KINGS COUNTY PLANNING COMMISSION

Regular Meeting
7:00 P.M.

Government Center
Hanford, California

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Community Development Agency at (559) 852-2680 by 4:00 p.m. on the Thursday prior to this meeting. Agenda backup information and any public records provided to the Commission after the posting of the agenda for this meeting will be available for public review at the Kings County Community Development Agency, Building No. 6, Kings County Government Center, 1400 W. Lacey Blvd., Hanford, California.

AGENDA
June 6, 2016

This meeting will be held in the Board of Supervisors Chambers, Administration Building No. 1, Kings County Government Center, 1400 W. Lacey Boulevard, Hanford, California. Pursuant to California Government Code Section 65009, subdivision (b), if you challenge a decision of the Planning Commission in court, you may be limited to raising only those issues you or someone else raised at the public hearing, or in written correspondence delivered to the Planning Commission at, or prior to, the public hearing.

I. CALL TO ORDER - Kings County Planning Commission Meeting

1. **REQUEST THAT CELL PHONES BE TURNED OFF**
2. **PLEDGE OF ALLEGIANCE**
2. **SUMMARY OF THE AGENDA -** Staff
3. **UNSCHEDULED APPEARANCES**
   Any person may address the Commission on any subject matter within the jurisdiction or responsibility of the Commission at the beginning of the meeting; or may elect to address the Commission on any agenda item at the time the item is called by the Chair, but before the matter is acted upon by the Commission. Unscheduled comments will be limited to five minutes.
4. **APPROVAL OF MINUTES - Meeting of March 7, 2016.**

II. OLD BUSINESS

1. **AMENDMENT TO CONDITIONAL USE PERMIT NO. 10-05 (AMERICAN KINGS SOLAR, LLC)** – The applicant is proposing to establish a photovoltaic solar facility with up to 125 megawatts (MW) located at 15671 25th Avenue, Lemoore. The purpose of the Amendment is to analyze a revision to the Project's CUP that would: 1) extend the expiration date of CUP No. 10-05 for three (3) years, 2) modify the requirement to mitigate for the loss of Swainson's Hawk foraging habitat based on a project specific analysis, and 3) remove the requirement to cancel the existing Farmland Security Zone contract and allow the Modified Project to demonstrate Farmland Security Zone (FSZ) contract compatibility by maintaining a reasonably foreseeable agricultural operation onsite determined by site-specific soil and water analysis, consistent with Kings County Board of Supervisors Resolution No. 13-058. The applicant also seeks modifications to the CUP in order to add certain parcels of land to the project site, accommodate an updated project layout, modify certain Project Design Features and conditions of approval in response to proposed project revisions, and make other technical changes to the project authorized by the CUP.

A. Staff Report
B. Resume Deliberations
C. Decision

III. NEW BUSINESS

1. ELECTION OF OFFICERS (for term of 7/1/16 to 6/30/17)

A. Nominations for Chairman
B. Decision
C. Nominations for Vice-Chairman
D. Decision

IV. MISCELLANEOUS

1. **FUTURE MEETINGS -** The next regular meeting of the Planning Commission is scheduled for Monday, July 11, 2016.
2. **CORRESPONDENCE**
3. **STAFF COMMENTS**
4. **COMMISSION COMMENTS**

V. ADJOURNMENT

H:\PLANNING\LAND DEVELOPMENT SECTION\PLANNING COMMISSION\PC-AGENDA\2010 TO 2019\2016\6-6-16 PC AGENDA.DOC

NOTICE OF RIGHT TO APPEAL: For projects where the Planning Commission's action is final, actions are subject to appeal by the applicant or any other directly affected person or party and no development proposed by the application may be authorized until the final date of the appeal period. An appeal may be filed with the Community Development Agency at 1400 W. Lacey Blvd., Building #6, Hanford, CA, on forms available at the Community Development Agency. A filing fee of $320.00 must accompany the appeal form. The appeal must be filed within 8 days of the Planning Commission's decision date, not including the date of the decision. If no appeal is received, the Planning Commission's action is final. There is no right of appeal for projects for which the Planning Commission's action is advisory to the Board of Supervisors.

