studies make direct comparisons of these parameters among the habitats used by a species (Weinstein and Brooks 1983, Sheridan 1992, Jenkins and Wheatley 1998), but such comparisons are often limited to vegetated versus unvegetated habitats (Edgar and Shaw 1995, Gray et al. 1996). Generally, an area has been called a nursery if a juvenile fish or invertebrate species occurs at higher densities, avoids predation more successfully, or grows faster there than in a different habitat.

Of all the studies on the nursery-role concept, most have focused on the effects of seagrass meadows or wetlands on an animal's density. The evidence usually indicates that the density of fish and invertebrates is higher in vegetated than in unvegetated habitats (for reviews see Orth et al. 1984, Heck et al. 1997, Able 1999, Minello 1999). Direct comparisons of an animal's abundance between mangrove forests and other habitats are rare (Sheridan 1992). There are also difficulties with these comparisons, because different sampling methods usually are used to estimate densities inside and outside of mangrove forests and frequently samples are only collected in areas adjacent to mangrove forests rather than directly within the flooded forest.

The few studies that have focused on differences in juvenile survival among wetlands, seagrass meadows, and other areas indicate that survival of a species is generally greater in vegetated than in unvegetated habitats (Orth et al. 1984, Heck and Crowder 1991, Able 1999). Even fewer studies have focused on the effects of wetlands and seagrass meadows on the growth of fish and invertebrates (Heck et al. 1997, Phelan et al. 2000). In seagrass meadows, evidence regarding growth is, surprisingly, equivocal. Only about half of the studies report that the growth rate of individuals is higher in seagrass habitats than in adjacent habitats (Heck et al. 1997).

Finally, only a handful of studies have attempted to determine whether the juveniles of a species move successfully from putative nursery habitats to adult habitats (Costello and Allen 1964, Deegan 1993, Gillanders and Kingsford 1996, Gillanders 1997, Fry et al. 1999). The evidence that supports successful movement of seagrass- or wetland-associated juveniles to adult habitats is largely indirect (Eggleston 1995), both because movement data are difficult to obtain and because there has been a dearth of communication between benthic ecologists and fisheries biologists.

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Figure 1. Examples of field experiments and observations used to assess whether some habitats serve as nurseries. (a) A drop trap used to compare density between marsh and nearby unvegetated habitats. (b) A tethered shrimp used to assess differences in survival between sand, seagrass, and marsh habitats. (c) Cages used to examine shrimp growth between marsh and unvegetated habitats. (d) A juvenile summer flounder, *Paralichthys dentatus*, being injected subcutaneously with a nontoxic acrylic paint marker to examine movement patterns.

There is growing recognition that there are exceptions to the nursery-role concept. For example, few commercially important species of fish and invertebrates appear to rely exclusively on seagrass meadows in coastal waters of Massachusetts (Heck et al. 1995) or New Jersey (Able and Fahay 1998). Instead, most of these species use seagrass meadows opportunistically but can survive well in unvegetated areas. Edgar and Shaw (1995) reported that seagrass beds in southern Australia were not always better nurseries than nearby unvegetated substrates. A study on the labrid Australian blue groper, *Achoerodus viridis*, indicated that recruits to the offshore adult population came primarily from young that settled in offshore rocky reefs, not from the abundant young in inshore seagrass beds (Gillanders and Kingsford 1996). A recent planning document produced for the Australian Fisheries Research Development Corporation concluded that there was very little strong evidence that Australian seagrass provided critical nursery habitat for the majority of Australian finfish species (Butler and Jernakoff 1999).

That the evidence about the role of certain ecosystems as nurseries is sometimes contradictory is not surprising—there are exceptions to any broad ecological concept. However, much of the disagreement about evidence that sup-

ports or refutes the nursery-role concept is exacerbated by the fact that the nursery-role concept does not have a clearly defined hypothesis, and therefore it has been difficult to test directly (Edgar and Shaw 1995, Gillanders 1997).

