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**Appendix F**  
**Cultural Resources, Including**  
**Section 106 Consultation**

**OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION**

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(916) 445-7000 Fax: (916) 445-7053  
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June 14, 2011

Reply in Reference To: DOE110407A

Angela Colamaria  
Loan Programs Office  
Environmental Compliance Division  
Department of Energy  
1000 Independence Ave SW, LP-10  
Washington, DC 20585

Re: Topaz Solar Farm, San Luis Obispo County, California

Dear Ms. Colamaria:

Thank you for seeking my consultation regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Department of Energy (DOE) is seeking my comments on the effects the proposed undertaking will have on historic properties.

The project consists of providing a Federal loan guarantee to construct a 550 megawatt photovoltaic solar electricity generating facility in San Luis Obispo County. The loan guarantee also is connected to the upgrade of 35 miles of an existing PG&E transmission line with the construction of four new towers. All other modifications to the Morro Bay-Midway Transmission Line will involve placing new line on existing towers. The transmission line upgrade would only use existing access roads to access and perform modifications. Travel will be restricted to the existing roads to ensure the avoidance of all archaeological sites within the transmission line corridor. The solar array will cover approximately 4100 acres on a 10000 acre property which will require grading and clearing of vegetation. The development would include installation of nine million photovoltaic solar modules within 460 arrays, an electrical substation, switching station, and overhead collector lines, maintenance facilities, a public outreach learning center, 22 miles of access roads, perimeter fencing, and leach field and septic systems for facilities.

The Area of Potential Effects will include the 10,000 acre project site, of which only 4100 will be developed, with an additional 465 acres for the reconductoring portion of the undertaking. The APE will also include the viewshed, although the acreage and exact locations of this portion of the APE have yet to be defined. The APE for the array will include grading as much as 3.5 feet deep in sections, while other cuts are as deep as six feet for the leach field and septic system, and 5.5 feet for vaults for power converter stations and a PV Combining Switchgear. In addition to your letter received April 7, 2011 and continued informal correspondence, you have submitted the following documents as evidence of your efforts to identify historic properties in the APE:

- *Memorandum: Topaz Solar Farm, Response to SHPO Comments on Section 106 Consultation* (Barry Price, Applied Earthworks, May 2011)
- *Archaeological Survey Report for the Carrizo Energy Solar Farm San Luis Obispo County, California* (Reid Farmer, URS, September 2007)
- *Cultural Resources Section of Carrizo Energy Solar Farm Project* (Beverly Bastian and Carol Roland, CEC, 2008)
- Cultural and Paleontological Resources Investigations for the Proposed Topaz Solar Farm, California Valley, San Luis Obispo County (Robert Lichtenstein et al, Applied Earthworks, April 2010)
- Cultural and Paleontological Resources Assessment of the Carrizo-Midway 230 kV Transmission Line Reconductoring Project (Gabriel Roark et al., ICF, May 2010)

The DOE has performed a records search at the Central Coastal Information Center and through their consultants, performed a pedestrian survey of the APE by way of 15 meter transects, identifying a total of 17 resources within the APE. Of these, the DOE determined that 16 resources are not eligible for the NRHP, while the one site that is left unevaluated, CA-SLO-2623, a lithic scatter, will be avoided by the undertaking. The DOE has undertaken consultation with letters sent to the Santa Rosa Rancheria and the Santa Ynez Band of Chumash Mission Indians. No response has been received from the Santa Rosa Rancheria to date. Santa Ynez Tribal Elder's Council contacted the DOE by phone and indicated that it had no concerns with the undertaking, also sending an email on February 22, 2011 and again March 30. The DOE also contacted the Tachi Yokut Tribe and the Tule River Tribe to enter consultation regarding the project; however no response has been received to date. The DOE also contacted all individuals on the NAHC list. Most contacts did not have concerns or only sought further information on the project, or did not comment. Two contacts, Lei Lynn Odom and Mathew Darian Gordon indicated the sacredness of the Area, however Mr. Gordon indicated that the project would not be visible from Painted Rock, a sacred site whose significance has yet to be fully understood, and therefore had no concerns regarding the proposed project. The DOE has determined that there will be no adverse effects to historic properties.

Based on the documentation submitted I have the following comments:

1. I concur with the DOE's determinations that 15 properties (CA-SLO-2624H, -2625H, -2626H, -2627H, -2628H, -2629H, -2630H, -2631H, P-40-041223, the Filos Property, Filos Property II, King Property, the Morro Bay-Carrizo Transmission Line, Carrizo Plain Substation and the Cavanaugh property) are not eligible for the National Register.
2. Rather than concur on the ineligibility of State Highway 58, as the full linear resource may retain integrity beyond the scope of recording for this undertaking, I instead concur that the sections within the project area is a non-contributor to the linear resource's potential eligibility.
3. I concur with the project proponent's approach to assume eligibility of CA-SLO-2623 and avoid the site during the undertaking.
4. I suggest offering the consulting tribes the opportunity to monitor any and all ground disturbing work for this undertaking.

5. Therefore, pursuant to 36 CFR 800.5(c), I recommend a finding of no adverse effects to historic properties, enabling the project to move forward.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the DOE may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact Trevor Pratt of my staff at (916) 445-7017 or at email at [tpratt@parks.ca.gov](mailto:tpratt@parks.ca.gov).

Sincerely,



Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer



## Department of Energy

Washington, DC 20585

October 26, 2010

William Wyatt  
Tribal Administrator  
Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation  
P.O. Box 517  
Santa Ynez, California 93460

**SUBJECT:** Intent to Prepare an Environmental Impact Statement (EIS) in consideration of a Federal loan guarantee for Topaz Solar Farm Project

Dear Mr. Wyatt:

Under Title XVII of the Energy Policy Act of 2005 (EPAAct 2005), the U.S. Department of Energy (DOE) is evaluating whether or not to provide a Federal loan guarantee to Topaz Solar Farms, LLC (Topaz) to support construction of the Topaz Solar Farm Project located in San Luis Obispo County, California (the Project). Based on our review of the currently available information, DOE has determined the appropriate level of analysis to be an EIS under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*).

Topaz proposes to develop the Project on approximately 4,000 acres of land. As proposed, the approximately 550-megawatt electric generation project would include the installation of about nine million photovoltaic solar modules within approximately 437 arrays and associated electric equipment. At full capacity, the Project would generate enough electricity to power an estimated 160,000 California homes annually. Generated electricity would be sold to Pacific Gas and Electric (PG&E) under a long-term power purchase agreement. The Project would be interconnected into PG&E's existing Morro Bay-Midway 230-kilovolt (kV) transmission line, which runs in an east-to-west direction through the site.

The DOE NEPA regulations (10 CFR Part 1021) require DOE to publish in the *Federal Register* a Notice of Intent (NOI) to prepare an EIS. The publication of the NOI serves as the official notification to the host Tribe of NEPA determinations. A copy of the NOI, including the associated Notice of Proposed Floodplain Action, for the proposed Project is enclosed. Our records indicate that the Santa Ynez Band of Chumash Mission Indians has an historic interest in San Luis Obispo County. Accordingly, DOE invites your Tribe to government-to-government consultation, regarding the project, in accordance with Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Part 800) of 1966, as amended. Compliance with Section 106 requires consideration of the effects of a proposed project on those cultural resources that are included in, or eligible for inclusion in, the National Register of Historic Places. The DOE recognizes that the Santa Ynez Band of Chumash Mission Indians may have information on resources in this area and an interest in federal undertakings located in the project area. The



DOE would therefore appreciate any input you can provide in identifying cultural resources, including properties of traditional, religious, or cultural importance that may be affected by the proposed undertaking. The DOE will ensure that any information you provide will remain subject to the confidentiality provisions of the NHPA (Section 304).

Please let us know if you need more information regarding this project, whether you would like to initiate formal government-to-government consultation for this project, or if you wish to identify any issues or concerns that need to be addressed during the NHPA or NEPA review process. You may contact us by phone, letter, or email to let us know of your interest or preference for involvement in this proposed project. The DOE contact representative for the Project is:

Angela F. Colamaria  
U.S. Department of Energy  
Loan Programs Office  
Environmental Compliance Division  
1000 Independence Avenue, S.W., LP-10  
Washington, DC 20585

Direct: (202) 287-5387  
Email: [angela.colamaria@hq.doe.gov](mailto:angela.colamaria@hq.doe.gov)

Ms. Colamaria will also be available for a face-to-face meeting on November 16, 2010, before the Federal scoping meeting. The scoping meeting will be held at the Carrisa Plains Heritage Association Community Center, 10750 Carrisa Highway (Highway 58), Santa Margarita, CA. There will be an open house from 5:00 - 7:00 pm, followed by oral presentations/comments from 7:00 pm - 9:00 pm.

If you have any questions concerning the DOE process to be followed for the review of this project, you can contact Ms. Colamaria (see contact information above), or me at 202-586-7248 or [matthew.mcmillen@hq.doe.gov](mailto:matthew.mcmillen@hq.doe.gov).

Sincerely,



Matthew McMillen  
Director, Environmental Compliance Division  
Loan Programs Office

Enclosure



**Department of Energy**  
Washington, DC 20585

March 10, 2011

Honorable Ryan Garfield  
Chairman  
Tule River Indian Tribe  
Tule River Reservation  
340 N. Reservation Road  
Porterville, CA 93257

**SUBJECT:** Upcoming Publication of Draft Environmental Impact Statement (EIS) in consideration of a Federal loan guarantee for Topaz Solar Farm Project

Dear Chairman Garfield:

Under Title XVII of the Energy Policy Act of 2005 (EPAct 2005), the U.S. Department of Energy (DOE) is evaluating whether or not to provide a Federal loan guarantee to Topaz Solar Farms, LLC (Topaz) to support construction of the Topaz Solar Farm Project located in San Luis Obispo County, California (the Project). Based on our review of the currently available information, DOE has determined the appropriate level of analysis to be an EIS under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*).

Topaz proposes to develop the Project on approximately 4,000 acres of land. As proposed, the approximately 550-megawatt electric generation project would include the installation of about nine million photovoltaic solar modules within approximately 437 arrays and associated electric equipment. At full capacity, the Project would generate enough electricity to power an estimated 160,000 California homes annually. Generated electricity would be sold to Pacific Gas and Electric (PG&E) under a long-term power purchase agreement. The Project would be interconnected into PG&E's existing Morro Bay-Midway 230-kilovolt (kV) transmission line, which runs in an east-to-west direction through the site, as well as portions of Kern County.

A copy of the Notice of Intent to prepare an Environmental Impact Statement (EIS), including the associated Notice of Proposed Floodplain Action, for the proposed Project is enclosed. DOE will be publishing a Draft DEIS in the *Federal Register*, as required by DOE NEPA regulations (10 CFR Part 1021). A copy of the Draft EIS will be forwarded to you when it is published.

Our records indicate that the Tule River Indian Tribe of the Tule River Reservation has an historic interest in San Luis Obispo County. Accordingly, DOE invites your Tribe to government-to-government consultation, regarding the Project. We are also inviting your Tribe to consult in accordance with Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Part 800) of 1966, as amended. Compliance with Section 106 requires consideration of the effects of a proposed project on those cultural resources that are included in, or eligible for



inclusion in, the National Register of Historic Places. The DOE recognizes that the Tule River Indian Tribe of the Tule River Reservation may have information on resources in this area and an interest in federal undertakings located in the project area. The DOE would therefore appreciate any input you can provide in identifying cultural resources, including properties of traditional, religious, or cultural importance that may be affected by the proposed undertaking. The DOE will ensure that any information you provide will remain subject to the confidentiality provisions of the NHPA (Section 304).

Please let us know if you need more information regarding this project, whether you would like to initiate formal government-to-government consultation for this project, or if you wish to identify any issues or concerns that need to be addressed during the NHPA or NEPA review process. You may contact us by phone, letter, or email to let us know of your interest or preference for involvement in this proposed project. The DOE contact representative for the Project is:

Angela F. Colamaria  
U.S. Department of Energy  
Loan Programs Office  
Environmental Compliance Division  
1000 Independence Avenue, S.W., LP-10  
Washington, DC 20585

Direct: (202) 287-5387  
Email: [angela.colamaria@hq.doe.gov](mailto:angela.colamaria@hq.doe.gov)

Ms. Colamaria will also be available for a face-to-face meeting when she is in the San Luis Obispo area for the public meeting regarding the DEIS in the next month. Once a date and time have been set, we will contact you with the details.

If you have any questions concerning the DOE process to be followed for the review of this project, you can contact Ms. Colamaria (see contact information above), or me at 202-586-7248 or [matthew.mcmillen@hq.doe.gov](mailto:matthew.mcmillen@hq.doe.gov).

Sincerely,



Matthew McMillen  
Director, Environmental Compliance Division  
Loan Programs Office

Enclosures



Department of Energy  
Washington, DC 20585

March 10, 2011

Honorable Ruben Barrios  
Chairman  
Tachi Yokut Tribe  
Santa Rosa Rancheria  
P.O. Box 8  
Lemoore, CA 93245

**SUBJECT:** Upcoming Publication of Draft Environmental Impact Statement (EIS) in consideration of a Federal loan guarantee for Topaz Solar Farm Project

Dear Chairman Barrios:

Under Title XVII of the Energy Policy Act of 2005 (EPAct 2005), the U.S. Department of Energy (DOE) is evaluating whether or not to provide a Federal loan guarantee to Topaz Solar Farms, LLC (Topaz) to support construction of the Topaz Solar Farm Project located in San Luis Obispo County, California (the Project). Based on our review of the currently available information, DOE has determined the appropriate level of analysis to be an EIS under the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*).

Topaz proposes to develop the Project on approximately 4,000 acres of land. As proposed, the approximately 550-megawatt electric generation project would include the installation of about nine million photovoltaic solar modules within approximately 437 arrays and associated electric equipment. At full capacity, the Project would generate enough electricity to power an estimated 160,000 California homes annually. Generated electricity would be sold to Pacific Gas and Electric (PG&E) under a long-term power purchase agreement. The Project would be interconnected into PG&E's existing Morro Bay-Midway 230-kilovolt (kV) transmission line, which runs in an east-to-west direction through the site, as well as portions of Kern County.

A copy of the Notice of Intent to prepare an Environmental Impact Statement (EIS), including the associated Notice of Proposed Floodplain Action, for the proposed Project is enclosed. DOE will be publishing a Draft DEIS in the *Federal Register*, as required by DOE NEPA regulations (10 CFR Part 1021). A copy of the Draft EIS will be forwarded to you when it is published.

Our records indicate that the Tachi Yokut Tribe has an historic interest in San Luis Obispo County. Accordingly, DOE invites your Tribe to government-to-government consultation, regarding the Project. We are also inviting your Tribe to consult in accordance with Section 106 of the National Historic Preservation Act (NHPA) (36 CFR Part 800) of 1966, as amended. Compliance with Section 106 requires consideration of the effects of a proposed project on those cultural resources that are included in, or eligible for inclusion in, the National Register of



Historic Places. The DOE recognizes that the Tachi Yokut Tribe may have information on resources in this area and an interest in federal undertakings located in the project area. The DOE would therefore appreciate any input you can provide in identifying cultural resources, including properties of traditional, religious, or cultural importance that may be affected by the proposed undertaking. The DOE will ensure that any information you provide will remain subject to the confidentiality provisions of the NHPA (Section 304).

Please let us know if you need more information regarding this project, whether you would like to initiate formal government-to-government consultation for this project, or if you wish to identify any issues or concerns that need to be addressed during the NHPA or NEPA review process. You may contact us by phone, letter, or email to let us know of your interest or preference for involvement in this proposed project. The DOE contact representative for the Project is:

Angela F. Colamaria  
U.S. Department of Energy  
Loan Programs Office  
Environmental Compliance Division  
1000 Independence Avenue, S.W., LP-10  
Washington, DC 20585

Direct: (202) 287-5387  
Email: [angela.colamaria@hq.doe.gov](mailto:angela.colamaria@hq.doe.gov)

Ms. Colamaria will also be available for a face-to-face meeting when she is in the San Luis Obispo area for the public meeting regarding the DEIS in the next month. Once a date and time have been set, we will contact you with the details.

If you have any questions concerning the DOE process to be followed for the review of this project, you can contact Ms. Colamaria (see contact information above), or me at 202-586-7248 or [matthew.mcmillen@hq.doe.gov](mailto:matthew.mcmillen@hq.doe.gov).

Sincerely,



Matthew McMillen  
Director, Environmental Compliance Division  
Loan Programs Office

Enclosures



**Department of Energy**  
Washington, DC 20585

December 28, 2010

Mr. Dave Singleton  
Native American Heritage Commission  
915 Capitol Mall, RM 364  
Sacramento, CA 95814

Subject: Sacred Lands File Search Request for the Topaz Solar Farm, eastern San Luis Obispo, California

Dear Mr. Singleton:

The Department of Energy is proposing to issue a loan guarantee to the Royal Bank of Scotland to provide funding to Topaz Solar Farms, LLC to develop the Topaz Solar Farm, a nominal 550-megawatt photovoltaic solar energy generating facility. The proposed facility would be developed on disturbed agricultural lands. The project site is within unincorporated eastern San Luis Obispo County, California, approximately two miles north of the community of California Valley and six miles north of the Carrizo Plain National Monument (see attached maps). The project study area includes nearly 10,000 acres of land within the following townships, ranges, and sections (Mount Diablo Base and Meridian):

<u>Township</u>	<u>Range</u>	<u>Sections (all or part)</u>
29S	18E	7, 8, 15, 16, 17, 18, 19, 20, 21, 22, 26, 27, 28, 29, 32, 33, 34, 35
30S	18E	4, 5

The Department of Energy is writing to inform the Native American Heritage Commission of this proposed project and to request a copy of the current Native American contacts list for the area so that we may coordinate with the appropriate tribal leaders. In addition, we are requesting a Sacred Lands File Search to identify areas of traditional importance within the region.

This information can be emailed to [Angela.Colamaria@hq.doe.gov](mailto:Angela.Colamaria@hq.doe.gov) or mailed to the address below:

Angela Colamaria  
U.S. Department of Energy  
Loan Programs Office  
Environmental Compliance Division  
1000 Independence Avenue, S.W., LP-10  
Washington, DC 20585



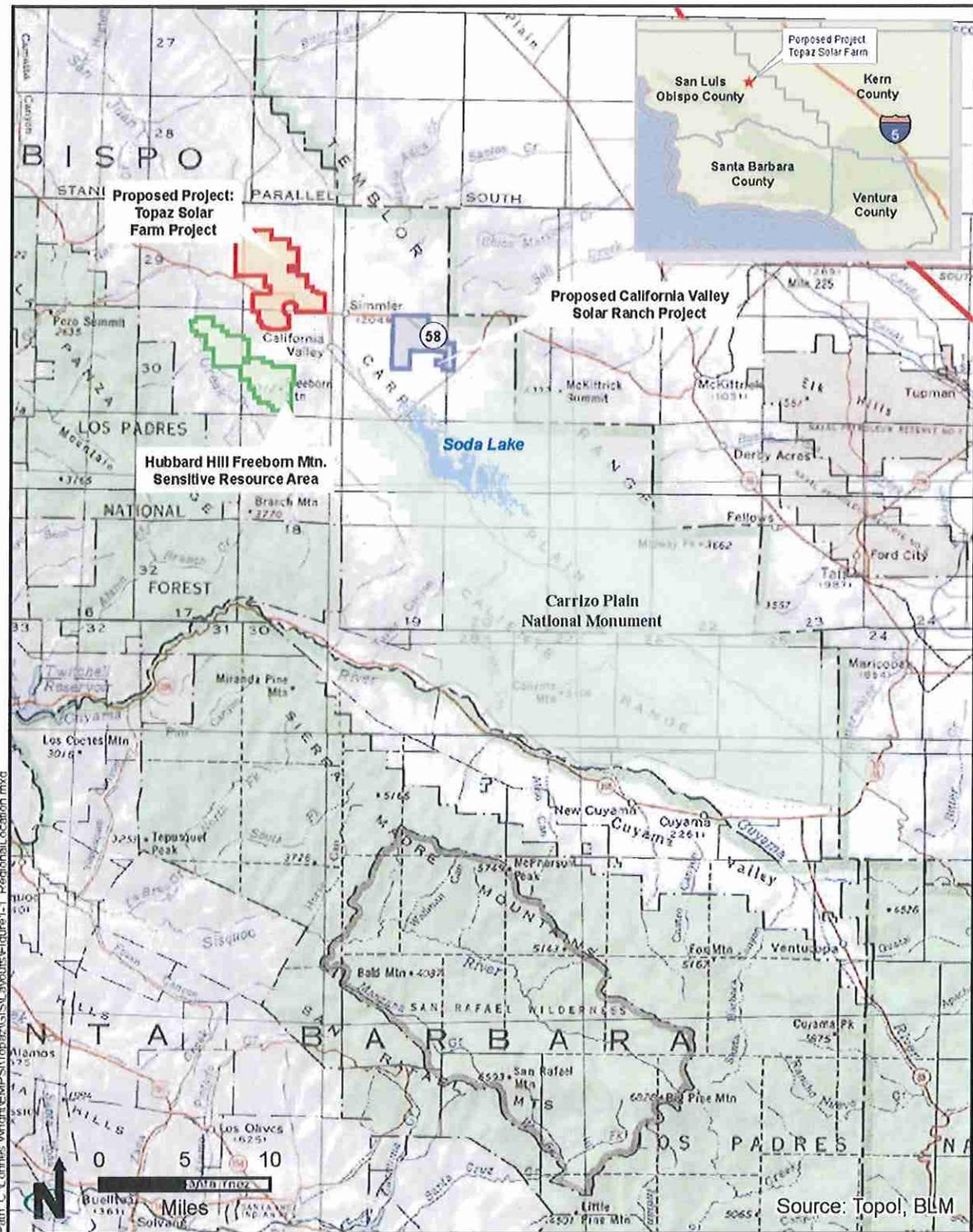
Please feel free to contact me at (202) 287-5387 or via email if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Angi G" followed by a long horizontal flourish.