KINGS COUNTY PLANNING COMMISSION
MINUTES

District 1 Commissioner – Riley Jones* District 2 Commissioner – Bob Bajwa
District 3 Commissioner – R.G. Trapnell** District 4 Commissioner – Jim Gregory
District 5 Commissioner – Steven Dias
*Chairman **Vice-Chairman

March 7, 2016

CALL TO ORDER: The meeting of the Kings County Planning Commission was called to order by Chairman Jones, on March 7, 2016, at 7:00 p.m. in the Board of Supervisors Chambers, Administration Building, Kings County Government Center, Hanford, California. The Pledge of Allegiance was recited.

COMMISSIONERS PRESENT: R.G. Trapnell, Jim Gregory, Bob Bajwa, Steven Dias, Riley Jones

COMMISSIONERS ABSENT:

STAFF PRESENT: Greg Gatzka – Director, Collene Carlson – County Counsel, Chuck Kinney – Deputy Director – Planning, Terri Yarbrough – Executive Secretary, Sandy Roper, Principle Planner, Dan Kassik - Senior Planner, Kao Nou Yang - Planner

VISITORS PRESENT: James Cook, Roy Skinner, Marlana Brown, Christina Caro, Josh Wagner, David Watkins, Megan Jennings, and Steven Bommelje

SUMMARY OF THE AGENDA: Mr. Gatzka summarized the agenda for the Commission.

UNSCHEDULED APPEARANCES: No one spoke during this portion of the meeting.

APPROVAL OF MINUTES: A motion was made and seconded (Gregory/Trapnell) to approve the minutes of the January 4, 2016 meeting. Motion carried unanimously.

OLD BUSINESS: None

NEW BUSINESS:

1. **Conditional Use Permit No. 15-04 (SAC Wireless – Verizon)**
   Mr. Dan Kassik provided an overview of a proposal to establish a new 150-foot lattice wireless communication facility with a fenced lease area for ground equipment located at 17242 Grangeville Blvd., Lemoore. He reported the address will be 8248 17th Avenue and the design is changing from lattice to a monopole. The project is located in the AG 20 zone district and is subject to an agricultural preserve. The only comments received were from agencies within the county. The project is consistent with the Development Code, Williamson Act and the General Plan.

   Chairman Jones opened the public hearing and asked if there was anyone wanting to speak in favor or against the project. Josh Wagner with SAC wireless representing Verizon Wireless asked if the light on the top of the tower was a requirement of the County or could it be removed since it's not required by the FAA. Mr. Roper clarified that the Commission has required a red constant burning light for all cell towers dating back to June of 1991. Seeing nobody else wanting to speak, Chairman Jones closed the public hearing.

   A motion was made and seconded (Gregory/Trapnell) to adopt Planning Commission Resolution 16-03 as presented in the staff report. Motion carried unanimously.

2. **Conditional Use Permit No. 15-06 (Log Haven Dairy)**

Ms. Kao Nou Yang provided an overview of a proposal to construct a new double lined lagoon incidental to an existing dairy facility located at 7755 Fargo Avenue, Hanford. Ms. Yang stated that the proposed expansion is consistent with the Kings County General Plan, Development Code and Dairy Element.

Chairman Jones opened the public hearing and asked if there was anyone wanting to speak in favor or against the project. Steve Bommelje with Provost and Prichard stated this was not an increase in the facility size and was only for compliance with the water board for the water storage area. Seeing nobody else wanting to speak, Chairman Jones closed the public hearing

A motion was made and seconded (Gregory/Trapnell) to adopt Planning Commission Resolution 16-04 as presented in the staff report. Motion carried unanimously.