A nursery-role hypothesis

The underlying premise of most studies that examine nursery-role concepts is that some nearshore, juvenile habitats contribute disproportionately to the production of individuals that recruit to adult populations. From this premise, we have developed a hypothesis from which clear and testable predictions can be made: A habitat is a nursery for juveniles of a particular species if its contribution per unit area to the production of individuals that recruit to adult populations is greater, on average, than production from other habitats in which juveniles occur.

The ecological processes operating in nursery habitats, as compared with other habitats, must support greater contributions to adult recruitment from any combination of four factors: (1) density, (2) growth, (3) survival of juveniles, and (4) movement to adult habitats (Figure 2). A general null hypothesis is that there is no difference in the nursery value (i.e., production of individuals that recruit to adult populations per

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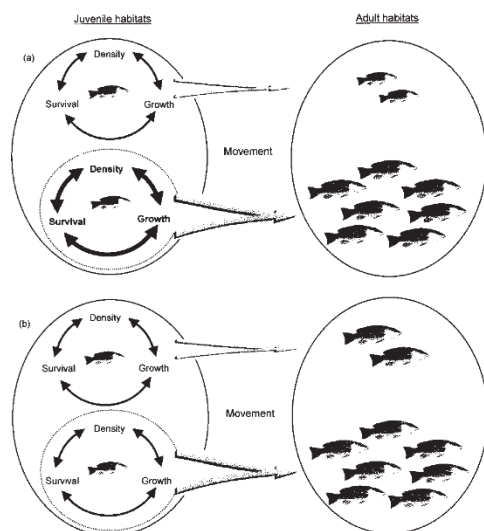


Figure 2. A representation of the factors operating in juvenile and nursery habitats. The thickness of the arrows indicates the relative contribution from each factor to the recruitment of adults. A nursery habitat (dashed oval) supports a greater than average combination of increased density, survival, and growth of juveniles and movement to adult habitats. (a) All four factors are greater in the nursery versus other juvenile habitats. (b) Only one of the four factors, in this case movement, is greater in the nursery versus other juvenile habitats.

unit area of juvenile habitat) of different juvenile habitats for a given species.

Considerations for tests of the nursery-role hypothesis

There are a number of key considerations on the species, habitats, and variables that should be accounted for when testing the nursery-role hypothesis. These considerations have frequently been overlooked in the past.

The nursery-role hypothesis focuses on a particular set of life history strategies—that is, on those strategies where there is a separation between juvenile and adult habitats (Figure 3). The original literature on nurseries focused on an idealized or classic life history strategy: Juveniles grew up in nearshore or estuarine habitats and then undertook rapid, directional movement to completely different offshore adult habitats (Figure 3a). The gag grouper (*Mycteroperca microlepis*), for example, fit this classic life history strategy (Koenig and Coleman 1998). However, many other species with substantial overlap in juvenile and adult habitats have historically been thought to use nurseries. In blue crabs, for example, juveniles and adults often occupy the same habitats, but females make a directed movement (usually to the

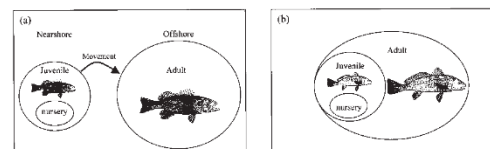


Figure 3. Relationship between juvenile, nursery, and adult habitats. The square represents all habitats. The ovals represent the portions of habitats used during juvenile and adult stages. Nursery habitats are a subset of juvenile habitats. (a) Classic concept of species that have nursery habitats. (b) General concept of species that have nursery habitats. There can be overlap in the habitats that juveniles and adults use, but there must be some movement to nonjuvenile habitats for a species to be considered to have a nursery habitat. This movement is often associated with reproduction or an ontogenetic habitat shift.

mouths of estuaries) to nonjuvenile habitats to release eggs (Orth and van Montfrans 1990). Some species do not move directly from juvenile to adult habitats but move gradually between them (e.g., spiny lobsters), and they also are considered to have nursery habitats.