Angela Colamaria  
NEPA Document Manager

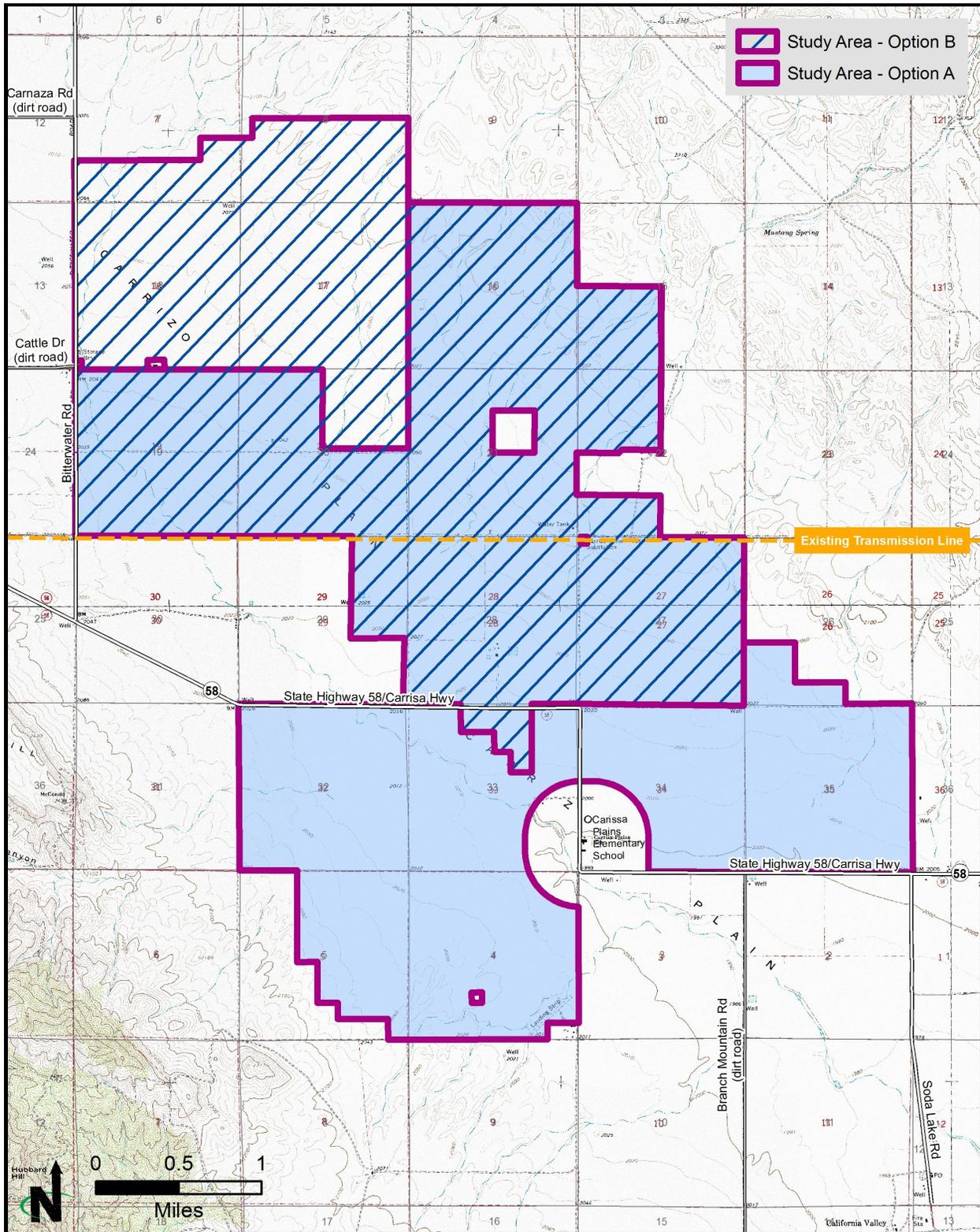
Enclosures: Project Location Maps (2)



### Regional Location Map

Topaz Solar Farm  
San Luis Obispo County, CA

Figure I



**Project Site Map**  
 Topaz Solar Farm  
 San Luis Obispo County, CA

Figure 2

STATE OF CALIFORNIA

Edmund G. Brown Jr. GOVERNOR

## NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
Fax (916) 657-5300  
Web Site www.nahc.ca.gov



January 6, 2011

Angela Colamaria  
U.S. Department of Energy  
Loan Programs Office  
Environmental Compliance Division  
1000 Independence Avenue, S.W., LP-10  
Washington, DC 20585

Sent by Fax: 202-586-7809 and Mail  
Number of Pages: 3

Re: Proposed Topaz Solar Farm; San Luis Obispo County

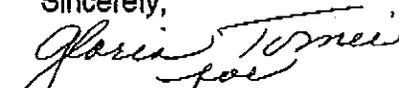
Dear Ms. Colamaria:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

  
Katy Sanchez  
Program Analyst

**Native American Contact List**  
**San Luis Obispo County**  
**January 4, 2011**

**Beverly Salazar Folkes**  
 1931 Shadybrook Drive  
 Thousand Oaks, CA 91362  
 folkes@msn.com  
 805 492-7255  
 (805) 558-1154 - cell  
 folkes9@msn.com

Chumash  
 Tataviam  
 Ferrnandefio

**San Luis Obispo County Chumash Council**  
**Chief Mark Steven Vigil**  
 1030 Ritchie Road  
 Grover Beach CA 93433  
 chelfmvigll@fix.net  
 (805) 481-2461  
 (805) 474-4729 - Fax

Chumash

**Santa Ynez Band of Mission Indians**  
**Vincent Armenta, Chairperson**  
 P.O. Box 517  
 Santa Ynez , CA 93460  
 varmenta@santaynezchumash.  
 (805) 688-7997  
 (805) 686-9578 Fax

Chumash

**Peggy Odom**  
 1339 24th Street  
 Oceano , 93445  
 (805) 489-5390

Chumash

**Barbareno/Ventureno Band of Mission Indians**  
**Julle Lynn Tumamait**  
 365 North Poli Ave  
 Ojai , CA 93023  
 jtumamait@sbcglobal.net  
 (805) 646-6214

Chumash

**Santa Ynez Tribal Elders Council**  
**Adelina Alva-Padilla, Chair Woman**  
 P.O. Box 365  
 Santa Ynez , CA 93460  
 elders@santaynezchumash.org  
 (805) 688-8446  
 (805) 693-1768 FAX

Chumash

**Lei Lynn Odom**  
 1339 24th Street  
 Oceano , CA 93445  
 (805) 489-5390

Chumash

**Randy Guzman - Folkes**  
 655 Los Angeles Avenue, Unit E  
 Moorpark , CA 93021  
 ndnRandy@yahoo.com  
 (805) 905-1675 - cell

Chumash  
 Ferrnandefio  
 Tataviam  
 Shoshone Paiute  
 Yaqui

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7060.6 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Topaz Solar Farm; San Luis Obispo County.

**Native American Contact List**  
**San Luis Obispo County**  
**January 4, 2011**

Coastal Band of the Chumash Nation  
 Vennise Miller, Chairperson  
 P.O. Box 4464 Chumash  
 Santa Barbara CA 93140  
 805-964-3447

Salinan-Chumash Nation  
 Xielolixii  
 3901 Q Street, Suite 31B Salinan  
 Bakersfield , CA 93301 Chumash  
 408-966-8807 - cell

Mona Olivas Tucker  
 660 Camino Del Rey Chumash  
 Arroyo Grande CA 93420  
 (805) 489-1052 Home  
 (805) 748-2121 Cell

Northern Chumash Tribal Council  
 Fred Collins, Spokesperson  
 67 South Street Chumash  
 San Luis Obispo CA 93401  
 fcollins@northernchumash.  
 (805) 801-0347 (Cell)

Matthew Darian Goldman  
 495 Mentone Chumash  
 Grover Beach CA 93433  
 805-748-6913

Frank Arredondo  
 PO Box 161 Chumash  
 Santa Barbara Ca 93102  
 ksen\_sku\_mu@yahoo.com  
 805-617-6884  
 ksen\_sku\_mu@yahoo.com

Santa Ynez Band of Mission Indians  
 Tribal Administrator  
 P.O. Box 517 Chumash  
 Santa Ynez , CA 93460  
 info@santaynezchumash.  
 (805) 688-7997  
 (805) 686-9578 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.6 of the Health and Safety Code, Section 6097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Topaz Solar Farm; San Luis Obispo County.

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**Appendix G**  
**Draft Wildfire Management**  
**Plan**

# **Wildfire Management Plan**

## **Topaz Solar Farm**

San Luis Obispo County  
California



Prepared for

**Topaz Solar Farms, LLC**  
1111 Broadway, 4<sup>th</sup> Floor  
Oakland, CA 94607

by

**BENJAMIN W. PARKER**  
**California Registered Professional Forester #2057**  
4423 Poinsettia Street  
San Luis Obispo, CA 93401  
(805) 540-1901

**January 3, 2010**

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## **Abbreviations and Definitions**

**AC:** Alternating current

**Cal Fire:** synonym for CDF

**CDF:** California Department of Forestry and Fire Protection

**CPUC:** California Public Utilities Commission

**DC:** Direct current

**kV:** Kilovolt (one thousand volts)

**MW:** Megawatt (one million watts)

**MWac:** Megawatt of alternating current

**NFFL:** Northern Forest Fire Laboratory

**O&M:** Operations and Maintenance

**PCS:** Power conversion stations

**PG&E:** Pacific Gas and Electric Company

**PV:** Photovoltaic

**PV Array:** A block of photovoltaic modules

**PV Module:** An individual solar panel

**PVCS:** Photovoltaic combining switchgear, in a pad-mounted electrical cabinet

**TSF: Topaz Solar Farm;** name of the Proposed Project

**TSF Project: Topaz Solar Farm Project;** used generically to describe the project, without distinction between the project layout options

## 1.0 Introduction

This Wildfire Management Plan covers the entire Topaz Solar Farm (TSF) Project (Figure 1, Section 5.0). The exact location and extent of the TSF Project is dependent upon approval of a final Project option, expected to have a fenced area of approximately 4,000 acres. This plan includes evaluation of wildfire potential effects, as well as ingress and egress for people who may be affected by wildfire in the vicinity of TSF.

### 1.1 Project Location

The Proposed Project is located in the northern Carrizo Plain area of San Luis Obispo County, California. The Project is within the La Panza NE and California Valley United States Geological Survey (USGS) 7.5 minute quadrangles. Elevation varies from approximately 2,010 to 2,200 feet above mean sea level. The TSF Project is located east of Bitterwater Road to Soda Lake Road, along PG&E's electric transmission lines at the north end of the Carrizo Plain, northwest of California Valley.

### 1.2 Project Description

The Topaz Solar Farm Project ("Topaz" or "Proposed Project") proposed by Topaz Solar Farms, LLC, a wholly owned subsidiary of First Solar, Inc. (the Applicant). The Applicant proposes to construct and operate a 550 megawatt (MW) photovoltaic (PV) solar power plant (Topaz) in the Carrizo Plains, an unincorporated portion of eastern San Luis Obispo County, adjacent to Highway 58 and east of Bitterwater Road. The Proposed Project would be installed over an approximate 4,000- to 4,100-acre (six-square-mile) site. The final Proposed Project site would accommodate solar arrays, as well as an electric substation, Solar Energy Learning Center, and maintenance facilities. In addition, as discussed later in this description, the project would also require an interconnection into the transmission grid that would be constructed by PG&E (e.g. switching station) and permitted by the CPUC.

The key Proposed Project components will include:

- Installation of up to approximately nine million PV solar modules within approximately 460 arrays, and associated electrical equipment enclosures.
  - Power Conversion Stations [PCS] including an inverter enclosure (236 sq. ft.) and adjacent transformer (48 sq. ft.)
  - PV Combining Switchgear [PVCS];
- Direct conversion of sunlight to electricity without the use of water for power generation;
- PV arrays that are approximately five and a half feet in height (the distance from the ground to the top of the PV module table may vary depending on the topography); and,
- PV arrays of approximately 1.3 MWac, occupying approximately seven acres that would be equipped with a PCS, which includes two DC to AC inverters and one transformer.

Note that the description above is based on an assumed 1.3 MWac PV array configuration. First Solar is constantly evaluating possible ways to improve upon the PV array design to achieve

greater environmental and economic benefits, so that it may be configured differently if the variation offers benefits relative to the 1.3MWac design. However, any PV array configuration variations would maintain the core fire safety features described in this plan.

Arrays will have a 20-foot access break every 500 feet.

In addition to the PV arrays the Proposed Project will include the construction and operation of:

- PG&E Switching Station
- Topaz Electrical substation
- Buildings
  - Operation and Maintenance (O&M) facility (11,250 square feet)
  - Solar Energy Learning Center (900 sq. ft.)
- Power cables
  - Above ground medium-voltage DC collector cables, specifications provided in Appendix A
  - Underground medium-voltage DC feeder cables
  - Above-ground medium-voltage (34.5 kV) AC collector line corridors (8 to 12 miles)
- On-site access roads (including existing agricultural roads)
- Fenced PV arrays
  - Fenced PV array areas that may vary in size from 30 to 1600 acres.
  - Perimeter fencing consisting of six-foot-high chain link with three strands of barbed wire on top and small openings approximately every 100 yards to allow for kit fox passage.

The Applicant has proposed sheep pulse grazing as a part of the site vegetation management plan, subject to validation by additional testing in spring 2011. If grazing is found not to be suitable to the application based on further testing, an alternate methodology, such as mowing, will be utilized.

Additional information regarding Proposed Project elements is included in Appendix A.

### **1.3 Existing Topography**

For wildland fire behavior predictive purposes, the topography of the project site is essentially flat, and has little direct effect on fire behavior calculations.

### **1.4 Vegetation/Fuel Production**

The Proposed Project site contains active farm fields and grazed annual grassland. Vegetation at the site (mostly annual grasses and forbs) is proposed to be managed by grazing with sheep to control height and volume of the fuels (Photos 1 and 2, below). Vegetative growth (fuel production) is highest in farmed barley fields and lowest in grasslands that have not been farmed for over 20 years.

PHOTOS OF UNGRAZED AND GRAZED PV TEST SITE. The PV test site was grazed in June 2010.



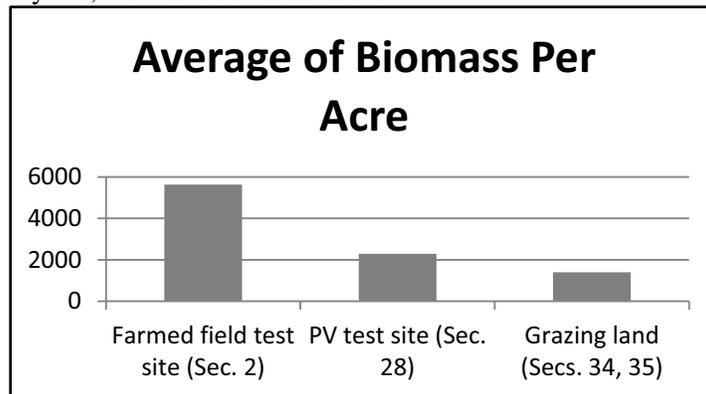
1. Vegetation prior to grazing.



2. Vegetation after grazing.

Clip plot measurements by Althouse and Meade, Inc. documented almost 6,000 pounds per acre in the barley field vegetation test site prepared in October 2009, less than 3,000 pounds per acre fuel in the PV vegetation test site, and approximately 1,500 pounds per acre in grazing land that has not been farmed for over 20 years (Figure 1, below). The graph below illustrates biomass production (also known as residual dry matter) measured in June 2010, an above-average rainfall year. Clip plot data by Althouse and Meade, Inc. in 2010 is documented in Figure 1 below.

FIGURE 1. Biomass from clip plots in June 2010. The farmed field test site is the location of the compaction test site. Inactive PV test site is the location of the compaction test site. Inactive PV modules are installed at the PV test site. Grazing land is located north of Hwy. 58, west of Soda Lake Road.



### 1.5 Historical Weather Near Project Site

Historical fire weather at the Topaz site is based on observations from the Carrizo Remote Automated Weather Station (RAWS) and indicates that winds are predominantly from the southeast.

Precipitation primarily occurs during the November to May period. Grasses and forbs cure and dry after May 1 of a typical year.

Humidity is often below 20 percent during the day in the summer. The low humidity increases potential for spread of fire.

Lightning is a common event during summer storms that occur over the southern San Joaquin valley and occasionally ignite fires in the Proposed Project area if the storms are not accompanied by rain. Historical fires in the area have been primarily as a result of lightning, equipment use (usually associated with grain harvesting) and illegal trash burning. This project would convert use of the site and reduce the probability of the equipment use and illegal burning risks.

## 2.0 Fire Modeling Methods

Using Behave-PLUS, a fire behavior predictive modeling program, fire behavior was modeled in the area of the Proposed Project assuming: (a) no vegetation management program is employed (e.g., no grazing); and (b) the Applicant's proposed vegetation management plan is implemented. The model runs indicate that when the vegetation management plan was implemented, the potential for damage to Project facilities and difficulty of containment of a fire are significantly reduced. Flame length of a typical fire on a grazed plot was reduced from two to six feet to negligible flame length because of the fuel height reduction to two to six inches.

### 2.1 Vegetation Fuel Model Data

As determined by sample clip plot data conducted by Althouse and Meade and others on the project area or similar sites, the representative fuel model would be (Northern Forest Fire Lab) Model 1 Annual Grasses. The wildland fuel loading from sheep grazing tests (Horney et al. 2010) at the Topaz site would be either:

- (i) **Unmitigated (Ungrazed)** Annual grasses and forbs, 1340 to 1632 pounds/acre of fuels 2 to 12 inches tall with potential for creating 2 to 6-foot flame length and greater difficulty of control and containment of a fire. This would be representative of lands adjacent to the project that are not grazed or otherwise treated.
- (ii) **Mitigated (Grazed)** Annual grasses and forbs 864 to 1046 pounds/acre of fuels 2 to 8 inches tall, with the potential to create fires with negligible flame length and easily contained. This would be representative of those areas proposed to be grazed within the project area.

## 3.0 Wildfire Management Plan

### 3.1 Vegetation Maintenance

Routine grazing and/or mechanical removal of grasses and forbs will manage wildland vegetation within those areas where wildland fuel (grasses and forbs) mitigation is designated.

Most annual grasslands within the project area are proposed to be grazed in the late spring of each year, effectively reducing fuel loads. This reduction in fuels combined with the extensive

network of roads and perimeter paths around the arrays will significantly reduce or eliminate the potential of a wildland fire spreading in or escaping from the project area. The rate of spread, and flame length of a fire that does become established would be reduced, providing relative ease of suppression and reduced potential of damage to onsite improvements.

In areas adjacent to structures or non-exempt electrical equipment where clearance is mandated by code, clearance may be achieved by a combination of mechanical clearance techniques, and/or herbicide treatment, and/or grazing. This would include a 30-foot clearance around structures required by California Public Resources Code (PRC) to approximately a 4-inch stubble and 10-foot clearance of flammable material around non-exempt power poles required by PRC 4292. These clearances would preferably be completed prior to May 1 of each year and managed based on proper timing of grazing and maintenance cycles.

### **3.2 Recommendations based on potential hazards and proposed mitigations.**

The Proposed Project's all-weather access roads as well as access paths within the PV arrays should be designed to act as fuelbreaks – creating 10-20 foot wide paths where grasses and forbs are grazed and /or compressed by occasional equipment use to create a space with reduced vertical and horizontal continuity of the grass. Prevailing winds would push fires away from more developed areas adjacent to the project area. Additionally, because of the network of roads and modification of fuels in the Proposed Project area, wind effect would be significantly reduced in the spread of any wildland fires.

With the planned clearances around structures, reduced fuel loading due to the vegetation management plan, and the network of paths and roads around PV arrays, a fire would be less likely to become established and, if established, would be relatively easy to suppress onsite. All workers onsite, during and after construction, will be briefed on procedures for monitoring the areas they are working in and reporting any fires or medical emergencies directly through the 911 systems.

Fenced areas will be numbered and clearly labeled as each phase is constructed.

Fire risk can also be mitigated by ensuring that all mechanized equipment have appropriate spark arrestors and non-critical maintenance be conducted during higher humidity periods when possible to reduce exposure to fire causing activities and ignition sources. During construction in the dry season, April to November, TSF will maintain fire suppression capable equipment for construction crews in the field: a mobile pumper, hand tools and backpumps. Equipment will follow Cal Fire's Industrial Operations Fire Prevention Field Guide (CDF 2009). In addition, O&M vehicles will have some equipment capable of fire suppression.

The Topaz Solar project will schedule regular briefings with CAL FIRE representatives to provide an update on project construction activities.

In addition, to best utilize the road network for fire suppression and public safety in the Proposed Project area, roads shall be identified with a nomenclature to easily identify locations throughout the project area using a county standard for signage. An effective road network combined with the impact of grazing would reduce the need for heavy equipment, like bulldozers, for fire suppression within the project area. In the event that heavy equipment did need to access the project area, surface areas with underground utilities below should be well marked with signage and markers for easy identification in adverse visual conditions. Heavy equipment would typically only skim the surface of the ground to remove light fuels for a firebreak ahead of a fire.

The network of roads and access paths within the Proposed Project should minimize the need for this level of disturbance.

Additionally, any water sources developed as part of the Proposed Project should have standard access for fire department use on fires onsite as well as offsite on adjacent lands. This will improve the ability to suppress fires on lands throughout the Carrizo area.

In the event of a fire, the complete facility AC power system can be shut down by opening the main AC breaker in the onsite Substation or each block can be isolated by opening a local breaker at its PVCS. The inverters automatically shut down, when they no longer sense voltage from the grid. The solar modules create electricity whenever the sun shines, including cloudy days, and cannot be de-energized until after sundown.

There are no additional precautions required due to the presence of CdTe encapsulated in the PV modules. Heating experiments to simulate high-temperature residential fires showed that the content of CdTe PV modules was 99.96% encapsulated in the molten glass matrix during tests that reached 1100 degrees Celsius (Fthenakis et al. 2005). Wildfires tend to burn at lower temperatures, below the melting point of CdTe at 1041 °C (Fthenakis and Zweibel 2003). For wildfires, residence times in grass fuels are approximately 15 seconds, and maximum temperatures, observed at the base of the flame (the hottest part), are approximately 800 °C to 1000 °C (Wotton 2009), although flame temperatures are expected to be much cooler in managed grassland on the Topaz site. Additional information about the use of CdTe PV has been submitted by the Applicant in their comment letter on the Draft EIR dated January 3, 2011.

### **3.3 Summary of Fire Management Recommendations**

- FR 1. Provide all-weather access roads to most fenced PV areas.
- FR 2. Manage access paths through arrays to act as fuel breaks; maintain paths with minimal fuel loads.
- FR 3. Maintain less than 1200 lbs per acre during fire season.
- FR 4. Maintain 30-foot clearance around structures, preferably with less than 1000 pounds per acre of grassland fuels.
- FR 5. Brief all workers on site during construction and operation phases regarding procedures for monitoring work areas and reporting fire and medical emergencies through the 911 system.
- FR 6. Schedule regular (quarterly or more frequent) briefings with Cal Fire representatives to provide an update on project construction activities.
- FR 7. Install lightning protection for the substation.
- FR 8. Number and clearly label each fenced area.
- FR 9. All mechanized equipment must have appropriate spark arrestors.
- FR 10. Non-critical vehicle maintenance should be conducted during higher humidity periods (e.g. before 10 a.m. during the summer months) to reduce exposure to fire-causing activities and ignition sources.
- FR 11. During construction in the dry season, April to November, maintain fire suppression capable equipment for construction crews in the field: a mobile pumper, hand tools, and 5-gallon backpack pumps. Equipment will follow Cal Fire's Industrial Operations Fire Prevention Field Guide.

- FR 12. Identify all roads with well-marked signage and nomenclature to easily identify locations throughout the project area. Use San Luis Obispo County's standards for signage.
- FR 13. Clearly mark locations of underground utilities.
- FR 14. Provide standard access for water sources within the project boundaries that may be used for fire suppression on lands throughout the Carrizo area.
- FR 15. Project staff will perform an annual orientation and site walk down with local Cal Fire department personnel.
- FR 16. Water tank storage will be provided at appropriate locations (e.g. by visitor center and operations and maintenance buildings) based on calculations provided by a structural fire protection engineer.