3. **Addendum to conditional Use Permit No. 10-05 (American Kings Solar, LLC)**

Mr. Roper provided an overview of a proposal to establish a photovoltaic solar facility with up to 125 megawatts located at 15671 25th Avenue, Lemoore. The purpose of the addendum is to analyze a revision to the project's CUP that would: 1) extend the expiration date for three years, 2) modify the requirement to mitigate for the loss of Swainson's Hawk foraging habitat, 3) remove the requirement to cancel the existing Farmland Security Zone contract and allow the modified project to demonstrate Farmland Security Zone compatibility by maintaining a reasonably foreseeable agricultural operation onsite determined by site-specific soil and water analysis, consistent with the Kings County Board of Supervisors Resolution No. 13-058. Mr. Roper reported that the modified project will remain consistent with the approved CUP and will continue to be subject to the same Conditions of Approval and Mitigation Measures as previously approved by the Commission, except the modifications of Planning Division Condition No. 1; the deletion of Planning Division Condition Numbers 17, 18, 21, 22, and 23; the modification of Building Division Condition No. 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension for CUP No. 10-05. Mr. Roper stated that the Modified Project would not result in any effects to environmental resources that are more severe than those described in the original IS/MND. Commissioner Gregory asked if it was appropriate for a new applicant to file an extension on an application from a previous applicant. Mr. Roper explained that when there is a change in ownership the CUP goes with the land and does not stay with the original applicant. Commissioner Trapnell asked if this project was part of the Henrietta project. Mr. Roper stated it was not.

Chairman Jones opened the public hearing and asked if there was anyone wanting to speak in favor or against the project. Mr. James Cook with First Solar spoke in favor of the project. Commissioner Trapnell asked the purpose of the transmission line that is referenced in the letter from the Commanding Officer at the Naval Air Station Lemoore (NASL). Mr. Cook explained it is only to connect the solar to the grid and that the issue would be if there was any interference. Commissioner Trapnell asked for a formal agreement outlining the requests in the letter from NASL. Ms. Marlena Brown, representing NASL, would like FAA notification and evaluation of the transmission line to the north to be required. She stated the letter says to the south but it is actually to the north. Commissioner Trapnell recommended further analysis be required as requested in the letter from NASL. Commissioner Gregory asked if it's necessary for the pole to be that high. Chairman Jones asked what height requires a red light. Mr. Roper addressed these questions. Chairman Jones asked if anyone else wanting to speak in favor of the project. Seeing nobody else he asked if there was anyone who wanted to speak in opposition of the project. Christina Caro, from Adams Broadwell Joseph and Cardozo, spoke in opposition of the project on behalf of her client Kings County Citizens for Responsible Development. She stated she didn't oppose the project in general but stated that the project was being substantially modified and would require a new Environmental Impact Report. She said that adding sheep grazing to the project had not been analyzed. She said that that removing the requirement to cancel the Farmland Security Zone contract and mitigate for the loss of 978 acres of Farmland of Statewide Importance by providing funding to place farmland of equal or greater value into an agricultural conservation easement within the County are fundamental changes to the Project's design that have not been analyzed. She also said that the changes proposed to the Swainson's Hawk mitigation was also a fundamental change to the Project. Mr. Cook stated it was their intention to make minor changes in order to bring the solar project which has already been approved in line with some changes that work better with design and operations. Ms. Carlson stated that Erik Kaeding from her office had reviewed the Proposed

Addendum in detail with Mr. Roper and had assured her that none of the conditions described in Section 15162 calling for the preparation of a subsequent negative declaration have occurred. Ms. Carlson asked if each of the issues raised by Ms. Caro were addressed in the addendum. Mr. Cook confirmed they were. Seeing nobody else wanting to comment Chairman Jones closed the public hearing.

Chairman Jones asked about the Swainson's Hawk issues being addressed by Department of Fish and Game rather than citizen groups. Mr. Roper stated that at the time that CUP No. 10-05 was originally approved Recurrent Energy had the Mustang Solar Project at the same Planning Commission meeting. The two solar projects took two different approaches concerning addressing potential impacts to Swainson's Hawk foraging habitat. CUP No. 10-05 contained a requirement to mitigate for the loss of Swainson's Hawk foraging habitat while the Mustang Solar Project included an extensive Swainson's Hawk study prepared by Jim Estep. The Estep study was sent to the Department of Fish and Game and they did not comment concerning any inadequacies in the Estep study. The Estep study documented that there was a surplus of Swainson's Hawk foraging habitat and established a threshold concerning how much Swainson's Hawk foraging habitat would need to be lost before mitigation would be required. The American Kings Solar Project is on the east side of 25th Avenue, directly across the street from the Mustang Solar Project. The Estep study did include the land that is proposed for the American Kings Solar Project. As a result of the Estep study, the Mustang Solar Project did not contain any requirement to mitigate for loss of Swainson's Hawk foraging habitat. All subsequent solar projects submitted since then have all contained a site specific analysis concerning Swainson's Hawk foraging habitat that utilized the methodology established in the Estep study and they have all been able to show that a surplus of Swainson's Hawk foraging habitat would remain and mitigation for loss of Swainson's Hawk foraging habitat was not required because the threshold established by the Estep study was not exceeded. The American Kings Solar Project is proposing to do the same analysis and if the threshold is not exceeded, then mitigation for loss of Swainson's Hawk foraging habitat would not be required. If the threshold is exceeded, then mitigation for loss of Swainson's Hawk foraging habitat would still be required.