We suggest that species must have at least some disjunction between juvenile and adult habitats to be considered to have nursery habitats (Figure 3b), and in most of these species, movement to nonjuvenile habitat is associated with reproduction. There are many other life history strategies, of course—this hypothesis does not imply that seagrass meadows, for example, do not have important effects on species that spend their entire life there. These other life history strategies, however, do not fit the nursery-role hypothesis. Based on our definition, taxa that do not have nurseries per se include, for example, bay scallops (*Argopecten irradians*), killifish (*Fundulus*), bay anchovy (*Anchoa mitchilli*), and amphipods. Examples of taxa that do have nurseries are clawed lobster (*Homarus americanus*), eels (*Anguilla*), red drum (*Sciaenops ocellatus*), gag grouper, blue groper, pink snapper (*Pagrus auratus*), luderick (*Girella tricuspidata*), tarwhine (*Rhabdosargus sarba*), blue crabs, brown shrimp (*Farfantepenaeus aztecus*), flounder (*Paralichthys* spp.), pinfish (*Lagodon rhomboides*), striped mullet (*Mugil cephalus*), and gray snapper (*Lutjanus griseus*).

The nursery role of habitats must be compared on a unit-area basis. Even if a habitat is small in area, it is an important nursery habitat if it produces relatively more adult recruits per unit of area than other juvenile habitats used by a species. This distinction is important in conservation and management, where priorities must be set for limited funding and effort. It is more important to conserve, abate the loss, restore, or otherwise manage habitats that contribute disproportionately to the production of adults. This need is even more pressing if these habitats are relatively uncommon.

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It is possible that common habitats may make important contributions to the recruitment of adults even if the density of individuals per area is low, simply because the habitats are widespread. We predict, however, that there will be few cases where habitats that have lower densities and often lower survival and growth rates of individuals will make significant contributions to adult recruitment simply because they are widespread. And if these habitats do make significant contributions solely because of their large areal coverage, they will be important juvenile habitats, but not nurseries per se.

A definitive test of the nursery-role hypothesis requires a comparison among all habitats that juveniles use (Figure 4). Comparisons among putative nursery habitats have usually involved only vegetated and unvegetated habitats, even though individual species may use many different habitats (Minello 1999). Thus, seagrasses or wetlands may seem less important as nurseries in regions where alternative habitats are used successfully. For example, in bays in southern Australia and in the northeastern United States, a species may be found in many habitats (e.g., cobble, rocky reef, oyster reef, kelp, sandy or muddy bottom) in addition to its marsh and seagrass habitats (Ward et al. 1999). To determine which, if any, habitats serve as nurseries, all of a species' juvenile habitats should be surveyed.

Nursery habitats are a subset of juvenile habitats. Any habitat that makes a greater than average contribution to the recruitment of adults should be considered a nursery habitat. Thus, some portions of juvenile habitats will be nurseries, but not all juvenile habitats can be nurseries (Figure 3). Previously, there has been little discussion of the quantitative contribution that a habitat must make before it is considered a nursery. In most tests, however, a habitat was considered a nursery if some parameter (usually density) was statistically significantly greater in that habitat than in another. This usage implies that any habitat with a greater than average contribution to adult recruitment should be considered a nursery. Juvenile habitats that are found not to be nurseries can and often do contribute individuals to adult populations, but they make a less than average contribution when compared with other habitats (Figure 4). If many habitats are examined, it should be possible to identify and focus on those that make the greatest contribution to adult recruitment, that is, the best nursery habitats.

The movement of individuals from juvenile to adult habitats must be measured. There are very few studies on movement patterns, and this is a vital missing link in our understanding of nurseries. Movement of individuals is one of the most difficult variables to measure in ecology. Fortunately, vast improvements in technology—archival data loggers, stable isotopes, genetic markers, and otolith microchemistry—allow researchers to track and infer movements (Gillanders and Kingsford 1996, Thorrold et al. 1998, Fry et al. 1999).