### 3.4 Resources for More Information

California Department of Forestry and Fire Protection. 1999. Industrial Operations Fire Prevention Field Guide. *Available at:*  
<http://www.osfm.fire.ca.gov/codedevelopment/pdf/firesafetyplanning/iopfpg/industrialoperationsguide.pdf>

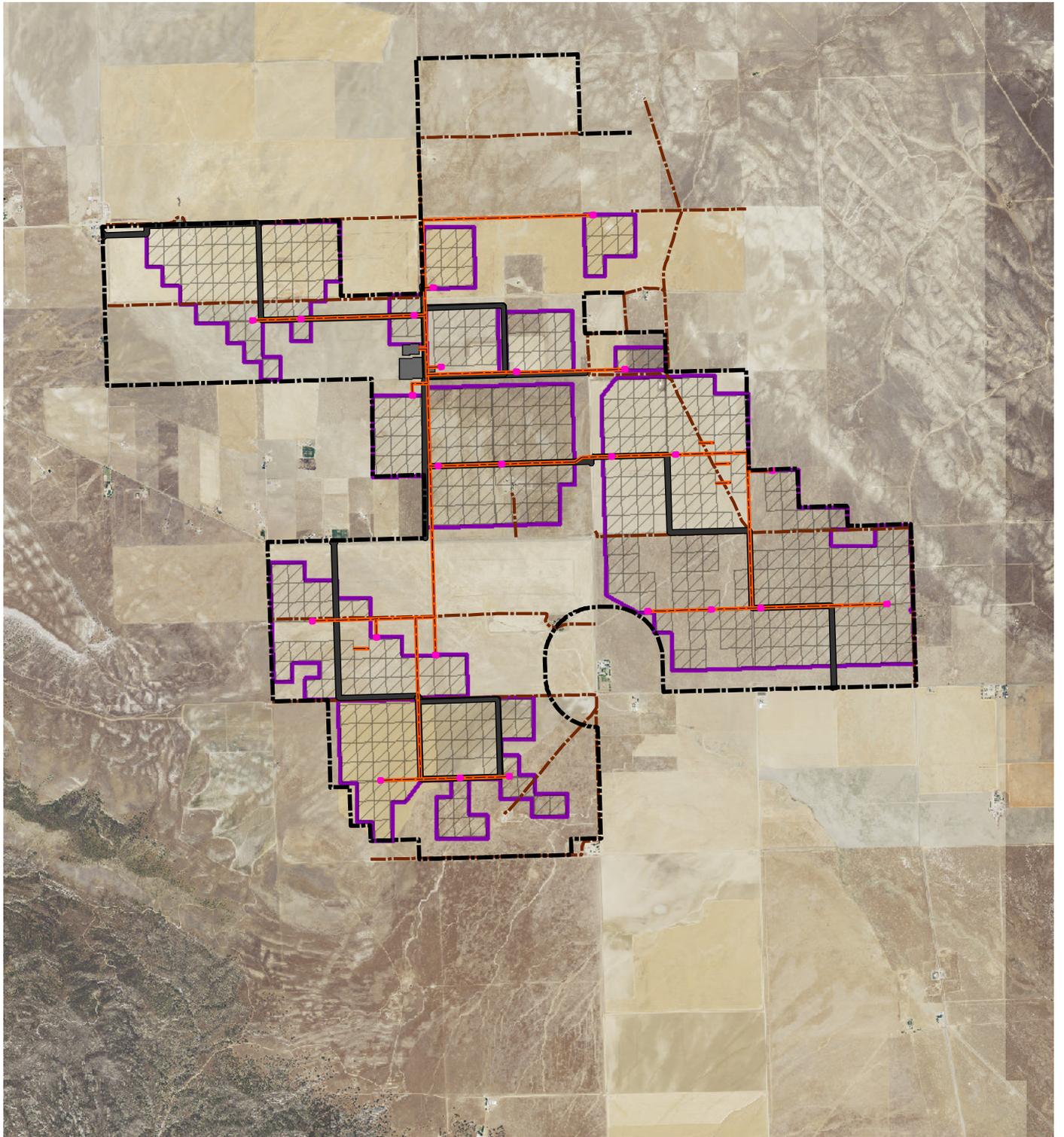
California Department of Forestry and Fire Protection and Pacific Gas and Electric. 2001. Powerline Equipment Identification Pocket Guide. March 27. *Accessible at:*  
<http://www.utilityarborist.org/images/PRC%204292%20e.pdf>

## 4.0 Conclusion

While there is a normal probability of lightning caused fires the project will not increase the occurrence of lightning strikes and will decrease the probability of ignition and spread because of the reduced fuel loading on the site due to the proposed grazing management. While there will be increased equipment use on the site, there will not be an increase in fires becoming established because of increased monitoring, use of equipment less likely to cause fires, and wildland fuel reduction. Any fire that becomes established would be easier to suppress because of the fuel modification and road network.

Proposed mitigations of grazing to reduce fuel loading, development of a road and path network around and within the project, permanent water development available for fire suppression and altering of uses on the site, will result in a reduction in the wildland fire risk and potential within the Project area from its current condition.

## **5.0 Wildfire Management Plan Exhibit**



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Appendix H  
USACE CWA Section 404  
Individual Permit Information



## DEPARTMENT OF THE ARMY

SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1398

REPLY TO  
ATTENTION OF:

Regulatory Division (1145b)

JUL 08 2011

SUBJECT: File No. 2009-00150S

Ms. Angela Colamaria  
U.S. Department of Energy  
Loan Programs Office (LP-10)  
1000 Independence Avenue, SW  
Washington, District of Columbia 20585

Dear Ms. Colamaria:

This correspondence is in reference to your request, dated June 20, 2011, for Corps of Engineers' (Corps) identification of the Least Environmentally Damaging Practicable Alternative (LEDPA) for the Topaz Solar Farm Project (project). This request was made pursuant to the Section 404(b)(1) Guidelines of the Clean Water Act (33 U.S.C. § 1344) and the Council on Environmental Quality (CEQ) Regulations §1501.6.

The basic project purpose is to increase the availability of electricity generated from renewable energy sources through the construction of a photovoltaic (PV) solar facility and associated transmission and support facilities that interconnect with the Morro Bay-Midway 230kV transmission line within eastern San Luis Obispo County, California. Topaz Solar Farms, LLC (Topaz) proposes to construct and operate a solar photovoltaic energy generating facility on lands under private ownership within the Carrizo Plain, which is located in eastern San Luis Obispo County. The project would include the following components to satisfy the overall project purpose:

- a solar field of ground-mounted PV modules that collect solar radiation to produce electricity;
- an electrical collection system that converts generated power from direct current (DC) to alternating current (AC) and delivers it to the project substation;
- a project substation that collects and converts the generated power from 34.5 kilovolt (kV) to 230 kV for delivery via a new onsite Pacific Gas and Electric Company (PG&E) switching station to PG&E's existing Morro Bay-Midway 230-kV transmission line;
- an onsite PG&E switching station;
- an Operations and Maintenance (O&M) facility located near the Substation;

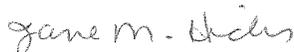
- a Solar Energy Learning Center located near Carrisa Plains Elementary School and designed to accommodate students and visitors during project operation; and
- access and maintenance roads.

An Alternatives Analysis for this project was submitted to our office by Huffman-Broadway Group, Inc. and Althouse and Meade, Inc., on behalf of Topaz, dated February 2011. The analysis included three alternative project sites and seven onsite alternative configurations that were identified by San Luis Obispo County. The applicant has adequately shown that there are no alternative project sites that would meet the overall project purpose and need. Five of the seven alternative configurations were not feasible, and the remaining two would have had a potentially significant impact on species protected under the Endangered Species Act. After our initial review of the document, we requested further analysis pursuant to Section 404(b)(1) to determine if additional avoidance of waters of the U.S. could be achieved through modifications to the solar array layout, access road route designs, and/or road crossing designs of the preferred alternative. An addendum to the Alternatives Analysis was submitted by Huffman-Broadway Group, Inc. and Althouse and Meade, Inc, on April 4, 2011, removing seven of the ten proposed water crossings from the preferred alternative.

While the preferred alternative would permanently impact less than 0.1 acre of waters of the U.S. with three road crossings; and an additional 0.045 acre of temporary impacts would result from excavating electrical cable collector and feeder line trenches; this project alternative reduces adverse impacts to hundreds of acres of Williamson Act lands, acres of scattered vernal pools that provide habitat for endangered longhorn fairy shrimp and threatened vernal pool fairy shrimp, and thousands of acres of grassland habitat that provides movement corridors for endangered San Joaquin kit fox. We have determined that the preferred alternative reasonably qualifies as the LEDPA.

You may refer any questions on this matter to Ms. Holly Costa of my staff by telephone at 415-503-6780 or by e-mail at [holly.n.costa@usace.army.mil](mailto:holly.n.costa@usace.army.mil). Any correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

Sincerely,



Jane M. Hicks  
Chief, Regulatory Division

Copies Furnished:

US EPA, San Francisco, CA

US FWS, Sacramento, CA

CA DFG, Yountville, CA

CA RWQCB, San Luis Obispo, CA

Topaz Solar Farms, LLC; Attn: Ashley Kenny



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
1455 MARKET STREET, 16<sup>TH</sup> FLOOR  
SAN FRANCISCO, CALIFORNIA 94103-1398

JAN 28 2011

Regulatory Division

Subject: File No. 2009-00150S, Jurisdictional Determination

Ms. LynneDee Althouse  
Althouse and Meade, Inc.  
1875 Wellsona Road  
Paso Robles, California 93446

Dear Ms. Althouse:

This correspondence is in reference to your submittal of April 21, 2010, on behalf of Topaz Solar Farms LLC, requesting an approved jurisdictional determination of the extent of navigable waters of the United States and waters of the United States occurring on a contiguous area of approximately 12,490-acres located northwest of California Valley, San Luis Obispo County, California. The Study Area is located near California Valley, straddling Highway 58 between Bitterwater Road and Soda Lake Road, between the Temblor Range to the east and the San Juan Hills and La Panza Range to the west. Approximate latitude and longitude coordinates for the center of the Study Area are 35.41145° N / 120.07859° W in the La Panza NE and California Valley United States Geological Survey (USGS) 7.5-minute quadrangles. The Study Area is located on all or portions of Section 1 of Township 29 South, Range 17 East; Sections 6-8, 15-22, 26-29, and 32-35 of Township 29 South, Range 18 East; and Sections 4 and 5 of Township 30 South Range 18 East (Mount Diablo Baseline Meridian).

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; and within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*). Waters of the United States generally include the territorial seas; all traditional navigable waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters subject to the ebb and flow of the tide; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally; and wetlands directly abutting such tributaries. Where a case-specific analysis determines the existence of a "significant nexus" effect with a traditional navigable water, waters of the United States may also include non-navigable tributaries that are not relatively permanent; wetlands adjacent to non-navigable tributaries that are not relatively permanent; wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary; and certain ephemeral streams in the arid West.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*). Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation maps entitled, USACE File #2009-00150S, Topaz Solar Farm, in ten sheets, date certified November 1, 2010, accurately depict the extent and location of wetlands and other waters of the United States within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. Jurisdictional Section 404 waters within the boundary area of the site include seasonal ephemeral wetlands, including vernal pools, and several intermittent and ephemeral unnamed streams and drainages that are tributary waters to Carriso Creek, an ephemeral tributary to Soda Lake, which is a navigable water of the United States. The wetlands are adjacent to and/or abutting these tributary waters, and their boundaries are defined by the presence of hydrophytic vegetation, hydrology, and hydric soils. The lateral extent of the tributary waters is characterized by the plane of ordinary high water which is defined by the presence of scouring, sediment deposits, shelving, debris lines, and transitional vegetation on the banks.

This approved jurisdictional determination is based on the current conditions of the site, as verified during field investigations of June 15 and 16, 2009 and June 30, 2010, and a review of other data included in your submittal. This approved jurisdictional determination will expire in five years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date. This approved jurisdictional determination is presumed to be consistent with the official interagency guidance of June 5, 2007, interpreting the Supreme Court decision, *Rapanos v. United States*, 126 S. Ct. 2208 (2006).

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000), and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be

submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal, unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Holly Costa of my Regulatory staff by telephone at (415) 503-6780 or by e-mail at [holly.n.costa@usace.army.mil](mailto:holly.n.costa@usace.army.mil). All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: <http://www.spn.usace.army.mil/regulatory/>.

Sincerely,



Jane M. Hicks  
Chief, Regulatory Division

Enclosures

Copies Furnished (w/ encls):

Topaz Solar Farms, LLC; Attn: Ashley Kenny

Electronic Copy Furnished (w/ encl 1 only):

CA RWQCB, San Luis Obispo, CA  
US EPA, Region 9  
CA SWRCB, Sacramento, CA



Regulatory Division  
1455 Market Street, 16<sup>th</sup> Floor  
San Francisco, CA 94103-1398

SAN FRANCISCO DISTRICT

# PUBLIC NOTICE

## PROJECT: Topaz Solar Farm

FILE NUMBER: 2009-00150S  
PERMIT MANAGER: Holly Costa

DATE: 1 March 2011  
TELEPHONE: 415-503-6780

RESPONSE REQUIRED BY: 31 March 2011  
E-MAIL: holly.n.costa@usace.army.mil

**1. INTRODUCTION:** Topaz Solar Farm LLC (POC: Ashley Kenny; 510.626.7480), 1111 Broadway, 4<sup>th</sup> Floor, Oakland, California, 94607, through its agent, Althouse and Meade, Inc. (POC: LynneDee Althouse; 805.237.9626), 1602 Spring Street, Paso Robles, California 93446, has applied to the U.S. Army Corps of Engineers (USACE), San Francisco District, for a Department of the Army Permit to discharge fill material into jurisdictional waters of the United States to construct a 550 megawatt solar photovoltaic (PV) energy generating facility. The Topaz Solar Farm (Project) would be constructed on approximately 3,500 acres within approximately 9,700 contiguous acres (Project Site) under private ownership on the Carrizo Plain in eastern San Luis Obispo County, California. This Department of the Army permit application is being processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*).

## 2. PROPOSED PROJECT:

**Basic Project Purpose:** The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the project is water dependent. The basic project purpose is to increase the availability of electricity generated from renewable energy sources through the construction of a photovoltaic (PV) solar facility and associated transmission and support facilities that interconnect with the Morro Bay-Midway 230 kV transmission line.

**Overall Project Purpose:** The overall project purpose serves as the basis for the Section 404(b)(1) alternatives analysis, and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, while allowing a reasonable range of alternatives to be analyzed. The overall project purpose is to increase the availability of electricity generated from renewable energy sources through the development, in a high-solar resource area, of a 550 megawatt (MW) photovoltaic (PV) solar facility and associated transmission and support facilities for interconnection to the Morro Bay-Midway 230 kV transmission line within eastern San Luis Obispo County, California.

The Project will generate 550 megawatts of power for the State's electrical power grid, which is enough to provide power to 100,000 to 150,000 households. By producing this sizable amount of electricity through PV generation, the Project will address the public and private need to reduce consumption of fossil fuel and reduce the carbon footprint associated with the generation of energy, as well as provide additional electricity to meet current and future public and private energy needs. Additionally, the generated electricity will support achievement of California's Renewables Portfolio Standard that 20 percent of the state's electricity be supplied by renewable resources, as well as support the Governor's Executive Order that California obtain 33 percent of its electricity from renewable resources by 2020.

**Project Site Location:** The Project Site is in an unincorporated portion of eastern San Luis Obispo County, California, adjacent to Highway 58 and east of Bitterwater Road (Figures 1 and 2). The boundary straddles Highway 58 between Bitterwater Road and the northern terminus of Soda Lake Road, in relatively flat farm fields west of the Temblor Range and east of the San Juan Hills and La Panza Range. The northern limit of the Project Site is 5.5 miles north of the southern boundary. The western limit is 5 miles from the eastern boundary. The boundary “stair-steps” along the eastern side to avoid areas with significant topographic relief. The western boundary avoids relatively small (60-acre) residential parcels near Highway 58, and hilly ground in the southwest.

Approximate latitude and longitude coordinates for the center of the Project Site are 35.381121° N /120.058898° W in the La Panza NE United States Geological Survey (USGS) 7.5-minute quadrangle. The Project Site is in the La Panza NE and California Valley 7.5-minute topographic quadrangles, on all or portions of sections 7, 8, 15 to 22, 26 to 29, and 32 to 35 of Township 29 South, Range 18 East; and sections 4 and 5 of Township 30 South, Range 18 East, Mount Diablo Base and Meridian.

**Project Site Description:** The majority of the Project Site consists of rolling hills and gently sloping plains, while the northeastern edge of the Project Site has some larger, steeper. Elevations range from approximately 1,998 to 2,135 feet above mean sea level. Figure 2 is a USGS topographic map of the Project Site.

Approximately 6,205 acres of the Project Site are currently dry-farmed with barley or wheat. The dry-farmed production cycle uses summer fallow, a method widely used in dry climates to conserve soil moisture; fields are planted every other year, and plowed and left bare during years they are not planted. Cattle graze on approximately 3,465 acres of annual grassland that was historically farmed. The remainder, approximately 30 acres of the 9,700 acre total, includes roads and structures.

Under current land use, the Project Site is dominated by upland plant species. Dominant plant communities include dry-farmed grain crops, fallow farmland used as rangeland, and annual grassland habitat. California annual grassland habitat is a dry seasonal habitat consisting of low-lying annual grasses and forbs. It is dominated by non-native and native annual grass species, with varying percentages of native and introduced forbs due to different topography, soils, grazing regimes, and farming history. Wetland vegetation is associated with a few ponded areas in drainages and a small number of localized depressions which typically pond for long periods during normal and above normal rainfall years.

The Project Site is in the Carrizo Plain watershed (HUC 18060003), a 445-square-mile closed basin. Most of the ephemeral drainages that extend across the Project Site are historically interconnected and flow during significant rainfall events toward the main drainage, which drains to Soda Lake, a shallow, ephemeral alkali lake in the Carrizo Plain National Monument. Soda Lake is approximately 9.6 miles southeast of the point where the main drainage leaves the Site. The main drainage is the principal drainage that flows into Soda Lake.

A combination of tectonic activity, semiarid climate, and unique soils in the Carrizo Plain has led to development of many short ephemeral channels that dissipate into gently rolling fields. Stormwater moves as sheet flow across fields and re-enters a few key drainages that convey concentrated flows toward Soda Lake. Water flowing down relatively steep slopes (e.g., hills at the north end of the Project Site) forms distinct channels that become wide swales where the landform is relatively flat in the middle of the Project Site. Water concentrates in the bottom of the valley, and flows in the main drainage toward Soda Lake, carrying sediment, dissolved solids, and other runoff from farmed fields and grazing lands.

**Project Description:** The applicant proposes to construct and operate a solar photovoltaic (PV) energy generating facility, the Topaz Solar Farm (Project), on lands under private ownership within the Carrizo Plain in eastern San Luis Obispo County,

California. The applicant has a power purchase agreement (PPA) with Pacific Gas and Electric Company (PG&E) that allows for transmission access to the Morro Bay-Midway 230 kV transmission line. The transmission line runs west to east across the Project Site, facilitating direct access without the need for a generation tie-in line. The Project Site comprises 9,700 acres, of which approximately 3,500 acres would be fenced as numerous distinct areas to enclose the solar farm. The fenced PV facilities would be set back from Highway 58, the nearby Carrisa Plains Elementary School, and the main drainage, which conveys floodwaters from the Project Site to Soda Lake. All facilities would be set back from wetlands. The location and proposed configuration of the Project Site are shown on Figures 1 through 3.

The Project would include:

- Solar field of ground-mounted PV modules that collect solar radiation to produce electricity;
- Electrical collection system that converts generated power from direct current (DC) to alternating current (AC) and delivers it to the Project Substation;
- Project Substation that collects and converts the generated power from 34.5 kilovolt (kV) to 230 kV for delivery via a new onsite Pacific Gas and Electric Company (PG&E) Switching Station to PG&E's existing Morro Bay-Midway 230 kV transmission line;
- PG&E Switching Station;
- Operations and Maintenance (O&M) facility near the Project Substation;
- Solar Energy Learning Center near Carrisa Plains Elementary School designed to accommodate students and visitors during Project operation; and
- Access and maintenance roads.

*Solar Field.* The Project's solar field would consist of up to 460 arrays of PV modules with the cumulative capacity to generate 550 MW of power at the point of delivery to PG&E, under peak solar conditions. Each solar array would generate at least 1.26 megawatts alternating current (MWAC) of power and would consist of at least 20,000 PV

modules and one power conversion station. Each power conversion station would consist of two inverters in an enclosure and one adjacent transformer. PV modules would be mounted on steel support structures called tables. Tables would be attached at an angle to a bracket on vertical steel posts spaced approximately 8 to 10 feet center-to-center and driven into the ground to a depth of 4 to 7 feet below grade. Once mounted, the front of each table would be approximately 1.5 feet above grade, while the rear would be approximately 5.5 feet above grade. The distance from the ground to the top of the PV module table may vary depending on the topography.

The applicant proposes to install piles to support the PV modules in five jurisdictional drainages. The rows of PV modules would be mounted on 2.12-square inch area metal piles, which would be spaced 10 feet apart in the east to west direction and 14 feet apart in the north to south direction. The PV arrays are designed to have as few support piles as is feasible while still providing the necessary stability for windloading and potential seismic events. Figure 5 shows a typical array configuration. On the basis of 33 CFR § 323.3(c)(2) (Pilings), the use of piles in would not have the effect of a discharge of fill material and therefore would not require Section 404 authorization.

*Electrical Collection System.* The PV modules would be electrically connected by wiring harnesses running along the bottom of each table to combiner boxes that collect power from several rows of modules. The combiner boxes would feed direct current (DC) power from the modules to the power conversion stations (PCS) via underground cables. The inverters in the PCS would convert the DC electric input into AC (alternating current) electric output, and the isolation transformer would step the current up to 34.5 kV for on-site transmission of the power to the PV combining switchgear (PVCS). Electric feeder cables would be installed in trenches that bisect each array (Figure 4).

Electrical collector cables would connect the power output from the PVCSs to the onsite Project

Substation. Collector cables would be installed in underground trenches (Figure 3).

*Project Substation.* The Project Substation would collect the output and transform it from 34.5 kV to 230 kV. The Substation would occupy approximately 4.5 acres adjacent to the PG&E Switching Station, where the 230 kV output of the Substation would be connected and delivered to the Morro Bay-Midway 230 kV transmission line.

*PG&E Switching Station.* PG&E's existing Morro Bay-Midway 230 kV transmission line runs west to east across the Project Site. It extends from PG&E's Morro Bay Substation in the city of Morro Bay in western San Luis Obispo County to its Midway Substation in Buttonwillow, Kern County. The new PG&E Switching Station for the Project would be just north of and adjacent to the Morro Bay-Midway 230 kV transmission line. The Switching Station work area would be approximately 600 feet by 650 feet (9 acres) with a buffer zone and would be enclosed by a fence and separate from the adjacent Topaz Solar Farm Project Substation. The Switching Station would require additional area for the incoming and existing transmission line. Estimated dimensions for the Switching Station and the buffer zones that include the new transmission poles are 880 feet by 715 feet (about 14.5 acres). Two new 100- to 125-foot-high double-circuit lattice steel transmission towers and four steel poles would be installed within or adjacent to PG&E's transmission line right of way to accommodate the looping of the 230-kV line into the Switching Station. The towers and poles would be situated on either side of the new Switching Station to position the transmission conductors for proper ingress and egress to the station. PG&E would be responsible for the construction of the Switching Station and the interconnection to the Morro Bay-Midway 230-kV line.

*PG&E Reconductoring Project.* Topaz has interconnection agreements in place for the first 400 MW of Project capacity. The California Independent System Operator (CAISO) has determined that local network upgrades would be required to accommodate the Project's remaining 150 MW, as well as a second

solar project in the Carrizo Plain – SunPower's California Valley Solar Ranch project. Network upgrades would include the reconductoring of the existing 230 kV transmission line between the new PG&E Switching Station onsite and the Midway Substation, a distance of 35 miles. Reconductoring is the process of installing new conductor wire on existing towers to increase the capacity of an existing transmission line and is considered part of this permit application as defined by NEPA and Section 404 Clean Water Act (CWA) review requirements.

*Operations and Maintenance Facility.* An approximately 11,250 square foot operations and maintenance (O&M) facility with associated parking would be constructed near the Project Substation for parts storage, security, and project monitoring. A leach field and septic system would be sited adjacent to the O&M facility to serve Project sanitary needs.

*Solar Energy Learning Center.* Topaz would construct and operate a Solar Energy Learning Center onsite. Topaz would work with local educators to develop exhibits, tours, and educational programs that would complement existing science and sustainability curricula. The center would be able to accommodate several class field trips per day, as well as 100 to 200 visitors per month. The center would be an ADA-compliant, 30-foot-by-30-foot enclosed building with restrooms, and would display a scale model of the solar facilities and other exhibits on solar power.

**Project Impacts:** Permanent fill impacts of 0.089 acre would result from construction of 10 at-grade road crossings and associated scour arrestors through ephemeral drainages (Figure 3). The 284.3 cubic yards of fill would consist of clean fill material, rip-rap, and pre-cast articulating concrete blankets with steel cable and rebar.

Temporary fill impacts of 0.045 acre (365 cubic yards) would result from the excavation of trenches in which to bury electrical collector and feeder cables.

No direct fill impacts to wetlands of the United States would occur as a result of the Project.

### **Proposed Mitigation:**

*Avoidance.* Project planning following the EPA Section 404 (b)(1) Guidelines resulted in avoiding all impacts to wetlands, which are EPA “special aquatic sites”; no other special aquatic sites are present onsite. Additionally, all building structure pads and work areas have been oriented so as to avoid impacts to other waters of the U.S.