Mr. Roper stated that staff didn't have time to go over the information received from Adams Broadwell Joseph and Cardozo just before the Planning Commission meeting, so he recommended continuing the item to the April 4, 2016 meeting in order to allow time to review the documents. Mr. Roper also stated that if the Addendum proposed changes that would create a new impact and require new mitigation measures, or increased the severity of a previously identified impact, then the initial study/mitigated negative declaration would need to be revised and recirculated. He said that the Addendum contained documentation that this would not occur and that the initial study/mitigated negative declaration did not need to be revised and recirculated. Chairman Jones continued the item to the April 4, 2016 meeting.

Mr. Roper stated that the Board of Supervisors previously adopted a Resolution recognizing that due to reduced surface water and groundwater, and poor quality soil, impairment may already exist in the area south of State Route 198 and west of State Route 41 and the foreseeable agricultural use may be dry farm seasonal grazing with or without the proposed American Kings Solar Project. He said that solar in conjunction with sheep grazing site specific documentation of existing impairment would allow the County to make compatibility findings and make cancellation unnecessary. Mr. Roper stated that the Addendum does contain site specific documentation of existing impairment and the Addendum did propose sheep grazing in conjunction with the solar facility. He also stated that the Development Code listed grazing as a permitted use that was allowed by right. Ms. Carlson stated that Erik Kaeding from her office had reviewed the proposed Addendum in detail with Mr. Roper and had assured her that none of the conditions described in Section 15162 called for the preparation of a subsequent negative declaration have occurred.

MISCELLANEOUS

1. **FUTURE MEETINGS**: The next regular meeting of the Planning Commission is scheduled for Monday, April 4, 2016.
2. **CORRESPONDENCE:** None
3. **STAFF COMMENTS:** None
4. **COMMISSION COMMENTS:** None

ADJOURNMENT – The meeting was adjourned at 8:17 p.m.

Respectfully Submitted,

KINGS COUNTY PLANNING COMMISSION

Greg Gatzka, Commission Secretary

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KINGS COUNTY PLANNING COMMISSION
SUPPLEMENTAL STAFF REPORT

CUP Amendment and Extension of Time for
Conditional Use Permit No. 10-05 (American Kings)
Development Code No. 668.12
June 6, 2016
(Adjourned from March 7, 2016)

APPLICANT: American Kings Solar, LLC, c/o First Solar, 135 Main Street, 6th Floor, San Francisco, CA 94105

PROPERTY OWNERS: The John and Sally Oliveira Revocable Family Trust, 12446 Fargo Avenue, Hanford, CA 93230

LOCATION: 15671 25th Avenue, Lemoore, CA, Assessor's Parcel Numbers 024-190-023, 044, 059, 063, 066, 068, and 071; 024-210-002, 003, 016, and 017; 024-231-008; 024-232-004; 024-241-001; 024-242-001; 024-250-001, 013, and 014; and 026-020-015

GENERAL PLAN DESIGNATION: Exclusive Agriculture ("AX")

ZONE DISTRICT CLASSIFICATION: Exclusive Agricultural ("AX")

CONDITIONAL USE PROPOSED: The applicant is proposing to establish a photovoltaic solar facility with up to 125 megawatts ("MW") on 966 acres.

CURRENT USE OF SITE: Agricultural production producing various field and row crops.

LAND USE SURROUNDING SITE: The site is surrounded by field and row crop agricultural production to the west, east, and south. Lemoore Naval Air Stations base housing is located to the north.

ENVIRONMENTAL REVIEW:

On November 12, 2010, the environmental review period ended for this proposal. A review of this project in compliance with the California Environmental Quality Act ("CEQA") indicates that there will not be significant adverse impacts to the environment. Evidence in the record indicates that the project has the potential for adverse effects on agriculture, wildlife, and resources or habitat for wildlife. To mitigate this impact the applicant has incorporated several project design features and mitigation measures that will mitigate the environmental impacts to less than significant. The Initial Study/Mitigated Negative Declaration ("IS/MND") for Conditional Use Permit ("CUP") No. 10-05 was certified by the Planning Commission on December 6, 2010, and is hereby incorporated by reference.