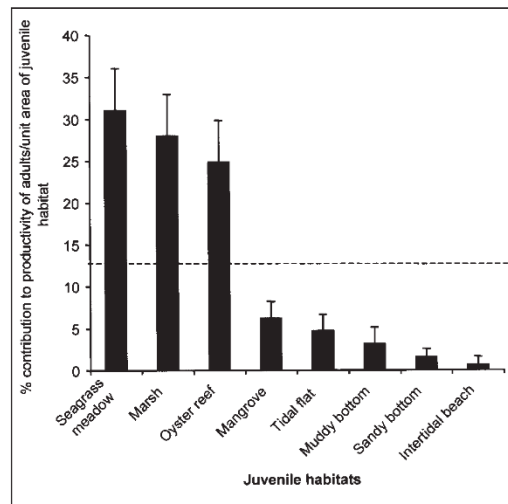


Figure 4. A hypothetical comparison of the nursery value of several different habitats. The dashed line represents the average percentage productivity of adults per unit area from all the juvenile habitats. In this example seagrass meadows, marshes, and oyster reefs are nursery habitats.

The total biomass of individuals recruiting to adult populations is the best single measure of the contribution from juvenile habitats. The nursery habitats for a species are those that are the most likely to contribute to future populations. This contribution should be a function of both the size and number of individuals that recruit to adult populations, because these variables affect survival, growth, and reproductive success in the adult habitats. Total biomass (i.e., production) of individuals recruiting to adult populations should be the best integrative measure of this potential contribution from juvenile habitats to future generations.

Examinations of the density of juveniles among habitats do not provide a conclusive test of the nursery-role hypothesis. In the overwhelming majority of studies, a habitat is suggested to be a nursery largely because it supports high densities of juveniles relative to another habitat. It is assumed that higher juvenile densities will lead to a greater recruitment to adult populations. Although a habitat may support high densities of juveniles, if these individuals never reach adult populations, then that habitat does not function as a productive nursery. In most studies the unstated premise has been that, all else being equal, habitats with higher densities of juveniles are likely to make a greater contribution to the production of adults than habitats with lower densities of juveniles. This correlation, which is rarely tested, may hold in many cases, but there are likely to be important exceptions. For example, some sites may be well

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placed to receive larval influx, but these could be sites where juveniles grow slowly or where movement to adult habitats is risky or difficult (e.g., there are no adult habitats nearby or there is particularly intense predation; Lipcius et al. 1997, McBride and Able 1998). Density is only one of four factors that must be considered to determine whether a habitat serves as a nursery.

It also is not sufficient to measure how long individuals spend in nursery habitats to determine whether that habitat is a nursery. That is, the duration of occupancy is important only inasmuch as it contributes to a greater combination of survival and growth of the individuals that leave the nursery habitat.

Factors that contribute to site-specific variation in nursery value

The nursery value of seagrass meadows, wetlands, and other ecosystems may vary geographically. For example, recent analyses suggest that seagrass meadows in the tropical Caribbean are more important as nurseries than they are in the Indo-Pacific region (Williams 1991); other analyses have found seagrass meadows more important as nurseries in the United States than in Australia (Edgar and Shaw 1995, Butler and Jernakoff 1999, Ward et al. 1999). Within the United States, seagrass meadows in warm temperate regions may serve as better nurseries than those in cool temperate regions (Orth and van Montfrans 1990, but see Grant and Brown 1998). Marshes in the Gulf of Mexico are suggested to be more important as nurseries than marshes in the US South Atlantic (Minello 1999).

This potential geographic variation is a source of contention about the importance of nurseries in general. Much of the apparent discrepancy in the importance of nurseries in different regions could be understood, however, by examining factors that contribute to local variation (e.g., within estuaries) in nursery value. For example, even within an estuary there is variation in the nursery value of different seagrass meadows for a species. Factors that can create this site-specific variation in the nursery value of habitats can be grouped into three broad categories: biotic, abiotic, and landscape (Table 1).

Many biotic and abiotic factors can influence the nursery value of habitats for a species (Table 1). For example, Heck and Crowder (1991) found that predation on target species in seagrass beds was lower in more structurally complex beds, which suggests that more complex beds may serve as better nurseries for many species because they increase survivorship. Salinity also appears to have important effects on site-specific variation in the nursery value of habitats. For example, the densities of many species within marshes are highly dependent on salinity (Minello 1999). Larval supply and presettlement processes also can affect the initial density and condition (e.g., size) of juveniles within a habitat (Grimes and Kingsford 1996, Roy 1998). In general, presettlement processes are rarely considered when evaluating how well habitats function

as nurseries; greater attention needs to be paid to their interaction with postsettlement processes.