*Minimization.* Given the linear and scattered nature of the ephemeral drainages throughout the site, impacts to these “other waters of the U.S.” were found to be unavoidable in designing access roads for construction and future project operation (permanent impacts), and trenches for underground electrical lines (temporary impacts). Minimization of unavoidable impacts to the ephemeral drainages includes:

- Minimizing the number of permanent at-grade road crossings to the maximum extent practicable;
- Minimizing roadway width to the maximum extent practicable in consideration of load requirements, vehicle type, and width and safety requirements;
- Utilizing an at-grade temporary trenching crossing approach to underground the electric cables;
- Minimizing ground disturbance by using piles where drainages are over-crossed by PV modules;
- Minimizing ground disturbance during construction and operations in areas adjacent to wetlands and ephemeral drainages;
- Using low-impact Project operations and maintenance adjacent to waters;
- Covering well-used roads on the Project Site with gravel to minimize sediment transport;
- Minimizing trash production in order to protect wildlife from waste materials;
- Burying natural rock scour arresters at crossings and other critical high energy surface water flow locations;
- Installing an “open cell, articulated concrete blanket” at access road crossings to reduce sedimentation;

- Re-vegetating tilled agricultural lands converted to Project use, and maintaining grassland cover during PV facility operation.

*Compensation.* The Applicant proposes to compensate for the loss of other waters of the U.S. (ephemeral drainage habitat) through in-kind habitat restoration (re-establishment) of a portion of the main drainage at a minimum ratio of 2:1 for permanent impacts of 0.089 acre and at a ratio of 1:1 for temporary impacts of 0.045 acre. This would result in reestablishing a minimum of 0.223 acre of ephemeral drainages by rebuilding a former portion of an aquatic resource (the main drainage), resulting in a gain in aquatic resource area and functions. The re-established drainage area would be revegetated with native vegetation typical of drainages within the Project Site. The re-established habitat would provide at a minimum functions comparable to those prior to project impacts. Implementing compensatory mitigation in the main drainage would expand its flood storage and desynchronization functions and would reduce flood damage by attenuating floodwaters following significant precipitation events. They would be protected from surrounding upland land use activities by an average 50-foot upland buffer. The mitigation area and buffer would be protected from future development by a recorded conservation easement.

### **3. STATE AND LOCAL APPROVALS:**

**Water Quality Certification:** State water quality certification or a waiver is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 *et seq.*). The applicant will submit an application to the California Regional Water Quality Control Board (RWQCB) to obtain water quality certification for the project. No Department of the Army Permit will be issued until the applicant obtains the required certification or a waiver of certification. A waiver can be explicit, or it may be presumed, if the RWQCB fails or refuses to act on a complete application for water quality

certification within 60 days of receipt, unless the District Engineer determines a shorter or longer period is a reasonable time for the RWQCB to act.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, Central Coast Region, 895 Aerovista Place, Suite 101, San Luis Obispo, California 93401, by the close of the comment period.

**Coastal Zone Management:** Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq.*), requires a non-Federal applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the State's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate State agency has issued a Consistency Certification or has waived its right to do so. The project does not occur in the coastal zone or within the San Francisco Bay, and a *preliminary* review by USACE indicates the project would not likely affect coastal zone resources. This presumption of effect, however, remains subject to a final determination by the California Coastal Commission.

Coastal zone management issues should be directed to the District Manager, California Coastal Commission, Central Coast District Office, 725 Front Street, Suite 300, Santa Cruz, California 95060-4508, by the close of the comment period.

**Other Local Approvals:** The applicant will be applying for the following additional governmental authorizations for the project: Lake and Streambed Alteration Agreement and Endangered/Threatened Species Take Authorization from the California Department of Fish and Game; Portable Engine Registration from California Air Resources Board; CEQA Environmental Impact Report certification; Grading Permit; Building Permit; and Conditional Use Permit from the San Luis Obispo County; Authority to Construct and Permit to Operate (new stationary source) and Fugitive Dust Permit from San Luis Obispo County Air Pollution Control District.

#### 4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

**National Environmental Policy Act (NEPA):** The applicant has submitted an application to the U.S. Department of Energy (DOE) under the federal loan guarantee program pursuant to the Energy Policy Act of 2005 to support construction of the proposed Project.

DOE is the lead agency for National Environmental Policy Act (NEPA) review of the Project. The Corps is a "cooperating agency" for preparation of the NEPA Environmental Impact Statement (EIS).

DOE is preparing an EIS pursuant to the National Environmental Policy Act of 1969, as amended (NEPA), the Council on Environmental Quality (CEQ) NEPA regulations, and the DOE NEPA implementing procedures to assess the potential environmental impacts of its proposed action of issuing a federal loan guarantee to Topaz. At the conclusion of the public comment period, USACE will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's Regulations at 40 C.F.R. Parts 1500-1508, and USACE Regulations at 33 C.F.R. Part 325. The final NEPA analysis will normally address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of USACE and other non-regulated activities USACE determines to be within its purview of Federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis will be incorporated in the decision documentation that provides the rationale for issuing or denying a Department of the Army Permit for the project. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division

**Endangered Species Act (ESA):** Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. § 1531 *et seq.*), requires Federal agencies to consult with either

the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to insure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. USACE has made a preliminary determination that the project site is not within any listed species critical habitat, but that the following federally listed species are known to occur on the project site:

- San Joaquin kit fox (*Vulpes macrotis mutica*): ESA Endangered
- Longhorn fairy shrimp (*Branchinecta longiantenna*): ESA Endangered
- Vernal pool fairy shrimp (*Branchinecta lynchi*): ESA Threatened
- Mountain plover (*Charadrius montanus*): ESA Proposed Threatened

Presence of San Joaquin kit fox within and near the Project site was determined by a scat survey, DNA analysis of scat collections and visual surveys. There is a high variation in habitat quality for kit fox utilization within the Project Site, ranging from good to poor. The spring 2010 survey data for kit fox natal dens found 2 occupied dens located in the extreme southern and eastern ends of the Project study area. The den sites are located in annual grassland habitat that has not been plowed in over 20 years. Survey data from winter 2010 indicates these areas are still occupied by kit fox. The Project may adversely affect San Joaquin kit fox through direct and/or indirect effects to individuals, populations and habitat, even though the overall long-term effect of the Project on kit fox is expected to be beneficial.

Longhorn fairy shrimp was detected in two pools within the Project Site in the south half of Section 20, a farm field in active cultivation with dry-farmed grain. Vernal pool fairy shrimp was detected in 11 vernal pools in Section 4, in the extreme south end of the Project Site. Although the likelihood is extremely low, the Project could potentially adversely affect these species during construction or operation of the facility.

Mountain plovers were found on four occasions between January and March 2010, with a high count of 17 birds observed in the eastern end of Section 35 in March. The Project is not expected to appreciably reduce the reproduction numbers or distribution of the wintering mountain plover population in the Carrizo Plain region; therefore the Project may affect, but is not likely to adversely affect this species.

In addition, bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) (both non-nesting) were occasionally detected foraging within the Project Site, but were not found to be nesting. Since bald eagles were delisted from the ESA in 2007, the Bald and Golden Eagle Protection Act (Eagle Act), as implemented by the USFWS, provides the primary legal protection for this species. The golden eagle, although never listed under the ESA, is also governed by the Eagle Act. The Project may affect the bald eagle and golden eagle. However the potential adverse effect would be discountable (i.e., extremely unlikely to occur and essentially not expected to occur) and insignificant (i.e. will not reach a scale where “disturbance” or “take” occurs) due to factors analyzed and explained in the project Biological Assessment.

On February 17, 2011, DOE initiated formal consultation with the USFWS under Section 7 of the federal Endangered Species Act (ESA), for potential impacts to federally listed species. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project. To complete the administrative record and the decision on whether to issue a Department of the Army Permit for the project, USACE will obtain all necessary supporting documentation from DOE and the applicant concerning the consultation process.

**Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA):** Section 305(b)(2) of the MSFCMA of 1966, as amended (16 U.S.C. § 1801 *et seq.*), requires Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those

waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. No fishery resources occur within the Project Site as the site contains no permanent or semi-permanent bodies of water, only wetlands and ephemeral drainages.

**Marine Protection, Research, and Sanctuaries Act (MPRSA):** Section 302 of the MPRS of 1972, as amended (16 U.S.C. § 1432 *et seq.*), authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the Act. No Department of the Army Permit will be issued until the applicant obtains the required certification or permit. The project does not occur in sanctuary waters, and a *preliminary* review by USACE indicates the project would not likely affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce, or his designee.

**National Historic Preservation Act (NHPA):** Section 106 of the NHPA of 1966, as amended (16 U.S.C. § 470 *et seq.*), requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of the Act further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance. The DOE will

consult with the State Historic Preservation Officer regarding Section 106 of the NHPA. If unrecorded archaeological resources are discovered during project implementation, those operations affecting such resources will be temporarily suspended until DOE concludes Section 106 consultation with the State Historic Preservation Officer or the Tribal Historic Preservation Officer to take into account any project related impacts to those resources.

**5. COMPLIANCE WITH THE SECTION 404(b)(1) GUIDELINES:** Projects resulting in discharges of dredged or fill material into waters of the United States must comply with the Guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C. § 1344(b)). An evaluation pursuant to the Guidelines indicates the project is not dependent on location in or proximity to waters of the United States to achieve the basic project purpose. This conclusion raises the (rebuttable) presumption of the availability of a less environmentally damaging practicable alternative to the project that does not require the discharge of dredged or fill material into special aquatic sites. The applicant has submitted an analysis of project alternatives which is being reviewed by USACE.

**6. PUBLIC INTEREST EVALUATION:** The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply

and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

**7. CONSIDERATION OF COMMENTS:**

USACE is soliciting comments from the public; Federal, State and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by USACE will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the project.

**8. SUBMITTING COMMENTS:**

During the specified comment period, interested parties may submit written comments to Ms. Holly Costa, San Francisco District, Regulatory Division, 1455 Market Street, 16<sup>th</sup> Floor, San Francisco, California 94103-1398; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Regulatory Permit Manager. Comments may include a request for a public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent, or by contacting the Regulatory Permit Manager by telephone or e-mail cited in the public notice letterhead. An electronic version of this public notice may be viewed under the *Current Public Notices* tab on the USACE website: <http://www.spn.usace.army.mil/regulatory/>.



Regulatory Division  
1455 Market Street, 16<sup>th</sup> Floor  
San Francisco, CA 94103-1398

## SAN FRANCISCO DISTRICT

# PUBLIC NOTICE

## PROJECT: Topaz Solar Farm (Revised)

FILE NUMBER: 2009-00150S  
PERMIT MANAGER: Holly Costa

DATE: 25 March 2011  
TELEPHONE: 415-503-6780

RESPONSE REQUIRED BY: 25 April 2011  
E-MAIL: holly.n.costa@usace.army.mil

**1. INTRODUCTION:** Topaz Solar Farm LLC (POC: Ashley Kenny; 510.626.7480), 1111 Broadway, 4<sup>th</sup> Floor, Oakland, California, 94607, through its agent, Althouse and Meade, Inc. (POC: LynneDee Althouse; 805.237.9626), 1602 Spring Street, Paso Robles, California 93446, has applied to the U.S. Army Corps of Engineers (USACE), San Francisco District, for a Department of the Army Permit to discharge fill material into jurisdictional waters of the United States to construct a 550 megawatt solar photovoltaic (PV) energy generating facility. The Topaz Solar Farm (Project) would be constructed on approximately 3,500 acres within approximately 9,700 contiguous acres (Project Site) under private ownership on the Carrizo Plain in eastern San Luis Obispo County, California. This Department of the Army permit application is being processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*).

This Public Notice has been revised at the request of the applicant to clarify the Corps' proposed actions and responsibilities under the National Environmental Policy Act, as USACE is *not* the lead federal agency for this project. It also has updated information on the Environmental Impact Statement being prepared by the Department of Energy.

## 2. PROPOSED PROJECT:

**Basic Project Purpose:** The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by

USACE to determine whether the project is water dependent. The basic project purpose is to increase the availability of electricity generated from renewable energy sources through the construction of a photovoltaic (PV) solar facility and associated transmission and support facilities that interconnect with the Morro Bay-Midway 230 kV transmission line.

**Overall Project Purpose:** The overall project purpose serves as the basis for the Section 404(b)(1) alternatives analysis, and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, while allowing a reasonable range of alternatives to be analyzed. The overall project purpose is to increase the availability of electricity generated from renewable energy sources through the development, in a high-solar resource area, of a 550 megawatt (MW) photovoltaic (PV) solar facility and associated transmission and support facilities for interconnection to the Morro Bay-Midway 230 kV transmission line within eastern San Luis Obispo County, California.

The Project will generate 550 megawatts of power for the State's electrical power grid, which is enough to provide power to 100,000 to 150,000 households. By producing this sizable amount of electricity through PV generation, the Project will address the public and private need to reduce consumption of fossil fuel and reduce the carbon footprint associated with the generation of energy, as well as provide additional electricity to meet current

and future public and private energy needs. Additionally, the generated electricity will support achievement of California's Renewables Portfolio Standard that 20 percent of the state's electricity be supplied by renewable resources, as well as support the Governor's Executive Order that California obtain 33 percent of its electricity from renewable resources by 2020.

**Project Site Location:** The Project Site is in an unincorporated portion of eastern San Luis Obispo County, California, adjacent to Highway 58 and east of Bitterwater Road (Figures 1 and 2). The boundary straddles Highway 58 between Bitterwater Road and the northern terminus of Soda Lake Road, in relatively flat farm fields west of the Temblor Range and east of the San Juan Hills and La Panza Range. The northern limit of the Project Site is 5.5 miles north of the southern boundary. The western limit is 5 miles from the eastern boundary. The boundary "stair-steps" along the eastern side to avoid areas with significant topographic relief. The western boundary avoids relatively small (60-acre) residential parcels near Highway 58, and hilly ground in the southwest.

Approximate latitude and longitude coordinates for the center of the Project Site are 35.381121° N /120.058898° W in the La Panza NE United States Geological Survey (USGS) 7.5-minute quadrangle. The Project Site is in the La Panza NE and California Valley 7.5-minute topographic quadrangles, on all or portions of sections 7, 8, 15 to 22, 26 to 29, and 32 to 35 of Township 29 South, Range 18 East; and sections 4 and 5 of Township 30 South, Range 18 East, Mount Diablo Base and Meridian.

**Project Site Description:** The majority of the Project Site consists of rolling hills and gently sloping plains, while the northeastern edge of the Project Site has some larger, steeper hills. Elevations range from approximately 1,998 to 2,135 feet above mean sea level. Figure 2 is a USGS topographic map of the Project Site.

Approximately 6,205 acres of the Project Site are currently dry-farmed with barley or wheat. The dry-farmed production cycle uses summer fallow, a

method widely used in dry climates to conserve soil moisture; fields are planted every other year, and plowed and left bare during years they are not planted. Cattle graze on approximately 3,465 acres of annual grassland that was historically farmed. The remainder, approximately 30 acres of the 9,700 acre total, includes roads and structures.

Under current land use, the Project Site is dominated by upland plant species. Dominant plant communities include dry-farmed grain crops, fallow farmland used as rangeland, and annual grassland habitat. California annual grassland habitat is a dry seasonal habitat consisting of low-lying annual grasses and forbs. It is dominated by non-native and native annual grass species, with varying percentages of native and introduced forbs due to different topography, soils, grazing regimes, and farming history. Wetland vegetation is associated with a few ponded areas in drainages and a small number of localized depressions which typically pond for long periods during normal and above normal rainfall years.

The Project Site is in the Carrizo Plain watershed (HUC 18060003), a 445-square-mile closed basin. Most of the ephemeral drainages that extend across the Project Site are historically interconnected and flow during significant rainfall events toward the main drainage, which drains to Soda Lake, a shallow, ephemeral alkali lake in the Carrizo Plain National Monument. Soda Lake is approximately 9.6 miles southeast of the point where the main drainage leaves the Site. The main drainage is the principal drainage that flows into Soda Lake.

A combination of tectonic activity, semiarid climate, and unique soils in the Carrizo Plain has led to development of many short ephemeral channels that dissipate into gently rolling fields. Stormwater moves as sheet flow across fields and re-enters a few key drainages that convey concentrated flows toward Soda Lake. Water flowing down relatively steep slopes (e.g., hills at the north end of the Project Site) forms distinct channels that become wide swales where the landform is relatively flat in the middle of the Project Site. Water concentrates in the bottom of the valley, and flows in the main drainage toward

Soda Lake, carrying sediment, dissolved solids, and other runoff from farmed fields and grazing lands.

**Project Description:** The applicant proposes to construct and operate a solar photovoltaic (PV) energy generating facility, the Topaz Solar Farm (Project), on lands under private ownership within the Carrizo Plain in eastern San Luis Obispo County, California. The applicant has a power purchase agreement (PPA) with Pacific Gas and Electric Company (PG&E) that allows for transmission access to the Morro Bay-Midway 230 kV transmission line. The transmission line runs west to east across the Project Site, facilitating direct access without the need for a generation tie-in line. The Project Site comprises 9,700 acres, of which approximately 3,500 acres would be fenced as numerous distinct areas to enclose the solar farm. The fenced PV facilities would be set back from Highway 58, the nearby Carrisa Plains Elementary School, and the main drainage, which conveys floodwaters from the Project Site to Soda Lake. All facilities would be set back from wetlands. The location and proposed configuration of the Project Site are shown on Figures 1 through 3.

The Project would include:

- Solar field of ground-mounted PV modules that collect solar radiation to produce electricity;
- Electrical collection system that converts generated power from direct current (DC) to alternating current (AC) and delivers it to the Project Substation;
- Project Substation that collects and converts the generated power from 34.5 kilovolt (kV) to 230 kV for delivery via a new onsite Pacific Gas and Electric Company (PG&E) Switching Station to PG&E's existing Morro Bay-Midway 230 kV transmission line;
- PG&E Switching Station;
- Operations and Maintenance (O&M) facility near the Project Substation;
- Solar Energy Learning Center near Carissa Plains Elementary School designed to accommodate students and visitors during Project operation; and
- Access and maintenance roads.

*Solar Field.* The Project's solar field would consist of up to 460 arrays of PV modules with the cumulative capacity to generate 550 MW of power at the point of delivery to PG&E, under peak solar conditions. Each solar array would generate at least 1.26 megawatts alternating current (MWAC) of power and would consist of at least 20,000 PV modules and one power conversion station. Each power conversion station would consist of two inverters in an enclosure and one adjacent transformer. PV modules would be mounted on steel support structures called tables. Tables would be attached at an angle to a bracket on vertical steel posts spaced approximately 8 to 10 feet center-to-center and driven into the ground to a depth of 4 to 7 feet below grade. Once mounted, the front of each table would be approximately 1.5 feet above grade, while the rear would be approximately 5.5 feet above grade. The distance from the ground to the top of the PV module table may vary depending on the topography.

The applicant proposes to install piles to support the PV modules in five jurisdictional drainages. The rows of PV modules would be mounted on 2.12-square inch area metal piles, which would be spaced 10 feet apart in the east to west direction and 14 feet apart in the north to south direction. The PV arrays are designed to have as few support piles as is feasible while still providing the necessary stability for windloading and potential seismic events. Figure 5 shows a typical array configuration. On the basis of 33 CFR § 323.3(c)(2) (Pilings), the use of piles would not have the effect of a discharge of fill material and therefore would not require Section 404 authorization.

*Electrical Collection System.* The PV modules would be electrically connected by wiring harnesses running along the bottom of each table to combiner boxes that collect power from several rows of modules. The combiner boxes would feed direct current (DC) power from the modules to the power conversion stations (PCS) via underground cables. The inverters in the PCS would convert the DC electric input into AC (alternating current) electric output, and the isolation transformer would step the

current up to 34.5 kV for on-site transmission of the power to the PV combining switchgear (PVCS). Electric feeder cables would be installed in trenches that bisect each array (Figure 4).

Electrical collector cables would connect the power output from the PVCSs to the onsite Project Substation. Collector cables would be installed in underground trenches (Figure 3).

*Project Substation.* The Project Substation would collect the output and transform it from 34.5 kV to 230 kV. The Substation would occupy approximately 4.5 acres adjacent to the PG&E Switching Station, where the 230 kV output of the Substation would be connected and delivered to the Morro Bay-Midway 230 kV transmission line.

*PG&E Switching Station.* PG&E's existing Morro Bay-Midway 230 kV transmission line runs west to east across the Project Site. It extends from PG&E's Morro Bay Substation in the city of Morro Bay in western San Luis Obispo County to its Midway Substation in Buttonwillow, Kern County. The new PG&E Switching Station for the Project would be just north of and adjacent to the Morro Bay-Midway 230 kV transmission line. The Switching Station work area would be approximately 600 feet by 650 feet (9 acres) with a buffer zone and would be enclosed by a fence and separate from the adjacent Topaz Solar Farm Project Substation. The Switching Station would require additional area for the incoming and existing transmission line. Estimated dimensions for the Switching Station and the buffer zones that include the new transmission poles are 880 feet by 715 feet (about 14.5 acres). Two new 100- to 125-foot-high double-circuit lattice steel transmission towers and four steel poles would be installed within or adjacent to PG&E's transmission line right of way to accommodate the looping of the 230-kV line into the Switching Station. The towers and poles would be situated on either side of the new Switching Station to position the transmission conductors for proper ingress and egress to the station. PG&E would be responsible for the construction of the Switching Station and the interconnection to the Morro Bay-Midway 230-kV line.

*PG&E Reconductoring Project.* Topaz has interconnection agreements in place for the first 400 MW of Project capacity. The California Independent System Operator (CAISO) has determined that local network upgrades would be required to accommodate the Project's remaining 150 MW, as well as a second solar project in the Carrizo Plain – SunPower's California Valley Solar Ranch project. Network upgrades would include the reconductoring of the existing 230 kV transmission line between the new PG&E Switching Station onsite and the Midway Substation, a distance of 35 miles. Reconductoring is the process of installing new conductor wire on existing towers to increase the capacity of an existing transmission line and is considered part of this permit application as defined by NEPA and Section 404 Clean Water Act (CWA) review requirements.

*Operations and Maintenance Facility.* An approximately 11,250 square foot operations and maintenance (O&M) facility with associated parking would be constructed near the Project Substation for parts storage, security, and project monitoring. A leach field and septic system would be sited adjacent to the O&M facility to serve Project sanitary needs.

*Solar Energy Learning Center.* Topaz would construct and operate a Solar Energy Learning Center onsite. Topaz would work with local educators to develop exhibits, tours, and educational programs that would complement existing science and sustainability curricula. The center would be able to accommodate several class field trips per day, as well as 100 to 200 visitors per month. The center would be an ADA-compliant, 30-foot-by-30-foot enclosed building with restrooms, and would display a scale model of the solar facilities and other exhibits on solar power.

**Project Impacts:** Permanent fill impacts of 0.089 acre would result from construction of 10 at-grade road crossings and associated scour arrestors through ephemeral drainages (Figure 3). The 284.3 cubic yards of fill would consist of clean fill material, rip-rap, and pre-cast articulating concrete blankets with steel cable and rebar.

Temporary fill impacts of 0.045 acre (365 cubic yards) would result from the excavation of trenches in which to bury electrical collector and feeder cables.

No direct fill impacts to jurisdictional wetlands or other special aquatic sites would occur as a result of the Project.

**Proposed Mitigation:**

*Avoidance.* Project planning following the EPA Section 404 (b)(1) Guidelines resulted in avoiding all impacts to wetlands, which are EPA “special aquatic sites”; no other special aquatic sites are present onsite. Additionally, all building structure pads and work areas have been oriented so as to avoid impacts to other waters of the U.S.

*Minimization.* Given the linear and scattered nature of the ephemeral drainages throughout the site, impacts to these “other waters of the U.S.” were found to be unavoidable in designing access roads for construction and future project operation (permanent impacts), and trenches for underground electrical lines (temporary impacts). Minimization of unavoidable impacts to the ephemeral drainages includes:

- Minimizing the number of permanent at-grade road crossings to the maximum extent practicable;
- Minimizing roadway width to the maximum extent practicable in consideration of load requirements, vehicle type, and width and safety requirements;
- Utilizing an at-grade temporary trenching crossing approach to underground the electric cables;
- Minimizing ground disturbance by using piles where drainages are over-crossed by PV modules;
- Minimizing ground disturbance during construction and operations in areas adjacent to wetlands and ephemeral drainages;
- Using low-impact Project operations and maintenance adjacent to waters;
- Covering well-used roads on the Project Site with gravel to minimize sediment transport;

- Minimizing trash production in order to protect wildlife from waste materials;
- Burying natural rock scour arresters at crossings and other critical high energy surface water flow locations;
- Installing an “open cell, articulated concrete blanket” at access road crossings to reduce sedimentation;
- Re-vegetating tilled agricultural lands converted to Project use, and maintaining grassland cover during PV facility operation.