California Environmental Quality Act Guidelines ("CEQA Guidelines") Section 15164, found in Title 14 of the California Code of Regulations, allows for an Addendum to an approved IS/MND be prepared when minor technical changes or additions are necessary and if the project does not meet any of the requirements stated in Section 15162. The County has determined that none of the conditions described in Section 15162, calling for the preparation of a subsequent environmental impact report ("EIR") or negative declaration, have occurred as described below:

1. No substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. No substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
   a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
   b. Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;
   c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
   d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or negative declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As stated in CEQA section 15164(c), an addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

PROJECT REVIEW:

<u>Original CUP Application</u>

August 9, 2010	Application submitted
August 19, 2010	Application certified complete
October 13, 2010	Begin 30-day review period for environmental review
November 12, 2010	30 day environmental review period ends
December 6, 2010	Planning Commission hearing
December 6, 2010	Planning Commission adopted Resolution No. 10-08 approving CUP No. 10-05

<u>CUP Extension of Time</u>

November 29, 2012	Applicant submitted request for a three year extension of time
January 7, 2013	Planning Commission hearing
January 7, 2013	Planning Commission adopted Resolution 13-02 approving the three year extension of time for CUP No. 10-05

<u>CUP Addendum and Extension of Time Application</u>

February 2, 2015	Application submitted
March 7, 2016	Planning Commission hearing, closed the public hearing, deliberated, directed staff to review the comments submitted, and adjourned their deliberations
June 6, 2016	Planning Commission resumes deliberations

I. SECTION 1: Discussion of the Proposed Amendment and Extension of Time

On January 30, 2015, American Kings Solar, LLC, (which acquired the project from GWF Solar, LLC) submitted an application for an amendment to revise Conditional Use Permit (CUP) No. 10-05 for the American Kings Solar Project (formerly the GWF Henrietta Solar Project). The revised American Kings Solar Project will be referred to as the "Modified Project" throughout the remainder of this staff report. The CEQA Addendum is attached to Planning Commission Resolution No. 16-05 as Exhibit "A." The purpose of the Amendment is to analyze a revision to the Project's CUP that would: 1) extend the expiration date of CUP No. 10-05 for three (3) years, 2) modify the requirement to mitigate for the loss of Swainson's Hawk foraging habitat based on a project specific analysis, and 3) remove the

requirement to cancel the existing Farmland Security Zone contract and allow the Modified Project to demonstrate Farmland Security Zone (FSZ) contract compatibility by maintaining a reasonably foreseeable agricultural operation onsite determined by site-specific soil and water analysis, consistent with Kings County Board of Supervisors Resolution No. 13-058.

The applicant also seeks modifications to the CUP in order to add certain parcels of land to the project site, accommodate an updated project layout, modify certain Project Design Features and conditions of approval in response to proposed project revisions, and make other technical changes to the project authorized by the CUP. The Modified Project is described in detail in Section III of the Addendum and changes from the Original Project are summarized in Table 2 of the Addendum.

CUP No. 10-05 was originally approved by the Kings County Planning Commission on December 6, 2010 when Resolution No. 10-08 was adopted. CUP No. 10-05 approved construction and operation of a 125 MW photovoltaic solar facility on 957 acres. On January 7, 2013, the Kings County Planning Commission adopted Resolution No. 13-02 which approved a three (3) year extension of time for CUP No. 10-05. The original application for CUP No. 10-05 consisted of the following properties:

Assessor's Parcel Number	Acres	Farmland Security Zone (FSZ) Status	FSZ #	FSZ Contract #
024-190-023	78.89	Yes	0090	221
024-190-044	53.60	Yes	0090	221
024-190-059	11.68	Yes	0090	221
024-190-063	17.26	Yes	0090	221
024-190-066	362.12	Yes	0090	221
024-190-068	60.00	Yes	0090	221
024-190-071	245.51	Yes	0090	221
024-210-003	10.00	Yes	0090	221
024-210-016	13.65	Yes	0090	221
024-210-017	34.49	Yes	0090	221
024-231-008	6.80	Yes	0090	221
024-232-004	7.68	Yes	0090	221
024-241-001	8.05	Yes	0090	221
024-242-001	8.04	Yes	0090	221
026-020-015	44.06	Yes	0090	221