Landscape-level factors also can affect the nursery value of sites within habitats (Table 1). For example, the relative location of seagrass beds in an estuary can affect the density of fish species; some seagrass beds near the site where larvae enter estuaries have higher densities of fish than similar beds farther up the estuary (Bell et al. 1988). Lipcius and colleagues (1997) suggested that proximity—i.e., relative location of nursery and adult habitats in the Exuma Sound, Bahamas seascape—affects the abundance of adult lobsters by affecting the success of movement between habitats. Relative location, with respect to large water movements such as upwelling or retention zones, has also been shown to strongly influence larval delivery (Roy 1998), thus playing a crucial role in setting initial juvenile densities within a habitat. Irlandi and Crawford (1997) concluded that for pinfish the nursery value of salt marshes was affected by their location relative to seagrass beds: Both the density and growth of pinfish were higher in marshes adjacent to seagrass beds than in marshes adjacent to unvegetated bottom. Several good landscape-scale studies document phenomena that are likely to create variation in the value of nursery habitats, even though they do not specifically address the nursery-role hypothesis. For example, Irlandi (1994) found that rates of predation on clams were higher in more fragmented seagrass beds. Micheli and Peterson (1999) found that densities of macroinvertebrates on oyster reefs were lower where the reefs were next to salt marshes, which harbored blue crab predators. The importance of these factors (Table 1) needs to be better examined, because much of the apparent discrepancy in nursery roles in different regions (across latitudinal gradients or between continents) very likely can be attributed to one or several of these factors operating locally (e.g., within estuaries).

Implications for research, conservation, restoration, and management of nurseries

Throughout the world, the degradation of coastal ecosystems continues at an alarming rate (Hinrichsen 1998). Estuaries may be some of the most degraded environments on

Table 1: Factors that create site-specific variation in nursery value

| Biotic | Abiotic | Landscape |
|-----------------------|-----------------------------|-------------------|
| Larval supply | Water depth | Spatial pattern |
| Structural complexity | Physico-chemical | (e.g., size, |
| Predation | (dissolved O ₂ , | shape, |
| Competition | salinity) | fragmentation, |
| Food availability | Disturbance regime | connectivity) |
| | Tidal regime | Relative location |
| | | (e.g., to larval |
| | | supply, other |
| | | juvenile habi- |
| | | tats, adult habi- |
| | | tats) |

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earth, because they have been focal points for human colonization for centuries (Edgar et al. 2000). Interest in conserving and managing coastal waters is intense and widespread, but funds are limited and must be targeted judiciously. Development of a better nursery-role hypothesis may help researchers identify the habitats and, even more important, the sites within habitats that serve as nurseries for a species, thus focusing efforts in research, conservation, restoration, and management. However, it is not useful to wait for irrefutable evidence of a given area's function as a nursery before action is taken to conserve, manage, or restore it. Rather, it is necessary to err on the side of caution and to act on current knowledge of the potential for a given area to serve as a nursery for some species.

Seagrasses and wetlands have been the focus of most work on nurseries, and in many cases this emphasis is justified. However, improved tests of predictions from the nursery-role hypothesis may show that previously ignored areas also serve as nurseries and therefore should be better conserved and managed (Gray et al. 1996). The question this article addresses is not "Are wetlands and seagrasses important?" There is undeniable evidence of their importance, aside from their potential as nurseries, at many sites. They provide many ecosystem services and serve many important functions (Costanza et al. 1997), stabilizing shorelines, reducing wave impacts, removing suspended solids, recycling nutrients, and adding oxygen to surrounding waters (Short and Wyllie-Echeverria 1996, Costanza et al. 1997, Gosselink et al. 1999). Seagrasses and wetlands are highly productive, and this production enters coastal food webs through many different pathways, not just as fish moving to adult habitats.