*Compensation.* The Applicant proposes to compensate for the loss of other waters of the U.S. (ephemeral drainage habitat) through in-kind habitat restoration (re-establishment) of a portion of the main drainage at a minimum ratio of 2:1 for permanent impacts of 0.089 acre and at a ratio of 1:1 for temporary impacts of 0.045 acre. This would result in reestablishing a minimum of 0.223 acre of ephemeral drainages by rebuilding a former portion of an aquatic resource (the main drainage), resulting in a gain in aquatic resource area and functions. The re-established drainage area would be revegetated with native vegetation typical of drainages within the Project Site. The re-established habitat would provide at a minimum functions comparable to those prior to project impacts. Implementing compensatory mitigation in the main drainage would expand its flood storage and desynchronization functions and would reduce flood damage by attenuating floodwaters following significant precipitation events. They would be protected from surrounding upland land use activities by an average 50-foot upland buffer. The mitigation area and buffer would be protected from future development by a recorded conservation easement.

**3. STATE AND LOCAL APPROVALS:**

**Water Quality Certification:** State water quality certification or a waiver is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 *et seq.*). The

applicant will submit an application to the California Regional Water Quality Control Board (RWQCB) to obtain water quality certification for the project. No Department of the Army Permit will be issued until the applicant obtains the required certification or a waiver of certification. A waiver can be explicit, or it may be presumed, if the RWQCB fails or refuses to act on a complete application for water quality certification within 60 days of receipt, unless the District Engineer determines a shorter or longer period is a reasonable time for the RWQCB to act.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, Central Coast Region, 895 Aerovista Place, Suite 101, San Luis Obispo, California 93401, by the close of the comment period.

**Coastal Zone Management:** Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq.*), requires a non-Federal applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the State's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate State agency has issued a Consistency Certification or has waived its right to do so. The project does not occur in the coastal zone or within the San Francisco Bay, and a *preliminary* review by USACE indicates the project would not likely affect coastal zone resources. This presumption of effect, however, remains subject to a final determination by the California Coastal Commission.

Coastal zone management issues should be directed to the District Manager, California Coastal Commission, Central Coast District Office, 725 Front Street, Suite 300, Santa Cruz, California 95060-4508, by the close of the comment period.

**Other Local Approvals:** The applicant will be applying for the following additional governmental authorizations for the project: Lake and Streambed Alteration Agreement and Endangered/Threatened Species Take Authorization from the California

Department of Fish and Game; Portable Engine Registration from California Air Resources Board; CEQA Environmental Impact Report certification; Grading Permit; Building Permit; and Conditional Use Permit from the San Luis Obispo County; Authority to Construct and Permit to Operate (new stationary source) and Fugitive Dust Permit from San Luis Obispo County Air Pollution Control District.

#### 4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

**National Environmental Policy Act (NEPA):** The applicant has submitted an application to the U.S. Department of Energy (DOE) under the federal loan guarantee program pursuant to the Energy Policy Act of 2005 to support construction of the proposed Project. DOE is the lead agency for National Environmental Policy Act (NEPA) review of the Project. The Corps will be a "cooperating agency" for preparation of the NEPA Environmental Impact Statement (EIS).

DOE is preparing an EIS pursuant to the National Environmental Policy Act of 1969, as amended (NEPA), the Council on Environmental Quality (CEQ) NEPA regulations, and the DOE NEPA implementing procedures to assess the potential environmental impacts of its proposed action of issuing a federal loan guarantee to Topaz.

The Draft EIS is currently available at <http://www.nepa.energy.gov/1676.htm>. Interested parties will be able to comment on this Draft EIS during the 45-day comment period that will begin when the Environmental Protection Agency publishes a Notice of Availability of this Draft EIS in the *Federal Register*. During this public comment period, DOE will convene a public hearing that will include a question-and-answer session, a brief overview presentation on the Draft EIS, and an opportunity for members of the public to provide oral and written comments for the record. The date, time and location of the public hearing will be posted on the Loan Programs Office's Public Involvement Website: [www.lgprogram.energy.gov/NEPA\\_PI.html](http://www.lgprogram.energy.gov/NEPA_PI.html) and the DOE NEPA website: [www.nepa.energy.gov](http://www.nepa.energy.gov)

and will be published in local newspapers at least 15 days prior to the hearing.

To obtain additional information about this EIS or to receive a copy of the draft EIS when it is issued, contact Angela Colamaria by telephone: 202-287-5387; toll-free number: 800-832-0885 ext. 75387; or electronic mail: [Angela.Colamaria@hq.doe.gov](mailto:Angela.Colamaria@hq.doe.gov). The final EIS will be incorporated into the decision document that provides the rationale for issuing or denying a Department of the Army Permit for the project.

At the conclusion of the public comment period, USACE will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's Regulations at 40 C.F.R. Parts 1500-1508, and USACE Regulations at 33 C.F.R. Part 325. The final decision document, with the incorporated EIS analysis, will address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of USACE and other non-regulated activities USACE determines to be within its purview of Federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division.

**Endangered Species Act (ESA):** Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. § 1531 *et seq.*), requires Federal agencies to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to insure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. USACE has made a preliminary determination that the project site is not within any listed species critical habitat, but that the following species currently listed or proposed for listing under the federal Endangered Species Act are known to occur on the project site:

- San Joaquin kit fox (*Vulpes macrotis mutica*): ESA Endangered
- Longhorn fairy shrimp (*Branchinecta longiantenna*): ESA Endangered
- Vernal pool fairy shrimp (*Branchinecta lynchi*): ESA Threatened
- Mountain plover (*Charadrius montanus*): ESA Proposed Threatened

Presence of San Joaquin kit fox within and near the Project site was determined by a scat survey, DNA analysis of scat collections and visual surveys. There is a high variation in habitat quality for kit fox utilization within the Project Site, ranging from good to poor. The spring 2010 survey data for kit fox natal dens found 2 occupied dens located in the extreme southern and eastern ends of the Project study area. The den sites are located in annual grassland habitat that has not been plowed in over 20 years. Survey data from winter 2010 indicates these areas are still occupied by kit fox. The Project may adversely affect San Joaquin kit fox through direct and/or indirect effects to individuals, populations and habitat, even though the overall long-term effect of the Project on kit fox is expected to be beneficial.

Longhorn fairy shrimp was detected in two pools within the Project Site in the south half of Section 20, a farm field in active cultivation with dry-farmed grain. Vernal pool fairy shrimp was detected in 11 vernal pools in Section 4, in the extreme south end of the Project Site. Although the likelihood is extremely low, the Project could potentially adversely affect these species during construction or operation of the facility.

Mountain plovers were found on four occasions between January and March 2010, with a high count of 17 birds observed in the eastern end of Section 35 in March. The Project is not expected to appreciably reduce the reproduction numbers or distribution of the wintering mountain plover population in the Carrizo Plain region; therefore the Project may affect, but is not likely to adversely affect this species.

In addition, bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) (both non-nesting) were occasionally detected foraging within the Project Site, but were not found to be nesting. Since bald eagles were delisted from the ESA in 2007, the Bald and Golden Eagle Protection Act (Eagle Act), as implemented by the USFWS, provides the primary legal protection for this species. The golden eagle, although never listed under the ESA, is also governed by the Eagle Act. The Project may affect the bald eagle and golden eagle. However the potential adverse effect would be discountable (i.e., extremely unlikely to occur and essentially not expected to occur) and insignificant (i.e. will not reach a scale where “disturbance” or “take” occurs) due to factors analyzed and explained in the project Biological Assessment.

As the lead federal agency for this project, DOE initiated formal consultation with the USFWS under Section 7 of the federal Endangered Species Act (ESA), for potential impacts to federally listed species, by letter dated February 17, 2011. USACE will be relying upon and utilizing the results of this Section 7 consultation for its permit decision. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project. To complete the administrative record and the decision on whether to issue a Department of the Army Permit for the project, USACE will obtain all necessary supporting documentation from DOE and the applicant concerning the consultation process.

**Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA):** Section 305(b)(2) of the MSFCMA of 1966, as amended (16 U.S.C. § 1801 *et seq.*), requires Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. No

fishery resources occur within the Project Site as the site contains no permanent or semi-permanent bodies of water, only wetlands and ephemeral drainages.

**Marine Protection, Research, and Sanctuaries Act (MPRSA):** Section 302 of the MPRS of 1972, as amended (16 U.S.C. § 1432 *et seq.*), authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the Act. No Department of the Army Permit will be issued until the applicant obtains the required certification or permit. The project does not occur in sanctuary waters, and a *preliminary* review by USACE indicates the project would not likely affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce, or his designee.

**National Historic Preservation Act (NHPA):** Section 106 of the NHPA of 1966, as amended (16 U.S.C. § 470 *et seq.*), requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of the Act further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance. As the lead federal agency for this project, DOE will consult with the State Historic Preservation Officer regarding Section 106 of the NHPA. USACE will be relying upon and utilizing the results of these Section 106 consultations for its permit decision. If unrecorded archaeological resources are discovered during

project implementation, those operations affecting such resources will be temporarily suspended until DOE concludes Section 106 consultation with the State Historic Preservation Officer or the Tribal Historic Preservation Officer to take into account any project related impacts to those resources.

**5. COMPLIANCE WITH THE SECTION 404(b)(1) GUIDELINES:** Projects resulting in discharges of dredged or fill material into waters of the United States must comply with the Guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C. § 1344(b)). An evaluation pursuant to the Guidelines indicates the project is not dependent on location in or proximity to waters of the United States to achieve the basic project purpose. This conclusion raises the (rebuttable) presumption of the availability of a less environmentally damaging practicable alternative to the project that does not require the discharge of dredged or fill material into special aquatic sites although the project as proposed, is not expected to discharge into such sites. The applicant has submitted an analysis of project alternatives which is being reviewed by USACE.

**6. PUBLIC INTEREST EVALUATION:** The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety,

food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

**7. CONSIDERATION OF COMMENTS:** USACE is soliciting comments from the public; Federal, State and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by USACE on the project from this notice and from the Final EIS being prepared by DOE will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the project.

**8. SUBMITTING COMMENTS:** During the specified comment period, interested parties may submit written comments to Ms. Holly Costa, San Francisco District, Regulatory Division, 1455 Market Street, 16<sup>th</sup> Floor, San Francisco, California 94103-1398; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Regulatory Permit Manager. Comments may include a request for a public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent, or by contacting the Regulatory Permit Manager by telephone or e-mail cited in the public notice letterhead. An electronic version of this public notice may be viewed under the *Current Public Notices* tab on the USACE website: <http://www.spn.usace.army.mil/regulatory/>.

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Appendix I  
Contractor Disclosure  
Statement

**NATIONAL ENVIRONMENTAL POLICY ACT DISCLOSURE STATEMENT  
FOR PREPARATION OF THE *TOPAZ SOLAR FARM*  
ENVIRONMENTAL IMPACT STATEMENT**

The Council of Environmental Quality regulations at Title 40 of the *Code of Federal Regulations* (CFR), Section 1506.5(c), which have been adopted by the U.S. Department of Energy (10 CFR 1021), require contractors and subcontractors who will prepare an environmental impact statement to execute a disclosure specifying that they have no financial or other interest in the outcome of the project.

"Financial or other interest in the outcome of the project" is defined as any direct financial benefits, such as a promise of future construction or design work in the project, as well as indirect financial benefits that the contractor is aware of.

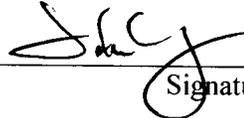
In accordance with these requirements, the offeror and any proposed subcontractors hereby certify as follows, to the best of their actual knowledge as of the date set forth below:

- a) X Offeror and any proposed subcontractors have no financial or other interest in the outcome of the project.
  
- b)    Offeror and any proposed subcontractors have the following financial or other interest in the outcome of the project and hereby agree to divest themselves of such interest prior to award of this contract, or agree to the attached plan to mitigate, neutralize, or avoid any such conflict of interest.

Financial or Other Interests

- 1.
- 2.
- 3.

Certified by:

  
\_\_\_\_\_  
Signature

\_\_\_\_\_  
John King  
Name

\_\_\_\_\_  
Principal  
Title

Environmental Management and Planning Solutions, Inc.  
Company

\_\_\_\_\_  
2/23/2011  
Date

**NATIONAL ENVIRONMENTAL POLICY ACT DISCLOSURE STATEMENT FOR  
PREPARATION OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE  
US DEPARTMENT OF ENERGY LOAN GUARANTEE  
TO ROYAL BANK OF SCOTLAND FOR DEVELOPMENT OF THE  
TOPAZ SOLAR FARM, SAN LUIS OBISPO COUNTY, CALIFORNIA**

The Council of Environmental Quality regulations at Title 40 of the *Code of Federal Regulations* (CFR), Section 1506.5(c), which have been adopted by the U.S. Department of Energy (10 CFR 1021), require contractors and subcontractors who will prepare an environmental impact statement to execute a disclosure specifying that they have no financial or other interest in the outcome of the project.

"Financial or other interest in the outcome of the project" is defined as any direct financial benefits, such as a promise of future construction or design work in the project, as well as indirect financial benefits that the contractor is aware of.

In accordance with these requirements, the offeror and any proposed subcontractors hereby certify as follows, to the best of their actual knowledge as of the date set forth below:

- a)  Offeror and any proposed subcontractors have no financial or other interest in the outcome of the project.
  
- b)  Offeror and any proposed subcontractors have the following financial or other interest in the outcome of the project and hereby agree to divest themselves of such interest prior to award of this contract, or agree to the attached plan to mitigate, neutralize, or avoid any such conflict of interest.

Financial or Other Interests

- 1.
- 2.
- 3.

Certified by:



Signature

Bart Wright

Name

Principal

Title

Lohnes + Wright.

Company

3/7/11

Date

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# Appendix J

## Distribution List

## **DRAFT EIS DISTRIBUTION LIST**

**Topaz Solar Farm EIS  
Distribution List**

Name	Agency	Number of Paper Copies (with Appendices on CD)	Number of CDs	Number of Summaries	Letter of EIS Availability
<b>Elected Officials</b>					
<i>Federal</i>					
The Honorable Barbara Boxer	US Senator				
The Honorable Dianne Feinstein	US Senator				
The Honorable Kevin McCarthy	US Representative, 22 <sup>nd</sup> District				
The Honorable Lou Capps	US Representative, 23 <sup>rd</sup> District				
The Honorable Jim Costa	US Representative, 20 <sup>th</sup> District				
<i>US Congressional Appropriations Committees</i>					
The Honorable Dianne Feinstein	Chairman Subcommittee on Energy and Water Development Committee on Appropriations US Senate				
The Honorable Lamar Alexander	Ranking Member Subcommittee on Energy and Water Development Committee on Appropriations United States Senate				
The Honorable Rodney P. Frelinghuysen	Chairman Subcommittee on Energy and Water Development, and Related Agencies Committee on Appropriations United States House of Representatives				
The Honorable Peter J. Visclosky	Ranking Member Subcommittee on Energy and Water Development, and Related Agencies Committee on Appropriations United States House of Representatives				

**Topaz Solar Farm EIS  
Distribution List**

Name	Agency	Number of Paper Copies (with Appendices on CD)	Number of CDs	Number of Summaries	Letter of EIS Availability
<i>US Congressional Authorizing Committees</i>					
The Honorable Jeff Bingaman	Chairman Committee on Energy and Natural Resources United States Senate	1			
The Honorable Barbara Boxer	Chairman Committee on Environment and Public Works United States Senate	1			
The Honorable Lisa Murkowski	Ranking Member Committee on Energy and Natural Resources United States Senate	1			
The Honorable James M. Inhofe	Ranking Member Committee on Environment and Public Works United States Senate	1			
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Cory Black	Douglas & Janice Edwards	Kapeleech
Jeffrey Blackman	Leon E. Elwell	Ermina Karim
Andrew Blodgett	Denise Emebon	Kaskeldt Residence
Steve Bogger	Gholam Fatemi	Janet Keith
John & Evlyn Bonca	Iain Fisher	John Kessler
Rick Boothe	Forrest Residence	Kevin Kester
Elay & Carol Bowman	Richard Forth	Michael Khus-Zarate
Luke Boyer	Tom Foss	Sean Kiernan
Robert Boyer	Prince Frazier	Janet R Klock
Teresa Brander	Don Freeborn	Janet Klock
Joseph Brolin	Calvin & Louise French	John Knight
Tisha Bryant	Friend Residence	Kevin Knowles
Clinton I. Bullard	Gallagher Residence	Rachael Koss
Jerry Bunin	George Galvan	Orchell Krier
Pam Burgett	Pete & Mary Giambalvo	Kuhnle Residence
	Marie Giusto	Randall L Kuhnle

Charles Kuhnle  
Luke Lathrop  
Thomas Lebens  
Estaban Ledezma  
Dawn Legg  
Mike A Leprino Trust  
Alex Levinson  
Albert Lewis  
Brandon Liddell  
Alfred Look  
Shirley Macagni  
Maher Residence  
Michael Manchak  
Lisa Marrone  
Jackie Martin  
Ken & Debra Martin  
Rosa Martinez  
Janet Martinez  
Don Maruska  
Danilo & Edita Masaya  
Isaac Matta  
Colman & Lydia Matyas  
Louise Mayhew  
Ruth Mc Laughlin  
Sarah Mcbride  
Kimberly Mcgrath  
Roy Mckee  
Paul Mcmillan  
Greg Mcmillan  
John Mcreynolds  
Steve Mcvicar  
Mcvicar Residence  
Rosendo & Carmen Medina  
Patricia Miller  
Glenn A Miller  
Loreno Montenegro  
Josefina Montenegro  
John Montgomery  
Melissa Mooney  
Allen Moore  
Bob Morrison  
Babak Naficy  
S. Natcher  
Joseph Nguyen  
Nolan Residence  
Pati & Bob Nolan  
Nate & Nicole Nolen  
Normandin Residence  
Andrew & Silvia Nunez  
Mark J. Nye

Tom O'Malley  
Lorelei Oviatt  
Robyn Padgett  
George Paquette  
Steven Paquette  
Brian Parker  
Al Parker  
Randall & Shelly Parker  
J J Parsons  
Vince Pasquini  
Benjamin J. Peters  
Jim & Roberta Petersen  
Peyron Residence  
Mike Post  
Robert E Pritchard  
Larry C Pritchard  
Morgan Rafferty  
Barbara I Ratekin  
Santos & Alberta Reyes  
Morgan Richard  
B.K. Richard  
Sabrina Roberts  
Rudy Rodriguez  
Flora Rodriguez  
John Rogers  
Deborah L. Rogers  
John Romanini  
Don & Gaynelle Rose  
Don & Gaynelle Rowlett  
Heirs of Marcus Rudnick  
Gary Ruggerone  
John A. Ruskovich  
Paul Sacks  
Karl Salinas  
Richard Savage  
Joann Sellington  
Settle Residence  
Sill Properties, Inc.  
Steve Settle  
Edwin Silva  
Silva Edwin  
Richard & Estrella Simpson  
Thomas E Simpson  
Thomas & Jean Simpson  
Rob Simpson  
Dawn Skinner  
Julie M Slate  
Evalena C Smith  
David Sneed  
Sokkary Residence

Vicki Stach  
Starr Residence  
Harley Stegman  
John R Stephenson  
Stu Strobridge  
Kathleen Sumida  
Michael Sumter  
Cindy Switzer  
Kenneth Tab  
Takle Residence  
William Thoma  
Donald T Toretta  
Leonard Torgerson  
Traver Residence  
Pamela Tucker  
Grain & Cattle Twisselman  
Carl F & Dorothy  
Twisselman Residence  
Ken Twisselman  
Rowland W Twisselman  
Darrell & Nola Twisselman  
Debra Twisselman  
Rowland & Catherine  
Twisselman  
Stacey Twisselman  
Rowland W Twisselman  
Carl F Twisselman  
K.C. Twisselman  
Elena Twisselman-Clark  
Cindy Utter  
Vanessa Vasquez  
Vaughan Residence  
Eva Vaughn  
Delia Velasquez  
Leona Wadhams  
Dr. David Warner  
Sharee Washer  
Larry Werner  
Ray Weruth  
Mike Whiteford  
Isaac & Janet Wiire  
Raymond Williams  
Kim Williams  
Michael Winn  
Kenneth Wreden  
Dorothy T Yard  
Fred Young  
Zissa Residence  
Shawn Zovod  
Rachel Zurer

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**Appendix K**  
**County Mitigation Monitoring**  
**and Reporting Plan**

# Exhibit 7 Mitigation Monitoring and Reporting Plan

(Excerpted from the Topaz Solar Farm Project Final EIR, March 2011)

## Final EIR Appendix 18 Topaz Solar Farm Project

As a condition of approval of the Conditional Use Permit (CUP) for the Topaz Solar Farm Project, adopted mitigation measures shall be implemented as specified below in this Mitigation Monitoring and Reporting Plan (MMRP). The MMRP is implemented as a requirement of CEQA (Guidelines Section 15097) and also to comply with similar requirements in the County's Land Use Ordinance (22.32.030(b)) which requires implementation of an Environmental Quality Assurance Program.

This MMRP for the proposed project will be in place through all phases of the project, including design and construction, and will help ensure that project objectives are achieved. The County shall be responsible for administering the MMRP and ensuring that all parties comply with its provisions. The County may delegate monitoring activities to staff, consultants, or contractors. The County also will ensure that monitoring is documented through periodic reports and that deficiencies are promptly corrected. The designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to rectify problems, including, but not limited to revocation of the approved CUP.

Pursuant to AB 3180, this MMRP was prepared and is accompanied by the associated report forms utilized to verify compliance with individual mitigation measures. This MMRP identifies each mitigation measure by discipline, the entity (organization) responsible for its implementation, the report/permit/ certification required for each measure, and an accompanying County MMRP form used to certify completion. Certain inspections and reports may require preparation by qualified individuals, and these are specified as needed. The timing and method of verification for each measure is also specified.

### Responsibilities of the Parties

Responsibility for implementing adopted mitigation measures and APMs, and for reporting on the implementation of these measures, rests with the Applicant. The County has primary responsibility for ensuring that the measures are implemented as adopted by the Planning Commission. The County may use its monitoring authority by evaluating written reports and plans, and also by active field evaluation of activities at the project site to ensure compliance with the requirements of adopted measures.

### Compliance and Non-Compliance Violation Levels

Project compliance and non-compliance violation levels and the specific corrective actions are defined as follows:

- **Compliance.** At this level indicates that all mitigation measures and permit conditions are being complied with and there are no violations. No corrective action is necessary.
- **Level 1 Non-Compliance.** One aspect of a mitigation measure has not been complied with resulting in only partial implementation of a mitigation measure, but no significant impact. An oral warning shall be issued to Applicant's Environmental Coordinator (or assigned designee) and corrective action shall be required within a stated maximum period, to be determined by the County's Environmental Coordinator. If corrective action is not taken within the stated period, a Memorandum of warning will be issued.
- **Level 2 Non-Compliance.** One or more aspects of a mitigation measure have not been complied with, making the mitigation ineffective and resulting in minor impacts. If allowed to continue, this non-compliance could result in a significant impact over time. An oral warning

followed by a Memorandum of warning shall be submitted to the Applicant's Environmental Coordinator (or assigned designee). Corrective action shall begin by the next construction day. If corrective action is not begun by the next construction day, a Non-Compliance Report shall be issued.

- **Level 3 Non-Compliance.** One or more of the aspects or a mitigation measure are not complied with and the implementation of a mitigation measure is deficient or non-existent, resulting in significant impact(s), or there is immediate threat of major, irreversible environmental damage or property loss. An oral warning, followed by a Non-Compliance Report, shall be submitted to the Applicant's Environmental Coordinator (or assigned designee). Corrective action shall begin immediately.

Based on the severity of a given infraction or pattern of non-compliance activity, the County's Environmental Coordinator has the authority to issue a temporary stop work order during project construction. If a shutdown of construction activity occurs, construction may resume based on approval by the County's Environmental Coordinator. The Environmental Coordinator's representative at the project site has the authority to order a temporary stop to work if he/she determines that a serious non-compliance event is occurring, personnel safety is at risk, or damage to resources is occurring, and if the Environmental Coordinator or other senior County official is unavailable.