The Amendment to CUP No. 10-05 is proposing to add the following property to the project:

Assessor's Parcel Number	Acres	Farmland Security Zone (FSZ) Status	FSZ #	FSZ Contract #
024-210-002	1.00	Not under contract	N/A	N/A
024-250-001	4.55	Yes	0090	221
024-250-013	0.93	Yes	0090	221
024-250-014	2.97	Yes	0090	221

With the Amendment the Project will remain a photovoltaic solar facility with up to 125 MW on 966 acres and will connect into a local electrical power line. The electrical energy generated by the Modified Project would be delivered to the CAISO electrical transmission/distribution grid. The plant would be connected to the electrical grid at the existing PG&E substation located adjacent to the Modified Project site. The Modified Project would generate electricity for its own auxiliary loads, including control systems, and general facility loads such as lighting, heating, and air conditioning during the daytime hours. At night, the Modified Project would draw electricity from the PG&E grid for these loads. Some power would also be re-converted from alternating current (AC) to direct current (DC) for use as backup power for control systems and other uses.

The Original Project would have been constructed on 957-acres of land that are bounded by SR 198 to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. Adjacent to the project site is the existing PG&E Henrietta Substation and the existing Henrietta 95-MW Peaker Power Plant. The Mustang, Orion, and Kent South Solar Projects are located on the west side of 25th Avenue and the Westside Solar Project is located at the southwest corner of 25th Avenue and Avenal Cutoff Road.

Major components and features of the Original Project include:

- 978 acres of disturbed land. A total of 978 acres (study area) was evaluated in the IS/MND which included 21 acres of land within the study area that were not included in the original 957-acre project site. The proposed project was approved as a 957-acre project site.
- Polycrystalline or thin-film PV solar collection field; single-axis tracking mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access road; water treatment systems and storage for service water, de-mineralized water, and potable water; and septic system.
- Control and maintenance building to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance.
- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the PG&E grid.
- Approximately 800 feet of new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation.

The Modified Project would be constructed on 966-acres of land that is bounded by SR 198 to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. In addition, there currently are public rights-of-way that cross the Modified Project site and that are included in the 966 acres of land. The applicant will initiate the right-of-way abandonment process with Kings County to eliminate those public rights-of-way. Adjacent to the Modified Project site is the existing PG&E Henrietta Substation and the existing Henrietta 95-MW Peaker Power Plant.

Major components and features of the Modified Project include:

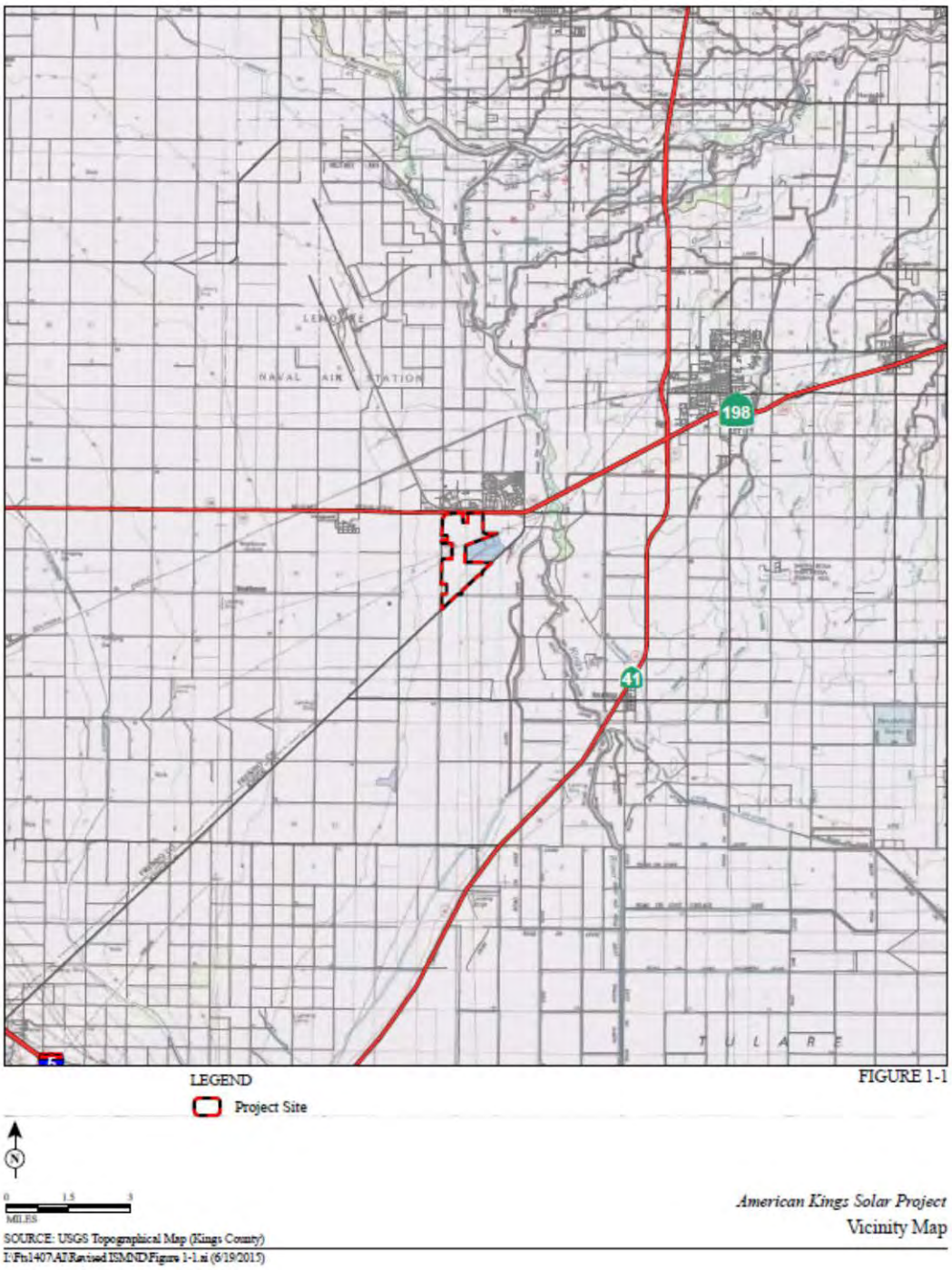
- 966 acres of disturbed land;
- Polycrystalline or thin-film PV solar collection field; single-axis tracking or fixed-tilt mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access road; water treatment systems and storage for service water, de-mineralized water, and potable and non-potable water; septic system; and meteorological stations;
- Control Building to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance;
- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the electrical grid; and
- A new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation.