The development of the nursery-role concept is similar in some respects to the development of the keystone species concept. There are few rigorous tests of predictions developed from the keystone species concept, and it is difficult to conduct all the experiments that would be necessary to show unequivocally that a keystone species exists (Power et al. 1996). Nonetheless, it would be useful to know what a definitive test would encompass, so that researchers could arrive at the best approximation of it. Although there is no unequivocal test of the keystone species concept, sufficient evidence exists to indicate that some species are likely to be keystone species (Estes and Duggins 1995) and others are not (Elner and Vadas 1990). The situation is much the same for nursery habitats. For example, substantial evidence supports the contention that some seagrasses and wetlands are likely to serve as nurseries (Heck et al. 1997, Butler and Jernakoff 1999, Minello 1999) even if there is no definitive test.

Many practical considerations can help in the testing of predictions from the nursery-role hypothesis. First, more than one factor must be considered. Ideally, all four factors—density, growth, survival, and movement—would be examined in a study of putative nursery habitats, but doing so may be difficult. Nonetheless, researchers cannot continue to be satisfied with single-factor studies in this field. Multifactor ex-

periments are preferred also because they often lead to useful insights about factor interaction.

Second, researchers must consider multiple habitats. Although most species are found in more than one or two habitats, surprisingly few studies make comparisons among more than two potential nursery habitats.

Third, we must attempt to better quantify the movement of individuals between juvenile and adult habitats with all available tools. Refinements in tagging and chemistry will help substantially to identify the sources of individuals that recruit to adult habitats, yet these techniques can be labor intensive and expensive; moreover, they involve more laboratory than field work, which would require a major shift in many research programs. Nonetheless, it should be possible to design simple but elegant field studies to examine the movement of juveniles. It is surprising, for example, that so few studies examine season- and size-specific movements of juveniles out of the mouths of estuaries towards adult habitats (Deegan 1993).

Fourth, although we have focused on direct methods of study in this article, correlative and case study analyses can yield many useful insights. For example, Butler and Jernakoff (1999) reviewed many studies that looked for correlations between inshore habitat loss and offshore fisheries production. These correlative analyses cannot provide strong inference for the existence of nursery habitats, but they do provide relevant observations on potential nurseries at scales that are ecologically and economically important.

Better and more consistent tests of the nursery-role hypothesis will identify nursery habitats. More important, they will reveal which factors create site-specific variation within habitats in the production of juveniles that recruit to adult populations. These tests should also provide a better indication of the species that depend on particular nursery habitats. Conservation and management organizations now commonly consider all seagrasses and wetlands as nurseries. These broad declarations may be useful for generating public interest, but they hinder the actual work that needs to be accomplished by these groups because the statements lack focus. A clearer understanding of the habitats that serve as nurseries for species, and the factors that make some sites more valuable as nurseries, will allow more efficient use of limited money, time, and effort in conservation and management. Not all oyster reefs, cobble, or wetlands are created equal. If it were known, for example, that for some species the best seagrass, marsh, or mangrove nurseries were large areas near sources of larval influx and in close proximity to adult habitats, then efforts in habitat conservation and management aimed at preserving or restoring nurseries could be more judiciously invested in those types of sites.

Some of this information is or should be available, but it has not been applied specifically to the identification of the habitats and the sites within habitats that serve as nurseries. A better understanding and testing of predictions of the nursery-role hypothesis should enable scientists and funding agencies to fill the gaps in our knowledge, help nongovern-

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mental organizations better target their conservation efforts to protect the diversity of species and natural resources, and allow state and federal agencies and fishery management councils to make better regulatory decisions for fisheries management, habitat conservation, habitat restoration, and mitigation.

Acknowledgments

This work was conducted as part of the Nursery Roles Working Group, supported by the National Center for Ecological Analysis and Synthesis, a center funded by the National Science Foundation (grant no. DEB-0072909), University of California, and University of California–Santa Barbara.