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
<b>Monitoring Process</b>				
EM-1	Applicant funding for environmental monitoring	<ul style="list-style-type: none"> <li>• Provide funding to County of San Luis Obispo to retain an environmental monitor for all measures requiring environmental mitigation.</li> <li>• Confirm that the mitigation monitoring program is in compliance with County Conditions of Approval and EIR mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits.</li> <li>• Monitoring will occur throughout construction, operation, and decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall approve environmental mitigation measures and any other conditions of approval.</li> <li>• County's environmental monitor shall develop a mitigation monitoring plan that reflects the County-approved environmental mitigation measures/conditions of approval.</li> </ul>
<b>Aesthetics</b>				
AE-1.1	Opaque fencing of laydown area	<ul style="list-style-type: none"> <li>• Provide construction plans verifying opaque fences are included for any laydown areas within 0.50 miles of Highway 58.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of the fencing in the construction plans.</li> <li>• County's environmental monitor shall ensure that the fencing is installed and remains for as long as the laydown area is in use.</li> </ul>
AE-1.2:	Setback for construction parking lots	<ul style="list-style-type: none"> <li>• Provide construction plans verifying that the 500-foot setbacks of construction parking lots from Highway 58 and residents.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> <li>• Install setbacks prior to final inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of setbacks in the construction plans.</li> <li>• County's environmental monitor shall ensure that the setbacks are maintained from Highway 58 and residents.</li> </ul>
AE-1.3	Minimize construction lighting	<ul style="list-style-type: none"> <li>• Provide construction plans verifying that night lighting plan for construction and parking areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of night lighting in the construction plans.</li> <li>• County's environmental monitor shall ensure that all lighting is shielded with no upwardly directed light and is limited to construction and parking areas.</li> </ul>
AE-2.1	Maintain setback from public roads	<ul style="list-style-type: none"> <li>• Provide construction plans showing the PV arrays at a minimum distance of 500 feet from the shoulder of Highway 58, and all fencing shall be a 500-foot minimum distance wherever possible.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> <li>• Install setbacks prior to final inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of setbacks in the construction plans.</li> <li>• Building inspector will verify compliance with approved plans.</li> </ul>

<sup>1</sup> The full text of all mitigation measures is presented in each part of Section C (Sections C.1 through C.15).

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
AE-2.2	Install electric lines underground	<ul style="list-style-type: none"> <li>• Provide construction plans verifying that medium-voltage collector lines and poles that protrude above the PV arrays and within 3,000 feet of Highway 58 are installed underground.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> <li>• Install poles, towers, and electric lines underground prior to final inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of required elements on plans.</li> <li>• Building inspector will verify compliance with approved plans.</li> </ul>
AE-2.3	Provide offsite screening for residences	<ul style="list-style-type: none"> <li>• Develop a visual screening program that will fund the planting of trees or shrubs, construction of screening fencing, or other mutually acceptable provisions that will screen views of the project from occupied residences that are within one mile of the project boundary.</li> </ul>	<ul style="list-style-type: none"> <li>• Show screening program plans prior to issuance of construction permits.</li> <li>• Submit quarterly reports for as long as the program is in place.</li> </ul>	<ul style="list-style-type: none"> <li>• Work with the applicant to develop and implement a visual screening program.</li> <li>• County shall verify the submission of a quarterly report.</li> </ul>
AE-2.4	Prepare and Implement exterior lighting conditions	<ul style="list-style-type: none"> <li>• Verify development and implementation of a lighting plan for both permanent and temporary facilities</li> <li>• Ensure temporary lighting is hooded to the extent consistent with safety.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> <li>• Implement lighting plan prior to final inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of required elements on plans in consultation with the Environmental Monitor.</li> <li>• Building inspector will verify compliance with approved plans.</li> </ul>
AE-2.5	Mitigate potential reflective glare	<ul style="list-style-type: none"> <li>• Develop a glare screening plan to screen reflections of the sun from the locations where modules are on the east side of Highway 58 where the highway goes in a north/south direction and where modules face residences.</li> <li>• The plan shall include a form for the reporting and resolution of complaints which shall be submitted to the County for approval.</li> <li>• The plan shall include a process for documenting the Applicant's resolution of complaints and reporting the complaint resolution to the County for the first year of operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Show plans prior to issuance of construction permits.</li> <li>• Install screens prior to final inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of required elements on plans in consultation with the Environmental Monitor.</li> <li>• Building inspector will verify compliance with approved plans.</li> <li>• After the first year of operation, the County shall determine the frequency of the reporting, which at a minimum should be conducted every year.</li> </ul>
<b>Agriculture</b>				
AG-1.1	Construction Timing Plan	<ul style="list-style-type: none"> <li>• Develop a plan that shows the work progression of construction activities in order to minimize disruption to existing agricultural operations.</li> <li>• Coordinate with property owners of agricultural lands to determine a schedule for construction activities and to ensure that any areas damaged or disturbed by construction are restored to a condition that closely approximates conditions existing prior to disturbance.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to commencing construction/ground disturbing activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify documentation of coordination efforts.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
AG-2.1	Mitigate the loss of farmland through permanent preservation of farmlands	<ul style="list-style-type: none"> <li>• Create open space or farmland easement(s) or provide adequate funds to create easement(s) to a qualified land trust on an acre for acre basis.</li> <li>• Provide funds to compensate for reasonable administrative and ongoing monitoring costs incurred by the easement holder.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide evidence to the County that an open space or farmland easement(s) has been granted prior to issuance of construction permits.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building verifies qualifications of off-site open space or farmland easements.</li> </ul>
<b>Air Quality</b>				
AQ-1.1	Reduce Construction Vehicle Emissions (NOx, ROG, and DPM)	<ul style="list-style-type: none"> <li>• Verify development and implementation of all components of the mitigation measure to reduce construction vehicle emissions.</li> </ul>	<ul style="list-style-type: none"> <li>• During all construction/ground disturbing activities and decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>• The Air Pollution Control District (ACPD) in consultation with the Department of Planning &amp; Building will verify compliance.</li> </ul>
AQ-1.2	Develop Construction Activity Management Plan (CAMP)	<ul style="list-style-type: none"> <li>• Prepare and submit a Construction Activity Management Plan (CAMP) for review and approval, which shall include all components of the mitigation measure.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits and commencement of construction/ground disturbing activities and prior to decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>• The Department of Planning &amp; Building in consultation with the APCD will verify compliance.</li> </ul>
AQ-1.3	Reduce fugitive dust	<ul style="list-style-type: none"> <li>• Implement measures to reduce fugitive dust and ensure all measures are shown on grading and building plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits and commencement of construction/ground disturbing activities and decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>• The ACPD in consultation with the Department of Planning &amp; Building will verify compliance.</li> </ul>
AQ-1.4	Provide Funding for Offsite Mitigation of Construction Equipment	<ul style="list-style-type: none"> <li>• Develop and implement or fund a program for offsite mitigation of construction equipment that offsets the amount of emissions exceeding APCD's Tier II thresholds per quarter for ROG and NOx by reducing existing emission sources in the Carrizo Plain area and surrounding communities.</li> <li>• Provide evidence of an APCD-approved strategy or funding.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a plan prior to issuance of construction permits.</li> <li>• Initiate a project such that the emission reduction project(s) is in place prior to commencing construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>• The ACPD in consultation with the Department of Planning &amp; Building will verify compliance.</li> </ul>
AQ-2.1	Prepare Operational Dust Control Plan	<ul style="list-style-type: none"> <li>• Develop and implement an Operational Dust Control Plan that addresses and includes, where appropriate, each of the control strategies identified in construction Mitigation Measure AQ-1.3 (Reduce fugitive dust).</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to energization or final inspection of County construction permit.</li> </ul>	<ul style="list-style-type: none"> <li>• The ACPD in consultation with the Department of Planning &amp; Building will verify compliance.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
AQ-2.2	Provide Funding for Offsite Mitigation of Dust Control	<ul style="list-style-type: none"> <li>Develop and implement or fund a program for offsite mitigation of fugitive dust from existing sources in the Carrizo Plain area and surrounding communities.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits.</li> <li>The Applicant shall initiate this program such that the emission reduction project(s) are in place prior to commencing operation.</li> </ul>	<ul style="list-style-type: none"> <li>The ACPD in consultation with the Department of Planning &amp; Building will verify compliance.</li> </ul>
<b>Climate Change/Greenhouse Gas</b>				
—none—				
<b>Biological Resources</b>				
BR-1.1	Implement a Worker Training Program (WTP)	<ul style="list-style-type: none"> <li>Develop and implement WTP with all elements defined in the mitigation measure.</li> <li>Retain qualified environmental monitor to implement and enforce WTP and maintain log of all personnel who have completed WTP training.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to any construction activities on-site (including surveying) and throughout duration of construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>County will verify qualifications of the biologist preparing WTP and the environmental monitor implementing WTP.</li> <li>County will review and approve WTP.</li> </ul>
BR-1.2	Implement Best Management Practices (BMPs)	<ul style="list-style-type: none"> <li>Implement BMPs and provide annual documentation of compliance with BMPs.</li> <li>Retain an environmental monitor to ensure compliance with BMPs.</li> </ul>	<ul style="list-style-type: none"> <li>During all ground disturbance and construction-related activities.</li> </ul>	<ul style="list-style-type: none"> <li>County will review annual written report.</li> <li>County will verify qualifications of the environmental monitor.</li> </ul>
BR-1.3	Develop a Habitat Restoration and Revegetation Plan (HRRP)	<ul style="list-style-type: none"> <li>Prepare HRRP with all elements defined in the mitigation measure.</li> <li>Restore disturbed areas to pre-construction conditions or better via implementation of a HRRP.</li> <li>Retain a qualified biologist, knowledgeable in the area of annual grassland habitat restoration to prepare a HRRP and monitor the initial implementation and attainment of established success criteria.</li> <li>Conduct qualitative and quantitative monitoring and submit qualitative monitoring reports.</li> </ul>	<ul style="list-style-type: none"> <li>Prepare HRRP prior to issuance of the building permit and removal of any vegetation.</li> <li>Prior to the final project inspection, review plan compliance.</li> <li>Submit a qualitative monitoring report monthly in all restored/ revegetated areas for the first year following planting in any phase of the Project, then quarterly until completion.</li> <li>Conduct quantitative monitoring annually for years one to five or until the success criteria are met.</li> </ul>	<ul style="list-style-type: none"> <li>County shall verify qualifications of the biologist expert.</li> <li>County shall review and approve HRRP in consultation with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS).</li> <li>County Environmental Monitor shall verify on-site compliance with HRRP and review monitoring reports.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
BR-1.4	Compensate for permanent and temporary impacts to vegetative communities	<ul style="list-style-type: none"> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the Habitat Mitigation and Monitoring Plan (HMMP).</li> <li>• Prepare annual report.</li> <li>• Preserve and manage in perpetuity habitat that contains the same quality of vegetative communities impacted by the project at a 1:1 mitigation ratio.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the disturbance of vegetation, obtain County approval of preserved and/or mitigation lands as well as documentation of a recorded conservation easement.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and determine whether proposed conservation easement holder meets requirements specified in the mitigation measure.</li> <li>• County shall verify and approve attainment of habitat mitigation requirements prior to construction of each project phase.</li> </ul>
BR-2.1	Prepare and implement a Weed Control Plan (WCP)	<ul style="list-style-type: none"> <li>• Prepare WCP with 6 elements outlined in the mitigation measure.</li> <li>• Retain an environmental monitor to ensure compliance with measures set forth in WCP.</li> <li>• Prepare and submit to the County reports and logs, as required by the WCP.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits or ground disturbance, prepare and approve WCP.</li> <li>• The WCP will be implemented prior to and during construction.</li> <li>• The WCP shall be updated and utilized for eradication and monitoring after construction.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of biologist or restoration ecologist responsible for preparing WCP.</li> <li>• County Environmental Monitor shall review and approve WCP.</li> </ul>
BR-2.2	Develop a Grazing Plan	<ul style="list-style-type: none"> <li>• Prepare the Grazing Plan with the five elements outlined in the mitigation measure.</li> <li>• Prepare and submit alterations to the Grazing Plan to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, prepare and approve Grazing Plan.</li> <li>• Grazing Plan will be implemented during construction and operation.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of biologist or restoration ecologist responsible for preparing the Grazing Plan.</li> <li>• County shall review and approve the Grazing Plan.</li> <li>• County Environmental Monitor shall verify compliance with the measures set forth in the Grazing Plan.</li> </ul>
BR-4.1	Implement protective dust control pond design, monitoring, and management plan	<ul style="list-style-type: none"> <li>• Prepare the Dust Control Pond Design and Monitoring and Management Plan with the five elements outlined in the mitigation measure.</li> </ul>	<ul style="list-style-type: none"> <li>• Design and implement plan prior to issuance of construction permits.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve the plan in consultation with the CDFG.</li> <li>• County Environmental Monitor shall verify compliance with the measures set forth in the plan.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-4.2	Implement biological construction monitoring	<ul style="list-style-type: none"> <li>• Retain qualified biologist(s) with demonstrated expertise with listed and/or special-status plants, terrestrial mammals, and reptiles to monitor all construction activities on a daily basis.</li> <li>• Contact the USFWS, CDFG, and County and provide a written report if dead or injured special-status species are encountered.</li> <li>• The qualified biologist shall flag or avoid any listed or special-status plants, relocate any special-status terrestrial species found within a project impact area, and conduct clearance surveys for special-status species prior to initiation of construction each day.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the commencement of ground disturbance or site mobilization activities, retain a County qualified biologist(s).</li> <li>• First day of work through the duration of construction activities, monitor activities.</li> <li>• Contact agencies and the County by end of day if dead/injured special-species are found; provide written report within five days of sighting.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of biologist and environmental monitor.</li> <li>• County shall review reports submitted by biological monitor.</li> </ul>
BR-6.1	Conduct pre-construction surveys for nesting and breeding birds and implementation of avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to conduct pre-construction surveys for nesting birds in all areas within 500 feet of solar arrays, staging areas, substation sites, and access road locations.</li> <li>• Establish a 300-foot buffer around active nests, and a 0.5-mile buffer around active golden eagle nests.</li> <li>• Report California condor sightings to USFWS.</li> <li>• For nest removal, obtain written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation and prepare a written report documenting the relocation efforts.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to any on-site disturbance during breeding season, conduct pre-construction surveys for nesting birds.</li> <li>• During the recognized breeding season for most birds biological monitors will routinely inspect for active nests.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of the biologist.</li> <li>• County Environmental Monitor shall conduct routine checks of nests during the known breeding season and, if young are present, monitor until young have fledged.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-7.1	Conduct pre-construction surveys for State and Federally Threatened, Endangered, Proposed, Petitioned, and Candidate plants and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified plant ecologist to conduct pre-construction surveys for special-status plants.</li> <li>• Document special-status plants found.</li> <li>• Establish buffers based on survey results.</li> <li>• Fully describe, map, and submit a California Native Plant Society (CNPS) Field Survey Form or written equivalent for all listed plant species found during surveys.</li> <li>• Consult with the USFWS and/or CDFG when listed plants are unavoidable.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to new ground disturbance throughout construction, conduct pre-construction surveys during a year in which rainfall totals are at least 80% of average and in which the temporal distribution of rainfall is not highly abnormal.</li> <li>• Prior to site grading or vegetation removal, place a buffer zone around any populations of listed plant species identified during the surveys within the project limits and beyond.</li> <li>• Prior to commencement of any grubbing or earth disturbing activities, install protective visible fencing.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of plant ecologist.</li> <li>• County, USFWS, and CDFG approval shall be required to reduce buffer zone for special-status species.</li> <li>• County Environmental Monitor shall document when yearly survey events occur, review the resulting data and update the WEEP if impacts to species not previously addressed are anticipated, as well as ensure any protective fencing installed is kept in good working order.</li> </ul>
BR-7.2	Compensate for impacts to State and Federally Threatened, Endangered, Proposed, Petitioned, and Candidate species	<ul style="list-style-type: none"> <li>• Compensate for permanent impacts through the preservation and management of habitat that is not already public land at a 1:1 mitigation ratio.</li> <li>• Compensate for temporary impacts through land acquisition and/or preservation at a 0.5:1 ratio.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the HMMP.</li> <li>• Provide funds for a "qualified land trust" to acquire appropriate conservation easement(s) or donate appropriate conservation easement(s) to a qualified land trust or to an appropriate mitigation bank.</li> <li>• Submit annual report to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the disturbance of vegetation, review and approve location of mitigation lands.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve the location of mitigation lands.</li> <li>• County shall verify and approve attainment of habitat mitigation requirements prior to construction of each project phase.</li> </ul>
BR-8.1	Complete full protocol-level surveys for listed vernal pool fairy shrimp	<ul style="list-style-type: none"> <li>• Conduct surveys for vernal pool fairy shrimp.</li> <li>• Retain a qualified biologist holding the required 10(a)(1)(A) recovery permit from the USFWS to conduct surveys within all potential fairy shrimp habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• During wet and dry seasons of one year, conduct surveys.</li> <li>• Within 90 days of completion of surveys, submit survey results to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of biologist.</li> <li>• County shall verify surveys are completed.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-8.2	Avoid known listed fairy shrimp locations	<ul style="list-style-type: none"> <li>All pools that were identified by the Applicant in 2010 as occupied by listed vernal pool branchiopods, or which were specifically identified on BR Map 10 in the "Final Biological Report (refer to Appendix 9A) as potential habitat for vernal pool branchiopods, known seasonal/ephemeral depressions, vernal pools and known water bodies (refer to Appendix 9A) that have been verified or have the potential to be occupied by listed fairy shrimp shall be shown on all applicable construction plans and submitted with the construction permit application. Establish a 100-foot buffer around all seasonal depressions and known waterbodies that have potential to support listed fairy shrimp, and 250-foot buffer with seasonal depressions and know waterbodies containing documented populations of listed fairy shrimp to prevent equipment from entering these areas.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to commencement of construction activities, place on-site delineations of buffers.</li> <li>Prior to final County inspection, remove buffers.</li> </ul>	<ul style="list-style-type: none"> <li>County shall verify avoidance of seasonal depressions and application of appropriate buffers.</li> <li>Environmental monitor will periodically check to ensure that the on-site delineation method is working and observed.</li> </ul>
BR-8.3	Compensate for impacts to vernal pool or longhorn fairy shrimp or their habitat	<ul style="list-style-type: none"> <li>Avoid filling or disturbing such pools to the maximum extent practicable.</li> <li>Compensate unavoidable loss of ephemeral pools through the preservation and management of occupied vernal pool fairy shrimp habitat as stated in the measure.</li> </ul>	<ul style="list-style-type: none"> <li>During construction.</li> </ul>	<ul style="list-style-type: none"> <li>County shall verify the preservation and creation of ephemeral pools as compensation for unavoidable loss.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-9.1	Complete focused surveys for Kern primrose sphinx moth and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a County qualified biologist to conduct focused surveys for Kern primrose sphinx moth.</li> <li>• Conduct surveys according to methods in Jump et al. (2006) and information from the USFWS 5-year status review of this species.</li> <li>• Map Kern primrose sphinx moth habitat within the project footprint on all applicable construction plans.</li> <li>• Avoid to the extent feasible, these identified areas and install sturdy and highly visible delineation markers on-site, that results in a 100-foot buffer around these areas.</li> </ul>	<ul style="list-style-type: none"> <li>• During the flight season (January to late February, and as far out as March during cooler year) and when the temperature exceeds 60°, conduct focused surveys.</li> <li>• Prior to initial ground disturbance and for undisturbed areas during each subsequent construction year for all areas containing known individuals or populations of <i>Camissonia spp.</i>, conduct surveys.</li> <li>• During construction, avoid identified habitat and install 100-foot buffers.</li> <li>• Prior to final inspection, remove on-site buffer delineation zone.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the delineation of habitat on construction plans and the presence of buffer zones around known habitat.</li> <li>• County Environmental Monitor shall confirm that surveys are done during the correct time of year if required habitat is present.</li> </ul>
BR-9.2	Compensate for impacts to Kern primrose sphinx moth	<ul style="list-style-type: none"> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the HMMP.</li> <li>• Mitigate temporary and permanent impacts to Kern primrose sphinx moth following the mitigation habitat specifications described in the mitigation measure.</li> <li>• Submit location of proposed mitigation lands to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of a grading permit, review and approve proposed mitigation lands.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor will document any impacts to the habitat and verify compliance with mitigation land requirements.</li> </ul>
BR-10.1	Conduct focused pre-construction surveys for blunt-nosed leopard lizard and implement avoidance measures	<ul style="list-style-type: none"> <li>• Conduct pre-construction surveys for blunt-nosed leopard lizard, establish buffers and exclusion areas.</li> <li>• Retain a qualified biologist to perform pre-construction surveys for blunt-nosed leopard lizards.</li> <li>• Implement avoidance measures found in the mitigation measure, including the placement of a minimum 500-foot buffer around all active blunt-nosed leopard lizard habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the any site mobilization, complete surveys and provide documentation demonstrating completion.</li> <li>• Prior to issuance of grading permits, mitigation for impacts must be completed.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys and the placement of appropriate buffer zones.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-10.2	Compensate for impacts to occupied blunt-nosed leopard lizard habitat	<ul style="list-style-type: none"> <li>• Mitigate impacts to blunt-nosed leopard lizard habitat at a minimum of 3:1 ratio, following the mitigation habitat specifications described in the mitigation measure.</li> <li>• Manage mitigation lands in accordance with the HMMP.</li> <li>• Submit location of proposed mitigation lands to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of a grading permit, review and approve proposed mitigation lands.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor will document any impacts to the habitat and verify compliance with mitigation land requirements.</li> </ul>
BR-11.1	Monitor construction in condor habitat and remove trash and microtrash from the work area daily	<ul style="list-style-type: none"> <li>• Require appropriate disposal of all trash by project employees and contractors and daily removal of trash and microtrash for the duration of construction activities.</li> <li>• Ensure all workers attend the WTP.</li> <li>• Stop work within 500 feet of a condor landing in the project area and contact the USFWS/CDFG if the condor fails to leave the area.</li> <li>• Report all condor sightings within the project area within 24 hours.</li> </ul>	<ul style="list-style-type: none"> <li>• During construction, remove trash and microtrash daily.</li> <li>• Within 24 hours, report condor sightings.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor shall document any issues related to microtrash or trash and report it to the construction foreman for immediate action. Report any condor observations within 24 hours.</li> </ul>
BR-13.1	Implement Avian Power Line Interaction Committee guidelines (APLIC)	<ul style="list-style-type: none"> <li>• Construct all transmission facilities, towers, poles and lines in accordance with APLIC guidelines.</li> <li>• Include design components reflecting APLIC guidelines in all construction plans and prepare a separate document listing measures implemented to ensure compliance with APLIC guidelines.</li> <li>• Monitor for new versions of the APLIC guidelines and update designs or implement new measures as needed during project construction</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, submit designs and documentation of compliance with the construction permit application.</li> <li>• Prior to final inspection, review submitted designs and documents.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve submitted designs and documents.</li> </ul>
BR-14.1	Prepare and Implement a Bird and Bat Monitoring and Avoidance Plan	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to prepare the a Bird and Bat Monitoring and Avoidance Plan in consultation with CDFG and USFWS and monitor impacts to birds during construction and one year after completion of construction.</li> <li>• Submit quarterly reports to the County during construction and one year post-construction, and annual reports following the completion of the fourth quarter of monitoring.</li> <li>• Prepare papers that describe the design and monitoring results of the two studies to be submitted to peer-reviewed scientific journals.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permit, submit Bird Monitoring and Avoidance Plan.</li> <li>• Submit quarterly reports to the County during construction and one year post-construction, and annual reports following the completion of the fourth quarter of monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• County will verify qualifications of the biologist.</li> <li>• County will consult with CDFG and USFWS on the proposed program to determine thresholds prior to approval.</li> <li>• County will verify submittal of two studies to scientific-journals.</li> <li>• County will verify submittal of quarterly and annual reporting and consultation with USFWS and CDFG to determine if subsequent years of reporting are necessary.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-16.1	Complete focused pre-construction giant kangaroo rat burrow/precinct surveys and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to perform pre-construction surveys for giant kangaroo rat.</li> <li>• Flag active burrows and establish a 100-foot buffer from ground-disturbing activities around each burrow.</li> <li>• Map all active burrows/precincts and incorporate them into a GIS based figure for use by on-site monitors and construction crews.</li> <li>• Document all giant kangaroo rat burrows/precincts abandoned or destroyed and provide a written report to the County of San Luis Obispo</li> <li>• Prior to final County inspection, a final monitoring report shall be submitted to the County, CDFG and USFWS.</li> <li>• Periodically survey for potential burrows/precincts requiring the avoidance and setbacks.</li> </ul>	<ul style="list-style-type: none"> <li>• No more than 30 days prior to commencement of ground-disturbing activities, conduct pre-construction surveys.</li> <li>• Submit final monitoring report prior to final County inspection.</li> </ul>	<ul style="list-style-type: none"> <li>• County will verify qualifications of the biologist.</li> <li>• County will verify completion of pre-construction surveys.</li> </ul>
BR-16.2	Compensate for permanent impacts to giant kangaroo rat and San Joaquin antelope squirrel	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to map all areas subject to temporary and permanent impacts for the giant kangaroo rat and San Joaquin antelope squirrel.</li> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the HMMP.</li> <li>• Submit annual report to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, the location of mitigation lands must be submitted to the County for review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>• County will review and determine whether proposed mitigation land meets requirements specified in the mitigation measure.</li> <li>• County will verify and approve attainment of habitat mitigation requirements.</li> </ul>
BR-16.3	Prepare a Habitat Mitigation and Monitoring Plan (HMMP)	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to prepare and implement HMMP according to requirements stated in the mitigation measure.</li> <li>• Prepare and implement HMMP per the requirements set forth in the mitigation measure.</li> <li>• Monitor the mitigation lands during construction and for three years after the completion of construction and provide annual reports. Thereafter, a land trust/agency shall monitor the lands at least once per year.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, submit HMMP.</li> <li>• Prior to final County inspection, initial and estimated final impact acreages must be presented to the County and acquisition of off-site lands must be verified.</li> </ul>	<ul style="list-style-type: none"> <li>• County will review and approve HMMP.</li> <li>• County will verify acquisition of off-site lands.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-17.1	Conduct focused pre-construction San Joaquin kit fox surveys and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to perform pre-construction surveys for San Joaquin kit fox.</li> <li>• Flag and establish appropriate buffer around active San Joaquin kit fox surveys.</li> <li>• Routinely inspect protected dens and ensure that delineation methods are in good working order.</li> <li>• Stop work and contact USFWS if active dens are found within 1,000 feet of project activities from August 1 through November; work may resume upon direction from USFWS.</li> <li>• Implement sequential steps to evict San Joaquin kit fox if avoidance is infeasible. Natal dens shall not be disturbed at any time.</li> <li>• Prepare and submit a written report documenting all kit fox dens abandoned, destroyed or avoided/protected for County review and approval</li> <li>• Replace all excavated kit fox dens with artificial dens on a 2:1 basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Retain a biologist to conduct pre-construction surveys 30 days prior to commencement of construction activities.</li> <li>• Prior to the final County inspection, review compliance with measures and documentation of mitigation.</li> <li>• Prior to the final County inspection or occupancy, submit report to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys.</li> <li>• County shall review location and design of the artificial dens prior to installation.</li> <li>• County shall review document listing all abandoned or destroyed dens.</li> </ul>
BR-17.2	Compensate for permanent impacts to San Joaquin kit fox	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to map all areas subject to temporary and permanent impacts for the San Joaquin kit fox.</li> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Submit annual report to the County.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the HMMP.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, the location of mitigation lands must be submitted to the County for review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>• County will review and determine whether proposed mitigation land meets requirements specified in the mitigation measure.</li> <li>• County will verify and approve attainment of habitat mitigation requirements.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-18.1	Complete focused pre-construction San Joaquin Antelope squirrel surveys and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified plant ecologist to conduct pre-construction surveys.</li> <li>• Flag and establish appropriate buffer around active San Joaquin antelope squirrel burrow with a minimum of 100 feet surrounding each active burrow.</li> <li>• Notify the County and CDFG upon detection of a San Joaquin antelope squirrel on the project site.</li> <li>• Map all active burrows/precincts and incorporate them into a GIS based figure for use by on-site monitors and construction crews.</li> <li>• Periodically field check the mapped burrow/precincts to verify the buffer delineations are in good working order.</li> <li>• Submit a final monitoring report.</li> </ul>	<ul style="list-style-type: none"> <li>• Retain a biologist to conduct pre-construction surveys 30 days prior to commencement of construction activities.</li> <li>• Notify the County and CDFG within 24 hours of detection of a San Joaquin antelope squirrel on the project site.</li> <li>• Prior to final County inspection, a final monitoring report shall be submitted to the County and CDFG.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys.</li> <li>• County shall review the final monitoring report.</li> </ul>
BR-19.1	Conduct pre-construction surveys for Special-Status plants and implement avoidance measures	<ul style="list-style-type: none"> <li>• Conduct pre-construction surveys during appropriate blooming periods to mark and avoid listed plant species.</li> <li>• Retain a qualified plant ecologist/biologist according to USFWS, CDFG and CNPS.</li> <li>• Establish buffers zones based on survey results.</li> <li>• Fully describe, map, and submit a CNPS Field Survey Form or written equivalent for all listed plant species found during surveys.</li> <li>• Document yearly survey events and update WTP with information from data collected.</li> <li>• If the project results in the loss of more than 10% of the on-site population of special-status plant species, implement mitigation described in MM BR-19.2.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to new ground disturbance for any grassland (areas not cropped for two years) areas not disturbed prior to Spring 2013, and for undisturbed grassland areas in subsequent construction years, conduct pre-construction surveys during a year in which rainfall totals are at least 80% of average and in which the temporal distribution of rainfall is not highly abnormal.</li> <li>• Prior to site grading or vegetation removal, place a buffer zone around any populations of listed plant species identified during the surveys within the project limits and beyond.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of plant ecologist.</li> <li>• County, USFWS, and CDFG approval shall be required to reduce buffer zone for special-status species.</li> <li>• County Environmental Monitor shall document when yearly survey events occur, review the resulting data and update the WEEP if impacts to species not previously addressed are anticipated, as well as ensure any protective fencing installed is kept in good working order.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-19.2	Compensate for permanent impacts to Special-Status plant species	<ul style="list-style-type: none"> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Monitor and maintain mitigation land per the requirements set forth the HMMP.</li> <li>• Compensate for temporary impacts through land acquisition and/or preservation at a 0.5:1 ratio.</li> <li>• Compensate for permanent impacts through the preservation and management of habitat that is not already public land at a 1:1 mitigation ratio.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the disturbance of vegetation, review and approve location of mitigation lands.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve the location of mitigation lands.</li> <li>• County shall verify and approve attainment of habitat mitigation requirements prior to construction of each project phase.</li> </ul>
BR-20.1	Complete focused pre-construction surveys for silvery legless lizards, coast horned lizard, and San Joaquin coachwhip and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to conduct pre-construction surveys for silvery legless lizards, San Joaquin coachwhip, and coast horned lizards.</li> <li>• Re-locate for silvery legless lizards, San Joaquin coachwhip, and coast horned lizards when identified.</li> <li>• Prepare a written report documenting the relocation efforts and mortality and submit to the County on a monthly basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the disturbance of habitat, conduct pre-construction surveys for silvery legless lizards, San Joaquin coachwhip, and coast horned lizards.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of the biologist.</li> <li>• County Environmental Monitor shall monitor for occurrences of these species when construction activities occur in suitable habitat.</li> <li>• County shall review the report provided by the Applicant's biologist.</li> </ul>
BR-21.1	Complete focused pre-construction western spadefoot toad surveys and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to conduct pre-construction surveys for western spadefoot toad during the appropriate time of year.</li> <li>• Implementation a habitat restoration and management plan in accordance with the measure if the toad and habitat are found on-site.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the issuance of a construction permit, conduct the required surveys.</li> <li>• Conduct a series of pre-construction surveys annually for the duration of construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify the qualifications of the biologist.</li> <li>• County Environmental Monitor shall ensure implementation of avoidance measures and that buffer delineations are kept in good working order.</li> </ul>
BR-22.1	Complete focused pre-construction burrowing owl surveys and implement avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist(s) to conduct pre-construction reconnaissance level surveys in conformance with federal and State regulations for burrowing owls.</li> <li>• Implement avoidance measures and ensure buffer delineations are kept in good working order as required by the components within this measure.</li> <li>• Replace damaged or collapsed burrows with artificial burrows in adjacent habitat at a 2:1 ratio.</li> </ul>	<ul style="list-style-type: none"> <li>• No more than 15 days prior to the commencement of initial ground disturbing activities, conduct pre-construction surveys.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys.</li> <li>• County Environmental Monitor shall ensure implementation of avoidance measures and that buffer delineations are kept in good working order.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
BR-22.2	Compensation for impacts to burrowing owl	<ul style="list-style-type: none"> <li>• Create permanent conservation easement(s) according to requirements found in the mitigation measure.</li> <li>• Compensate for impacts through land acquisition at a rate of 6.5 acres per pair.</li> <li>• Ensure permanent protection and management of mitigation lands through an appropriate mechanism, such as a conservation easement or fee title purchase</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the disturbance of vegetation, review and approve location of mitigation lands.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve the location of mitigation lands.</li> <li>• County shall verify and approve attainment of habitat mitigation requirements prior to construction of each project phase.</li> </ul>
BR-25.1	Complete focused pre-construction surveys for American badger surveys and implementation of avoidance measures	<ul style="list-style-type: none"> <li>• Retain a qualified biologist to perform pre-construction surveys for American badgers.</li> <li>• Flag and establish appropriate buffer around active American badger dens.</li> <li>• Avoid maternity dens and establish a 200-foot buffer. Evict unavoidable badger dens by slowly excavating the burrow before or after the rearing season.</li> <li>• Routinely inspect protected dens and ensure that delineation methods are in good working order.</li> <li>• Prepare and submit a written report documenting all badger-related activities (e.g. den flagging, monitoring, badger removal, etc.) to the County of San Luis Obispo and the CDFG.</li> </ul>	<ul style="list-style-type: none"> <li>• No more than 30 days prior to commencement of ground-disturbing activities, conduct pre-construction surveys.</li> <li>• Prior to the final County inspection or occupancy, submit report to the County and CDFG.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys.</li> <li>• County shall review document listing all badger-related activities.</li> </ul>
BR-27.1	Conduct pre-construction maternity colony or hibernaculum surveys for sensitive bats	<ul style="list-style-type: none"> <li>• Retain a biologist, holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats, to conduct pre-construction surveys and surveys during maternity season.</li> <li>• Conduct surveys during the maternity season within 300 feet of project activities.</li> <li>• Avoid active maternity roosts or hibernacula.</li> <li>• Survey for alternative maternity roosts if avoidance is not feasible.</li> </ul>	<ul style="list-style-type: none"> <li>• No more than 15 days prior to grading near or the removal of towers, trees, and other structures and during maternity season, conduct pre-construction surveys.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify qualifications of the biologist.</li> <li>• County shall verify completion of pre-construction surveys and surveys for maternity roosts.</li> <li>• County Environmental Monitor shall routinely inspect known maternity roosts or hibernacula.</li> </ul>
BR-27.2	Provide substitute roosting habitat	<ul style="list-style-type: none"> <li>• Provide substitute roosting habitat for the maternity colony on, or in close proximity to, the Project site no less than three months prior to the eviction of the colony.</li> <li>• Construct alternative roost sites as required for the duration of construction activities and submit a written report documenting required coordination with CDFG as well as the location of roost sites to the County</li> </ul>	<ul style="list-style-type: none"> <li>• At least 3 months prior to eviction, provide suitable alternative roosting habitat.</li> <li>• Prior to final County inspection, review submittal of written report.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify adequacy of alternative roost site(s).</li> <li>• County shall review written report detailing coordinating with the CDFG and location of the roost sites.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
BR-27.3	Exclude bats prior to eviction from roosts	<ul style="list-style-type: none"> <li>Retain a biologist, holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats, to direct eviction of roosting areas.</li> <li>Safely evict non-breeding bat hibernacula if they are found on the project site.</li> <li>Demolition of maternity roost sites must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July).</li> </ul>	<ul style="list-style-type: none"> <li>A minimum of 1 week prior to intended eviction date, implement methods to evict bats.</li> </ul>	<ul style="list-style-type: none"> <li>County shall verify qualifications of the biologist.</li> <li>County shall ensure evictions are done according to mitigation measure standards.</li> </ul>
BR-31.1	Prepare and implement a pronghorn-friendly fencing plan	<ul style="list-style-type: none"> <li>Develop and implement a Pronghorn Friendly Fencing Plan that incorporates the criteria listed in the mitigation measure.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits, review and approve a Pronghorn Friendly Fencing Plan.</li> </ul>	<ul style="list-style-type: none"> <li>County shall review and approve a Pronghorn Friendly Fencing Plan.</li> <li>County Environmental Monitor shall routinely inspect fencing for compliance with the plan.</li> </ul>
BR-34.1	Establish the "California Valley Land Acquisition Program"	<ul style="list-style-type: none"> <li>Establish the "California Valley Land Acquisition Program" (CVLAP), for acquisition of private lands within the California Valley subdivision.</li> <li>Provide County with documentation regarding the acquisition of lands and/or the contribution of funds to a County-approved land management group.</li> </ul>	<ul style="list-style-type: none"> <li>Establish CVLAP before the sale of power generated from the project.</li> </ul>	<ul style="list-style-type: none"> <li>County shall verify the establishment of the CVLAP.</li> <li>County shall verify the entity (e.g., land trust) that would provide oversight of such a program.</li> </ul>
BR-35.1	Establish Fencing Plan to create fence removal or modification incentives	<ul style="list-style-type: none"> <li>Develop and implement a Fencing Plan that includes all of the components of the measure for the purpose of facilitating the removal or modification of fences within the Carrizo Plain region.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits, review and approve a Fencing Plan.</li> <li>Prior to operation of the facility, implement Fencing Plan.</li> </ul>	<ul style="list-style-type: none"> <li>County and the CDFG shall review and approve the Fencing Plan.</li> <li>County Environmental Monitor shall inspect fence removal or modification for compliance with Fencing Plan requirements.</li> </ul>
<b>Cultural and Paleontological Resources</b>				
CR-2.1	Unanticipated Discovery Plan	<ul style="list-style-type: none"> <li>Submit to the County an Unanticipated Discovery and Monitoring Plan for review and approval, which shall be prepared by a County-qualified archaeologist.</li> </ul>	<ul style="list-style-type: none"> <li>Submit plan 60 days prior to ground disturbing activities.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building, in consultation with the Environmental Monitor and a qualified archaeologist, shall ensure compliance.</li> </ul>

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CR-2.2	Sensitivity training for construction personnel	<ul style="list-style-type: none"> <li>• Provide training to construction personnel.</li> <li>• Submit proof of training to the Environmental Monitor on a quarterly basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Two weeks prior to the start of disturbance activities.</li> <li>• Perform training once a quarter during the construction period and with new personnel.</li> <li>• During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the Environmental Monitor and a qualified archaeologist, shall ensure compliance.</li> </ul>
PA-1.1	Paleontological Monitoring and Treatment Plan	<ul style="list-style-type: none"> <li>• Prepare a Paleontological Monitoring and Treatment Plan following the guidelines of the Society for Vertebrate Paleontology as stated in the measure.</li> <li>• Retain a qualified Principal Paleontologist to prepare Paleontologic Monitoring and Treatment Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, review submitted Paleontological Monitoring and Treatment Plan.</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify qualifications of the Principal Paleontologist, and review and approve a Paleontological Monitoring and Treatment Plan.</li> <li>• Department of Planning &amp; Building will review report on paleontological discoveries.</li> </ul>
PA-1.2	Paleontology construction monitoring	<ul style="list-style-type: none"> <li>• According to measures in Paleontological Monitoring and Treatment Plan, monitor grading, trenching, and other earth disturbance in areas determined to have moderate to high paleontological sensitivity and which have the potential to be shallow enough as to be adversely affected by such earthwork.</li> <li>• Retain a qualified paleontological monitor to conduct full-time monitoring as specified in the Paleontological Monitoring and Treatment Plan.</li> <li>• Divert construction activities when data recovery of significant fossils is warranted.</li> </ul>	<ul style="list-style-type: none"> <li>• Full-time construction monitoring based on the procedures outlined in the Paleontological Monitoring and Treatment Plan.</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building will verify qualifications of the paleontological monitor.</li> <li>• Department of Planning &amp; Building, (Environmental Coordinator), shall verify that monitoring occurs as defined in the Paleontological Monitoring and Treatment Plan.</li> </ul>
<b>Geology, Mineral Resources, and Soils</b>				
GE-1.1	Conduct landslide survey and protect against slope instability	<ul style="list-style-type: none"> <li>• Conducted landslide surveys of any steep hills in and adjacent to areas of planned construction and of installation of solar arrays.</li> <li>• Design and implement appropriate support structures to minimize damage if results of the landslide survey indicate presence of slopes likely to fail.</li> </ul>	<ul style="list-style-type: none"> <li>• Submit documentation of compliance 30 days prior to final Project design.</li> <li>• Environmental monitor will verify measures have been incorporated during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall verify inclusion of required elements on design plans.</li> </ul>

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MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
<b>Hazards and Hazardous Materials</b>				
HZ-1.1	Develop and implement site-specific spill response plan	<ul style="list-style-type: none"> <li>• Prepare and submit a site-specific spill response plan that includes the elements detailed in MM HZ-1.1.</li> <li>• Implement the site-specific response plan during construction and operation.</li> <li>• Verify compliance with plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to construction permit issuance, prepare and approve a site-specific spill response plan.</li> <li>• During construction and operation, implement the plan.</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved plan.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Health Services Division shall review and approve the spill response plan.</li> <li>• Compliance will be verified by the Department of Planning and Building in consultation with the County Environmental Health Services Division and Environmental Monitor.</li> </ul>
HZ-1.2	Develop and implement hazardous materials business plan	<ul style="list-style-type: none"> <li>• Prepare and submit a hazardous materials business plan.</li> <li>• Verify compliance with plan.</li> <li>• Submit the plan to the San Luis Obispo County Environmental Health Services Division for review and approval prior to issuance of construction permit.</li> <li>• Provide the plan to all contractors working on the project and ensure that one copy is available at the project site at all times.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of the construction permit, in accordance with the California Health and Safety Code, prepare and approve a hazardous materials business plan.</li> <li>• During construction and operation, implement the plan</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved plan.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Health Services Division shall review and approve the hazardous materials business plan.</li> <li>• Compliance will be verified by the Department of Planning and Building in consultation with the County Environmental Health Services Division and Environmental Monitor.</li> </ul>
HZ-1.3	Develop and implement a hazardous waste management plan	<ul style="list-style-type: none"> <li>• Prepare a hazardous waste management plan to ensure proper storage, transport, and disposal of hazardous waste generated at the Proposed Project site during construction and operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of the construction permit prepare and approve a hazardous waste management plan.</li> <li>• During construction and operation, implement the plan.</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved plan.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Health Services Division shall review and approve the hazardous waste management plan.</li> <li>• Compliance will be verified by the Department of Planning and Building in consultation with the County Environmental Health Services Division.</li> </ul>

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HZ-1.4	Develop and implement spill prevention, control, and countermeasures plans	<ul style="list-style-type: none"> <li>• Prepare a spill prevention, control, and countermeasures plans for the storage and use of transformer oil, gasoline, or diesel fuel at the site in quantities of 660 gallons or greater.</li> <li>• Submit plans to the U.S. Environmental Protection Agency, the California Environmental Protection Agency, and the County Environmental Health Services Division for review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of the construction permit, and 30 days prior to energizing the Proposed Project or final inspection prepare and approve spill prevention, control, and countermeasures plans.</li> <li>• During construction and operation, implement the plans.</li> <li>• During construction, the County Environmental Monitor shall verify compliance with approved plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning and Building, in consultation with the U.S. Environmental Protection Agency, the California Environmental Protection Agency and County Environmental Health Services Division shall review and approve the spill prevention, control, and countermeasures plans, and verify compliance.</li> </ul>
HZ-1.5	Use licensed herbicide applicator	<ul style="list-style-type: none"> <li>• Ensure the contractor or personnel applying herbicides have all the appropriate State and local herbicide applicator licenses and comply with all State and local regulations regarding herbicide use.</li> <li>• Ensure herbicides are mixed and applied in conformance with the product manufacturer's directions.</li> <li>• Submit documentation of compliance to the Environmental Health Services Division.</li> </ul>	<ul style="list-style-type: none"> <li>• During the construction and operational phases of the project, retain appropriate State and local herbicide applicator licenses and comply with regulations for herbicide use.</li> </ul>	<ul style="list-style-type: none"> <li>• An on-site environmental monitor, during construction, and the Operations Plant Manager, during operation, shall verify compliance with herbicide use regulation and mitigation.</li> <li>• Department of Planning and Building, in consultation with the County Environmental Health Services Division and Environmental Monitor shall verify compliance.</li> </ul>
HZ-1.6	Ensure proper disposal or recycling of photovoltaic modules and support structures	<ul style="list-style-type: none"> <li>• Prepare a recycling and disposal plan for photovoltaic modules and support structures for County review and approval.</li> <li>• Specify how these project components will be disposed of in a manner that will not pose a risk to human health or the environment and their costs.</li> <li>• Provide documentation of the First Solar recycling funding instrument and allow the County to audit the funding instrument at their discretion.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to construction permit issuance, review and approve a recycling and disposal plan for photovoltaic modules and support structures.</li> <li>• Prior to construction permit issuance, verify existence of a mutually acceptable financial obligation to offset recycling plan costs.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building shall review and approve a recycling and disposal plan for photovoltaic modules and support structures.</li> <li>• Department of Planning &amp; Building shall ensure receipt of a financial instrument for the cost of recycling and will ensure that the solar module recycling program funding remain adequate through the life of the project.</li> </ul>
HZ-4.1	Notify California Valley Airport	<ul style="list-style-type: none"> <li>• Send written notice to the California Valley Airport.</li> <li>• Submit documentation of compliance to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Send notice prior to commencement of construction activities.</li> <li>• Submit documentation of compliance prior to commencement of module installation.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building and the Environmental Monitor shall review the documentation submitted by the applicant for compliance.</li> </ul>

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HZ-5.1	Develop and implement a fire protection plan	<ul style="list-style-type: none"> <li>Obtain a County and California Department of Forestry and Fire Protection (Cal Fire)–approved fire safety plan for use during construction and operation.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to construction permit issuance, obtain a Cal Fire–approved fire safety plan for use during construction and operation.</li> <li>During project operation, implement approved fire plan.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building, in consultation with Cal Fire, the County Fire Department and the Environmental Monitor shall verify compliance with the fire plan.</li> </ul>
HZ-5.2	Ensure compliance with Industrial Operations Fire Prevention Field Guide	<ul style="list-style-type: none"> <li>All activities shall comply with the recommendations set forth in the CAL FIRE Industrial Operations Fire Prevention Field Guide (1999), and all subsequent publications of this field guide.</li> </ul>	<ul style="list-style-type: none"> <li>During the construction and operation periods.</li> <li>During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>Compliance will be verified by Department of Planning and Building, in consultation with the Environmental Monitor.</li> </ul>
HZ-5.3	Install electrical safety signage	<ul style="list-style-type: none"> <li>Install electrical safety signage on all solar arrays in the immediate vicinity of all wiring and on all electrical conduit using weather-resistant and fade-proof materials.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to energization or final inspection, install electrical safety signage.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building shall verify placement of signage.</li> </ul>
HZ-6.1	Coordinate traffic during emergency	<ul style="list-style-type: none"> <li>Designate an Emergency Response Liaison to coordinate the reduction of project-related traffic for the duration of any emergency at or nearby the project site.</li> <li>Ensure Emergency Response Liaison has radio contact with project construction vehicles at all times to coordinate traffic reduction measures.</li> <li>Inform the Carrizo Plain Fire Station/Cal Fire, the San Luis Obispo County Sherriff's Department, and the California Highway Patrol of the construction schedule and the on-site contact information for the Liaison.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to construction work commencing, designate an Emergency Response Liaison and provide contact info of Liaison, and construction schedule, to the Carrizo Plain Fire Station/Cal Fire, the San Luis Obispo County Sherriff's Department, and the California Highway Patrol.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building shall verify the establishment of an Emergency Response Liaison.</li> </ul>
HZ-6.2	Provide helicopter landing areas on-site	<ul style="list-style-type: none"> <li>Provide helicopter land areas on the project site designed in accordance with the Federal Aeronautics Administration Advisory Circular No. 150/5390-2B "Heliport Design".</li> </ul>	<ul style="list-style-type: none"> <li>Prior to commencement of construction/ground disturbing activities.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building shall verify the presence of a heli-pad on the project-site.</li> </ul>
HZ-7.1	Sample and test contaminated soil	<ul style="list-style-type: none"> <li>Terminate work near potential contamination sites and cordon off work area.</li> <li>Notify the County Environmental Health Division if contamination is detected above regulatory limits.</li> </ul>	<ul style="list-style-type: none"> <li>During construction and all ground-disturbing activities.</li> </ul>	<ul style="list-style-type: none"> <li>County Environmental Health Division shall verify proper protocol has been followed when thresholds are exceeded.</li> <li>Department of Planning &amp; Building in consultation with the Environmental Monitor shall verify compliance.</li> </ul>