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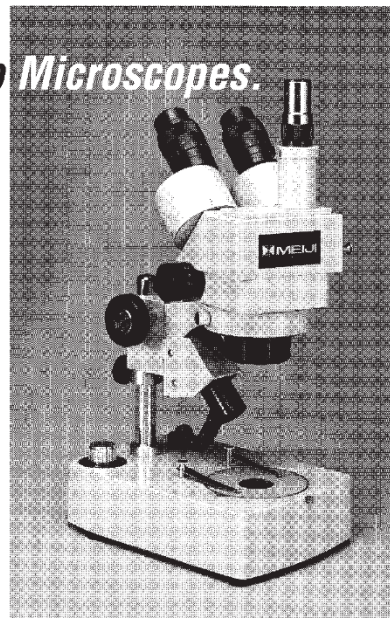
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Comment Letter 52: Barnard, Joe (July 13, 2021)

From: jozeonstage@aol.com
To: [Ronelle Candia](#)
Subject: Solar Fields in Boron
Date: Tuesday, July 13, 2021 6:53:05 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Are you kidding? The best here in Boron is not bearable in the summer as it is. WE CANNOT
ENDURE THIS !!
Take your solar fields ELSEWHERE!!

52-A

Joe Barnard
Boron, CA

Comment Letter 52: Barnard, Joe (July 13, 2021)

Here's another article on the long term global consequences to these solar farms!! Talk about some of the causes for global warming. If I'm understanding this correctly, 1.5 degrees Celcius (the increase in the local temperatures from the solar fields) converts to 34.7 degrees Fahrenheit!! What??!!



52-B

GREENBIZ.COM**Giant desert solar farms might have unintended climate consequences | ...**[Sent from the all new AOL app for Android](#)

Response to Letter 52: Barnard, Joe (July 13, 2021)

- 52-A:** The commenter expresses opposition to the proposed project and indicates his preference for an alternative project location.

This County notes the commenter's opposition to the project for the record. The comments made do not raise a substantive issue on the content of the Draft EIR. Revisions to the Draft EIR are not necessary in response to the comments provided.

- 52-B:** The commenter makes reference to an article (article not provided) and implies that solar development may cause an increase in temperature that may contribute to global warming.

The comments made are speculative and do not raise a substantive issue on the content of the Draft EIR. However, the comments provided have been noted for the record. Revisions to the Draft EIR are not necessary in response to the comments provided.

Comment Letter 53: Patel, Hasmukh (August 8, 2021)

From: [Hasmukh Patel](#)
To: [Ronelle Candia](#)
Subject: Testimony for Kern County Solar Project
Date: Sunday, August 8, 2021 12:28:17 PM

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

To Whom it May Concern,

I am delighted to know that our community has become a candidate for this project. We fully support incorporating solar, and are excited to be a part of something that is environment friendly. I feel that this opportunity will also allow good use of the desert. We have plenty of sunshine to go around, as we are a city with a small population that thrives off the clean air.

53-A

Hasmukh B. Patel

Boron Motel
26881 Twenty Mule Team Road
Boron, CA 93516

(760)-762-5093(Home)
(760)-267-6192(Cell)

Response to Letter 53: Patel, Hasmukh (August 8, 2021)

53-A: The commenter states support of the solar energy project and location within the desert community. The comments made do not raise a substantive issue on the content of the Draft EIR. Revisions to the Draft EIR are not necessary in response to the comments provided.

Comment Letter 54: Richards, Roy (August 1, 2021)

From: [Roy Richards](#)
To: [Ronelle Candia](#)
Subject: Re: Opposition to Aratina 2.0
Date: Sunday, August 1, 2021 10:22:30 PM

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Hello,

An interesting article that the supervisors should consider. Can you forward or should I? Not sure what is appropriate.

<https://foreignpolicy.com/2021/07/14/us-chinese-solar-panels-green-tech-strategy/>

Thank you,
Roy Richards

On Mon, Jul 12, 2021 at 9:37 PM, Ronelle Candia <Candiar@kerncounty.com> wrote:

Good Evening,

Thank you for your comment.

We appreciate your participation in this public process. I wanted to confirm for you that the Planning and Natural Resources Department did receive your comment and it will be included in the public record for consideration.

Should you have any further questions regarding this project, please feel free to contact me directly.

Sincerely,

Ronelle

Ronelle R. Candia

Supervising Planner – Advanced Planning Division

Kern County Planning & Natural Resources Department

[2700 "M" Street, Suite 100](#)

54-A

Comment Letter 54: Richards, Roy (August 1, 2021)

[Bakersfield, CA 93301](#)

Phone: 661.862.8997

Email: CandiaR@KernCounty.com

From: Roy Richards <boronroy1@gmail.com>
Sent: Sunday, July 11, 2021 7:05 PM
To: Ronelle Candia <Candiar@kerncounty.com>
Subject: Opposition to Aratina 2.0

CAUTION: This email originated from outside of the organization. Do not click links, open attachments, or provide information unless you recognize the sender and know the content is safe.

Hello Ronelle,

I am writing to voice my opposition to the Aratina 2.0 project. I have reviewed the EIR posted to the planning department website and this has only strengthened my opposition to this project. Within this report there are a number of troubling items:

- Page 59 (1-17), 84 (1-42); it is indicated that the air quality will be "significant and unavoidable". Since the placement of this project is upwind of our community, this means our town's air quality will be affected. My wife, father and myself all suffer from asthma. The change in air quality could make our homes unlivable for my family. This destabilization of the soil by this project also increases the likelihood of blowing sand and dust. This can lead to traffic accidents due to visibility being obstructed. Both the main road into Boron (Twenty Mule Team Road) and 58FWY are downwind of this project. And when I say downwind, please check prevailing winds, specifically 20+mph. These almost always come from the West and SouthWest.
- Page 64 (1-22), alternate site is dismissed because it would not avoid the environmental damage that is going to occur. This seems invalid because they do not consider use of damaged land. Old farmland or previously developed land would not lead to the same environmental destruction. The real reason this was not considered is because they want to utilize the utility infrastructure in the Boron area. 8 Minute is only concerned with profits. They have an agreement to sell energy to the Silicon Valley and Monterey areas. The land is mostly owned by a large land corporation. Basically all these corporations are sacrificing our town and desert for profit. Our

Comment Letter 54: Richards, Roy (August 1, 2021)

town is a blue collar community with a 35% poverty rate. We are being sacrificed so one of the richest areas in the world can have cheaper electricity.

- Boron is a desert town. The removal of 4000 joshua trees and the only remaining unobstructed horizon with native desert would forever change the feel of the town. This would change the emotional feel of the inhabitants and any potential for tourism.
- The process of clearing this size of land by mowing does not take into account that most of the wildlife is nocturnal and live in burrows. Those animals that are not killed immediately will find themselves without any means of sustenance. They will starve to death.
- There is potential for a migration of animals into the community due to this activity. This wildlife would include rattlesnakes and scorpions. Increase of these wildlife in close proximity of people is a dangerous situation.
- Traffic increase will lead to increased risk for our residents. Many of the entrances to the project are near or in neighborhoods. How would you like to have 1000 construction works and all the materials for a giant solar field going past your home, parks and schools. The roads in Boron are not new. There are significant cracking and structural deficiencies that our current traffic level leads to potholes and buckling on a regular basis. Finally, a large section of the project is South of the railroad tracks. These crossings are heavily travelled by trains and can lead to traffic being backed up to the main road on a regular basis. Now add 1000 construction workers, it does not make sense.

Thank you for the opportunity to share my comments. Please contact me if there are any questions.

Best regards,

Roy Richards

P.O. Box 724

Boron, CA 93596

661-754-9035

Response to Letter 54: Richards, Roy (August 1, 2021)

54-A: The commenter provides reference to an opinion piece (article) addressing supply chains for renewable energy projects. The comments made do not raise a substantive issue on the content of the Draft EIR. Revisions to the Draft EIR are not necessary in response to the comments provided.

Refer also to responses to Letter 47 prepared by the same commenter during the 45-day public review period (Roy Richards, dated July 11, 2021).

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