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HZ-7.2	Prohibit standing water and trash piles	<ul style="list-style-type: none"> <li>• Ensure that trash is stored in closed containers and removed from the site at regular intervals, open containers are inverted, and water is not generated on-site.</li> <li>• Avoid draining or filling naturally occurring depressions without consulting with the appropriate resource agency (San Luis Obispo County, U.S. Army Corps of Engineers, U.S. FWS, CDFG) and obtaining the appropriate permits.</li> </ul>	<ul style="list-style-type: none"> <li>• During construction and operation.</li> <li>• During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor shall conduct periodic inspections during construction.</li> <li>• Department of Planning &amp; Building in consultation with the Environmental Monitor shall verify compliance.</li> </ul>
HZ-7.3	Ensure proper handling of livestock	<ul style="list-style-type: none"> <li>• Ensure that, prior to livestock grazing the site, all personnel are trained to be aware of the risk of naturally occurring anthrax being transmitted to humans from a diseased animal carcass.</li> <li>• Only allow trained livestock handlers to handle livestock at the project site.</li> <li>• Report all suspected anthrax infections to the County Agricultural Commissioner.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to livestock grazing on the project site and during grazing of the site.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building in consultation with the Agriculture Department shall verify compliance.</li> </ul>
<b>Land Use and Recreation</b>				
LU-1.1	Establish construction liaison	<ul style="list-style-type: none"> <li>• Provide a toll-free general phone number and the name and contact information for a local public liaison to all property owners within a one-mile radius of the project's boundaries.</li> <li>• Ensure public liaison addresses questions or concerns related to the project.</li> <li>• Provide summary documentation of all comments and concerns communicated to the liaison monthly for the duration of construction and for one year following the completion of construction</li> </ul>	<ul style="list-style-type: none"> <li>• 30 days prior to the start of any construction-related activities and for up to one year following construction, local public liaison will be available to the public.</li> <li>• Within 24 hours, during construction, liaison will respond to all construction-related questions and concerns.</li> <li>• Monthly during construction and one year following the completion of construction, submit compliance documentation.</li> </ul>	<ul style="list-style-type: none"> <li>• County will verify the provision of a public liaison.</li> <li>• County will review the monthly compliance reports.</li> </ul>

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LU-1.2	Provide advance notification of construction	<ul style="list-style-type: none"> <li>• Provide 30 days notice to all potentially affected property owners.</li> <li>• Provide the County with a report that documents the compliance with this measure.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to construction, give at least 30 days advance notice of the start of any construction-related activities to potentially affected property owners.</li> <li>• At least two weeks prior to the start of construction, submit compliance documentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building will verify distribution of notice.</li> <li>• Department of Planning &amp; Building shall review compliance documentation.</li> </ul>
LU-1.3	Provide quarterly construction updates	<ul style="list-style-type: none"> <li>• Provide all potentially affected property owners with updates and changes to all of the information provided in the pre-construction notification.</li> <li>• Ensure public liaison responds to all questions and complaints.</li> </ul>	<ul style="list-style-type: none"> <li>• During construction, provide quarterly updates on project.</li> <li>• Within 24 hours of receiving a complaint during construction and within one week post-construction, respond to all questions and complaints.</li> </ul>	<ul style="list-style-type: none"> <li>• County will verify distribution of quarterly updates.</li> </ul>
RC-3.1	Develop and implement construction-phase CPNM camping restrictions	<ul style="list-style-type: none"> <li>• Verify compliance with the CPNM land manager's designations of camping ground restrictions.</li> <li>• Contact the CPNM land manager to discuss any restrictions/prohibitions of the project's construction workforce from using the CPNM's camping grounds for temporary housing.</li> <li>• Ensure that construction personnel are restricted or prohibited from using the CPNM camping grounds as identified by the CPNM land manager</li> </ul>	<ul style="list-style-type: none"> <li>• At least 90 days prior to the start of construction, contact the CPNM land.</li> <li>• At least 30 days prior to the start of construction, submit compliance documentation to the County.</li> </ul>	<ul style="list-style-type: none"> <li>• County's Environmental Monitor shall verify that construction personnel use of CPNM camping grounds is compliant with CPNM land manager's restrictions.</li> </ul>
RC-3.2	Establish CPNM construction liaison	<ul style="list-style-type: none"> <li>• Verify the establishment of a construction liaison.</li> <li>• Ensure the construction liaison responds to all construction-related questions and concerns communicated by the CPNM land manager.</li> <li>• Provide advance notice of construction to CPNM land manager and BLM Bakersfield Field Office that identifies a designated construction liaison to act as the primary point of contact for the CPNM during all phases of construction.</li> </ul>	<ul style="list-style-type: none"> <li>• At least 30 days prior to the start of construction, notify the CPNM land manager and BLM Bakersfield Field Office of upcoming construction and the designated construction liaison.</li> <li>• Within a 72-hour period during construction, the construction liaison shall respond to all questions or concerns communicated by the CPNM.</li> </ul>	<ul style="list-style-type: none"> <li>• County's Environmental Monitor shall verify compliance.</li> </ul>

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<b>Noise</b>				
NS-1.1	Limit noisy on-site construction activities	<ul style="list-style-type: none"> <li>Restrict use of heavy equipment and noisy construction work at the project site shall be restricted to the following hours: October 1 through May 31 - Monday through Friday 7:00 a.m. to 6:00 p.m. June 1 through September 30 – Monday through Friday 5:00 a.m. to 9:00 p.m. All construction activities between 5 am and 7 am shall not result in noise exceeding 45 dBA at the perimeter property boundaries. Saturday and Sunday 8:00 a.m. to 5:00 p.m.</li> <li>Ensure the County's Environmental Monitor monitors continuous noise levels when construction occurs within 4,500 feet from the Project's property line.</li> <li>No noisy construction activities within 4,500 feet of the school during school operation</li> <li>If maximum, impulsive, or hourly noise level thresholds are exceeded, stop all noise-related work until adequate noise attenuation measures are installed to meet these thresholds.</li> </ul>	<ul style="list-style-type: none"> <li>During ground disturbing activities, restrict use of heavy equipment and noisy construction work.</li> <li>During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>County Environmental Monitor shall verify effectiveness of measures installed.</li> <li>Department of Planning &amp; Building shall verify compliance with the measure.</li> </ul>
NS-1.2	Provide advance notice of construction	<ul style="list-style-type: none"> <li>Provide advance notice of construction and decommissioning to all land owners located within 4,500 feet of the Project boundary and to the principal of the Carrisa Plains Elementary School.</li> <li>Address any complaints received related to noise and prepare a report indicating how noise complaints are handled.</li> </ul>	<ul style="list-style-type: none"> <li>Within 2 to 4 weeks prior to construction, decommissioning or ground disturbing activities, provide notice of activities.</li> <li>Within 48 hours, provide the County with a report that documents the complaints and the strategy for resolution of any noise complaints.</li> <li>Prior to construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>County Environmental Monitor shall verify implementation of noise-reduction strategy through an environmental monitor.</li> <li>County shall review report documenting complaints.</li> <li>County's Environmental Monitor shall verify implementation of agreed upon strategy.</li> </ul>

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NS-1.3	Shield construction staging areas	<ul style="list-style-type: none"> <li>• Install adequate temporary noise barriers around the construction staging areas with 4,500 feet of the project's property line to reduce noise levels associated with deliveries and construction equipment staging.</li> <li>• Should hourly noise level standards be exceeded as a result of work occurring at a staging area, stop all noise-related work at that staging area until adequate noise attenuation measures are installed to meet these standards.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to the use of noisy equipment during construction, install noise barriers.</li> <li>• Throughout duration of the noise-making activity, ensure any measures installed remain in good working order.</li> <li>• During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor shall verify effectiveness of measures installed and monitor noise levels during construction at the project's property line closest to the construction staging area.</li> <li>• Department of Planning &amp; Building, in consultation with the Environmental Monitor, shall verify compliance with the measures.</li> </ul>
NS-1.4	Implement noise-reducing features and practices for construction noise	<ul style="list-style-type: none"> <li>• Employ and clearly state in the contractors' specifications the noise-suppression techniques listed in the mitigation measure.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to and during construction, operation, decommissioning, and ground disturbing activities, employ noise-suppression techniques to minimize the impact of temporary noise.</li> <li>• During construction, the County Environmental Monitor shall verify compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor shall work with on-site resident engineer to ensure construction worker adherence to these measures.</li> <li>• Department of Planning &amp; Building, in consultation with the Environmental Monitor, shall verify compliance with the measures.</li> </ul>
NS-4.1	Use smaller vehicles and/or electric vehicles for security patrols	<ul style="list-style-type: none"> <li>• Electric vehicles shall be utilized for security patrols during project operations to minimize generation of noise.</li> <li>• Submit, upon request, the purchase and maintenance records for each electric vehicle.</li> </ul>	<ul style="list-style-type: none"> <li>• Use electric vehicles for security patrols during project construction and operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the Environmental Monitor, shall verify compliance with this measure.</li> </ul>
NS-4.2	Limit noisy nighttime maintenance activities	<ul style="list-style-type: none"> <li>• Limit noisy maintenance activities to the appropriate time and day.</li> <li>• Should hourly noise level standards be exceeded, stop work in the area until adequate noise attenuation measures are implemented to meet thresholds.</li> </ul>	<ul style="list-style-type: none"> <li>• During project operations, within 1,000 feet of an occupied residence, noisy maintenance shall be restricted to Monday through Friday 7:00 a.m. to 9:00 p.m. and 8:00 a.m. to 5:00 p.m. Saturday and Sundays.</li> </ul>	<ul style="list-style-type: none"> <li>• County shall verify effectiveness of measures installed.</li> <li>• Department of Planning &amp; Building, in consultation with the Environmental Monitor, shall verify compliance with this measure.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
<b>Population and Housing</b>				
PH-2.1	Develop and implement Worker Housing Program	<ul style="list-style-type: none"> <li>Develop and implement a Worker Housing Program that includes all components of this measure.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits, develop and implement a Worker Housing Program.</li> <li>During construction, the County Environmental Monitor shall verify compliance with approved Program.</li> </ul>	<ul style="list-style-type: none"> <li>County shall coordinate with the Applicant to develop a Worker Housing Program.</li> <li>County Environmental Monitor shall periodically review worker compliance with this program.</li> <li>County Environmental Monitor shall review citations of an illegal camping.</li> </ul>
<b>Public Services, Utilities, and Service Systems</b>				
PS-1.1	Provide and maintain emergency access on-site	<ul style="list-style-type: none"> <li>Verify measures identified in the mitigation measure are implemented to provide and maintain emergency access on-site.</li> <li>Include measures to provide and maintain emergency access on-site on all applicable construction plans.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits, include measures to provide and maintain emergency access on-site on all applicable construction plans.</li> <li>CAL FIRE, in consultation with the Environmental Monitor shall verify implementation of the measure prior to final inspection.</li> <li>During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>CAL FIRE shall verify inclusion of required fire safety plan elements, as well as verify compliance once installed</li> </ul>
PS-1.2	Sheriff Department access review	<ul style="list-style-type: none"> <li>Review and provide input on landscape plans and architectural elevations in relation to the following issues: access for patrol vehicles and deputies on-foot, and proper illumination of entryways and parking areas.</li> <li>Present County's Sheriff Department with landscape plans and architectural elevations</li> </ul>	<ul style="list-style-type: none"> <li>Prior to issuance of construction permits, review and provide input on landscape plans and architectural elevations.</li> <li>During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>The County Sheriff's Department shall review and provide input on landscape plans and architectural elevations.</li> </ul>
PS-1.3 COA#13	Assure Adequate Funding for County Staffing Impacts	<ul style="list-style-type: none"> <li>Applicant shall enter into agreement with the County that addresses school fees, public facilities fees, housing impact fees and public service impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Within 60 days of the effective date of the Conditional Use Permit</li> </ul>	<ul style="list-style-type: none"> <li>County will address as part of Conditional Use Permit compliance.</li> </ul>
	<p><u>Note: This measure was replaced with COA #13.</u></p>			

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
PS-2.1	Require recycling at least 50 percent of construction waste	<ul style="list-style-type: none"> <li>• Ensure list of available recyclers is placed on all applicable construction plans.</li> <li>• Provide the San Luis Obispo County "Recycling Required at Construction Sites" pamphlet to all contractors prior to commencement of construction work.</li> <li>• Recycle at least 50 percent of waste generated by the project's construction activity.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permit, the list of available recyclers shall be placed on all applicable construction plans.</li> <li>• Prior to the commencement of construction, provide contractors with the County's "Recycling Required at Construction Sites" pamphlet.</li> <li>• During construction, recycle at least 50 percent of waste.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor shall verify compliance with recycling requirements.</li> </ul>
PS-2.2	Provide documentation of construction and demolition waste recycling	<ul style="list-style-type: none"> <li>• Provide documentation to the San Luis Obispo County Department of Planning &amp; Building and Public Works that at least 50 percent (by weight) of the construction or demolition (applies if demolition is 1,000 square feet or larger) waste has been recycled.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to final inspection or occupation, provide the Department of Planning &amp; Building and the Department of Public Works with documentation of waste recycling practices.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Public Works shall verify construction and demolition recycling compliance.</li> </ul>
<b>Transportation and Circulation</b>				
TR-1.1	Prepare and implement traffic control and management plan	<ul style="list-style-type: none"> <li>• Prepare and implement a Traffic Control and Management Plan (TCMP) including the components listed in the mitigation measure, including a Truck and Bus Safety Plan.</li> <li>• Submit a TCMP to Caltrans (District 5 and District 6) and the San Luis Obispo County Department of Public Works for approval.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, apply for an Encroachment Permit for implementation of a TCMP.</li> <li>• At least 30 days prior to the start of construction, submit TCMP for approval and issuance of an encroachment permit.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the San Luis Obispo County Department of Public Works and Caltrans Districts 5 and 6 shall review and approve TCMP.</li> <li>• County Environmental Monitor shall verify the implementation of measures listed in the TCP.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
TR-1.2	Repair roadway damage	<ul style="list-style-type: none"> <li>Restore all public roads, easements, rights-of-way (ROWs) and infrastructure within the public road ROWs that have been damaged due to project-related activities.</li> <li>Prepare and implement a Road Restoration Plan in consultation with the County and Caltrans with the components listed within this element.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to final inspection or occupancy, implement a Road Restoration Plan and repair all damaged public roads, easements, and rights-of-way.</li> <li>Establish baseline conditions and complete correction road work at least 30 days prior to the start of mobilization for construction.</li> <li>Prior to final inspection or occupancy, identify sections of public right-of-way to be repaired and establish a schedule to complete the repairs or compensate the County in accordance with the Roadway Repair Agreement.</li> <li>Following completion of any public right-of-way repairs, have agencies sign letter indicating approval of repairs.</li> </ul>	<ul style="list-style-type: none"> <li>San Luis Obispo County and Caltrans shall consult with the Applicant to determine standards of repair prior to and post construction.</li> <li>San Luis Obispo County and Caltrans shall sign letter indicating approval of repairs.</li> </ul>
TR-2.1	Coordinate construction traffic with school bus routes (annually)	<ul style="list-style-type: none"> <li>Submit a school bus traffic plan to the San Luis Obispo County Department of Planning that provides a process for all project related construction traffic to follow which maximizes the safety, and minimizes delays of Atascadero USD school buses on Routes 4, 5, and 7.</li> <li>Coordinate with Atascadero USD staff to obtain the school bus route schedule for the upcoming school year, and then (1) revise work schedules to avoid bus conflicts, as well as (2) instruct all construction-related employees of the revised hours or routes, and times to avoid these sections of roadways.</li> <li>Submit documentation of coordination and resulting schedule revisions to the Department of Planning &amp; Building</li> </ul>	<ul style="list-style-type: none"> <li>Submit school bus traffic plan prior to issuance of construction permits.</li> <li>Annually, and no later than July 1 of any given year during project construction, obtain the school bus route schedule for the upcoming school year from the Atascadero USD.</li> <li>During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>Department of Planning &amp; Building, in consultation with Atascadero USD, shall review and approve a school bus traffic plan.</li> <li>County Environmental Monitor will periodically check for compliance.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
<b>Water Resources</b>				
WR-1.1	Groundwater Monitoring and Reporting Plan	<ul style="list-style-type: none"> <li>• Prepare and submit a Groundwater Monitoring and Reporting Plan.</li> <li>• Prepare and submit quarterly and annual summary reports.</li> <li>• Evaluate the effectiveness of the Groundwater Monitoring and Reporting Plan and revise, extend, or eliminate plan accordingly.</li> <li>• If drawdown of 5 feet or more occurs at off-site wells, immediately reduce groundwater pumping until water levels stabilize or recover, sustaining drawdown of less than 5 feet or provide compensation to the well owner, including reimbursement of increased energy costs, or deepening the well or pump setting.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, approve submitted Groundwater Monitoring and Reporting Plan.</li> <li>• Monitoring of the wells shall be performed during pre-construction, construction and project operation.</li> <li>• During the construction period, submit quarterly summary reports during construction only, and annual summary reports during construction and operation for the first five years of the project (construction and operation).</li> <li>• After five years, evaluate the Groundwater Monitoring and Reporting Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building will review and approve the Groundwater Monitoring and Reporting Plan.</li> <li>• County will review quarterly and annual summary reports.</li> <li>• County will coordinate with the Applicant to review the effectiveness of the Groundwater Monitoring and Reporting Plan.</li> </ul>
WR-1.2	Install pervious and/or high-roughness ground-cover where applicable	<ul style="list-style-type: none"> <li>• Prepare and submit a drainage design and hydrologic and hydraulic analysis.</li> <li>• Install detention/retention basins to reduce local increases in runoff and drainage discharge points .</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, submit a drainage design and hydrologic and hydraulic analysis.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the County Public Works Department, shall review and approval a drainage design and hydrologic and hydraulic analysis.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
WR-1.3	Construction site dewatering management	<ul style="list-style-type: none"> <li>• Perform dewatering activities in compliance with applicable State and local regulatory requirements.</li> <li>• Submit written description of all executed dewatering activities.</li> <li>• Notify the Central Coast Regional Water Quality Control Board (RWQCB) and County at the onset of dewatering.</li> </ul>	<ul style="list-style-type: none"> <li>• If groundwater is unexpectedly encountered during project construction, perform dewatering activities in compliance with applicable State and local regulatory requirements.</li> <li>• Upon the completion of dewatering activities, submit written description of all executed dewatering activities.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Monitor shall periodically check deeper grading activities for groundwater exposure.</li> <li>• RWQCB or Department of Planning &amp; Building shall verify compliance with dewatering efforts.</li> </ul>
WR-1.4	Design on-site drainage improvements to maximize groundwater recharge	<ul style="list-style-type: none"> <li>• Design on-site drainage improvements to maximize groundwater basin recharge and include on all applicable construction plans.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to approval of construction plans, design on-site drainage improvements.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the County Public Works Department, shall verify the inclusion of on-site drainage improvements on applicable construction plans.</li> </ul>
WR-1.5	Develop master Drought Water Management and Water Conservation Education Program	<ul style="list-style-type: none"> <li>• Prepare a master Drought Water Management Program.</li> <li>• Implement measures during periods of "severe" drought.</li> <li>• Develop and submit to the County a master Water Conservation Education Program for all future operators/employees for use during drought periods.</li> <li>• Submit letter identifying what measures were implemented to conserve water and to provide water conservation education, as well as the effectiveness of such measures.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to construction permit issuance, review and approve a master Drought Water Management Program.</li> <li>• During construction and operation, implement measures during periods of "severe" drought.</li> <li>• In congruence with the Drought Water Management Program and prior to construction permit issuance, develop, and submit to the County for approval, a master Water Conservation Education Program.</li> <li>• By November 1 during any year that a "severe" drought state has been recognized, submit a letter to the County detailing measures</li> </ul>	<ul style="list-style-type: none"> <li>• County shall review and approve the master Drought Water Management Program.</li> <li>• County shall review and approve the master Water Conservation Education Program.</li> <li>• County shall verify implementation of measures during "severe" drought years by reviewing letter submitted by the Applicant.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

MM #	Mitigation Measure Title <sup>1</sup>	Applicant Responsibilities	Timing	Agency or County Responsibilities
WR-4.1	Minimize disturbance within stream channels	<ul style="list-style-type: none"> <li>• Obtain necessary permits for streambed crossings and road construction parallel to streambeds from the U.S. Army Corp of Engineers, CDFG, and the State Water resources Control Board (SWRCB)/Central Coast RWQCB.</li> <li>• Evaluate and adjust placement of infrastructure (including roads) to avoid sensitive hydrologic resources.</li> <li>• Clearly mark construction traffic routes with temporary markers such as easily visible flagging.</li> </ul>	<p>that were implemented.</p> <ul style="list-style-type: none"> <li>• Prior to issuance of construction permits, adjust placement of infrastructure to avoid impacts to sensitive hydrologic resources.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of Planning &amp; Building, in consultation with the Environmental Coordinator, shall verify infrastructure avoidance of hydrologic resources and placement of temporary markers.</li> </ul>
WR-5.1	Accidental spill control and environmental training	<ul style="list-style-type: none"> <li>• Prepare and implement the Construction Stormwater Pollution Prevention Plan (SWPPP).</li> <li>• Establish an environmental training program for field personnel to communicate appropriate work practices, including SWPPP measures.</li> <li>• Implement a monitoring program to ensure plans are followed.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to any ground disturbing activities, review submitted SWPPP and verify inclusion of procedures to handle hazardous materials.</li> <li>• Prior to and during construction, establish the environmental training program.</li> <li>• During all construction, operation, and maintenance activities, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• RWQCB or the Department of Planning &amp; Building shall review and approve SWPPP and the environmental training program.</li> <li>• County Environmental Monitor shall ensure all plans are followed.</li> </ul>
WR-5.2	No storage of fuels and hazardous materials near sensitive water resources	<ul style="list-style-type: none"> <li>• Prohibit fuel storage with 200 feet of groundwater supply wells or 400 feet of community or municipal wells.</li> </ul>	<ul style="list-style-type: none"> <li>• Prior to construction permit issuance, identify the location of all fuels and hazardous materials storage areas on construction plans submitted to the County for approval.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• County Environmental Monitor, in consultation with the Environmental Health Division, shall verify that fuel is stored at the appropriate distance from wells.</li> </ul>

**Table Ap. 18-1. Mitigation Monitoring and Reporting Plan**

<b>MM #</b>	<b>Mitigation Measure Title<sup>1</sup></b>	<b>Applicant Responsibilities</b>	<b>Timing</b>	<b>Agency or County Responsibilities</b>
WR-5.3	Maintain vehicles and equipment	<ul style="list-style-type: none"> <li>• Maintain all vehicles and equipment to ensure they are free of any and all leaks.</li> <li>• Provide a maintenance log to the County for the duration of project construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain all vehicles and equipment prior to construction/ground disturbing activities.</li> <li>• Update a maintenance log during construction/disturbing activities and operation.</li> <li>• During construction, compliance will be verified by the County Environmental Monitor.</li> </ul>	<ul style="list-style-type: none"> <li>• County will monitor vehicles and equipment to ensure no leakage occurs.</li> <li>• Compliance will be verified by the County's Environmental Monitor.</li> </ul>