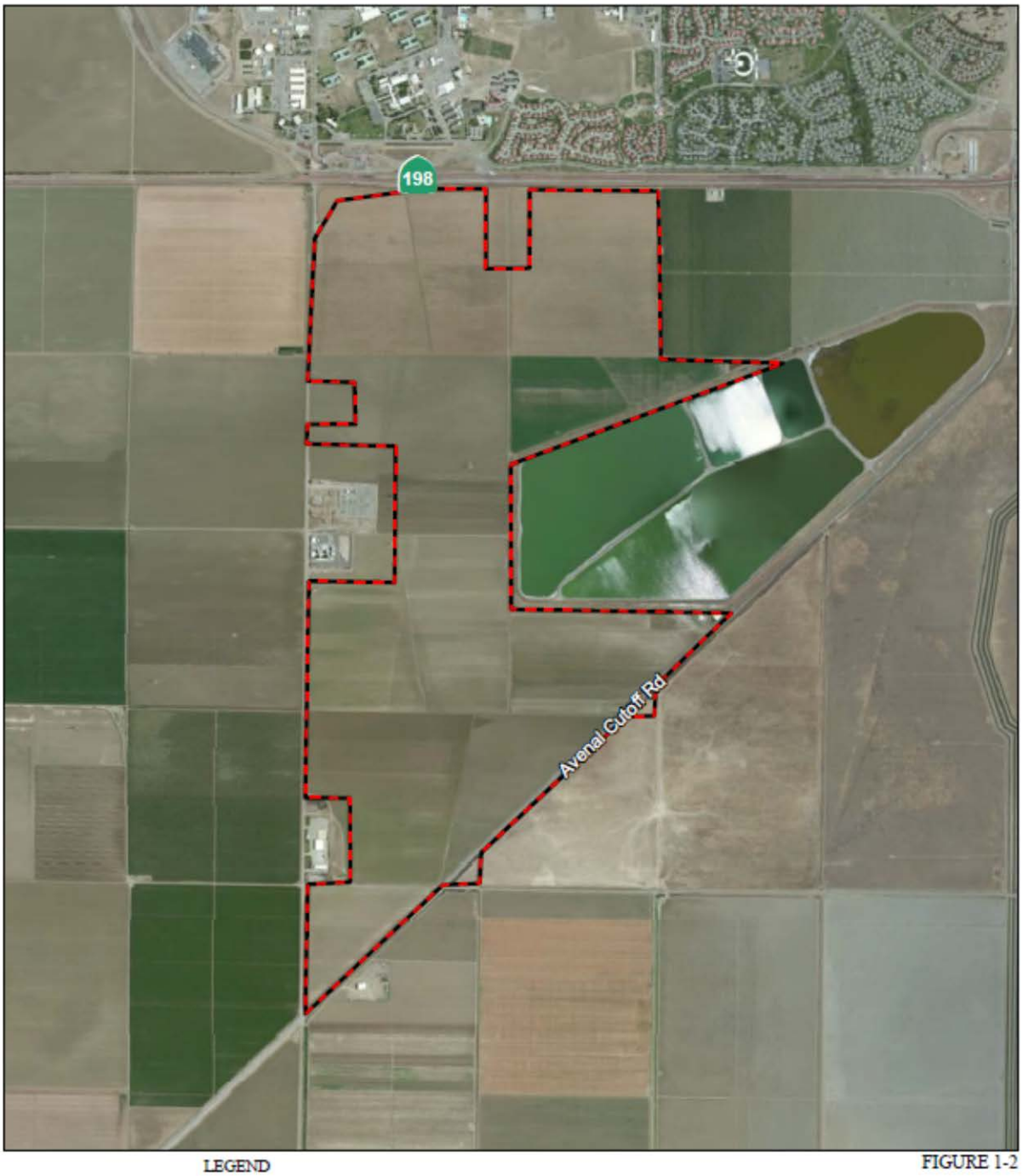
The Modified Project would be comprised of PV technology, and would consist of an array of solar PV panels supported on a metal-framed mounting system, junction boxes to connect the panels, inverters, and intermediate step-up transformers to convert sunlight into electricity. The Modified Project's general arrangement is shown in Figure 1-3 of the Addendum.

The Modified Project is located on land subject to Farmland Security Zone (FSZ) contract. A solar facility to be located on Williamson Act or FSZ contracted land may only receive a conditional use permit if it meets the principles of compatibility under Government Code Section 51238.1(a), or if the contract is proposed for cancellation, or is eligible and converts to a Solar Use Easement. The Modified Project would maintain a use onsite that meets the principles of compatibility pursuant to *Government Code* Section 51238.1(a) by maintaining reasonably foreseeable agricultural operations onsite as determined by site-specific soil and water analysis.

On November 26, 2013, the Board of Supervisors adopted Resolution No. 13-058, recognizing that circumstances exist on agricultural preserves located within that portion of Kings County south of State Route 198, west of State Route 41, and east of I-5, including water availability and soil conditions that limit the reasonably foreseeable agricultural use of certain parcels. If specified findings can be made, compatibility of solar development with certain reasonably foreseeable agricultural uses can be achieved.

The Addendum provides site specific evidence of impaired soil quality and drainage on the Project site, as well as severe limitations to surface water allocations, as evidence that a foreseeable agricultural operation on the Project's footprint is seasonal sheep grazing. A full soil and water analysis conducted by Provost & Pritchard Consulting Group and Dellavalle Labs Inc. for the SGF may be found in Appendix B of the Addendum.





LEGEND

Project Site

FIGURE 1-2

0 1000 2000
FEET

SOURCE: ESRI Aerial Imagery (8/2010)

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American Kings Solar Project
Location Map

FIGURE 1-3

American Kings Solar Project
Project General Arrangement

SOURCE: First Solar (2015)
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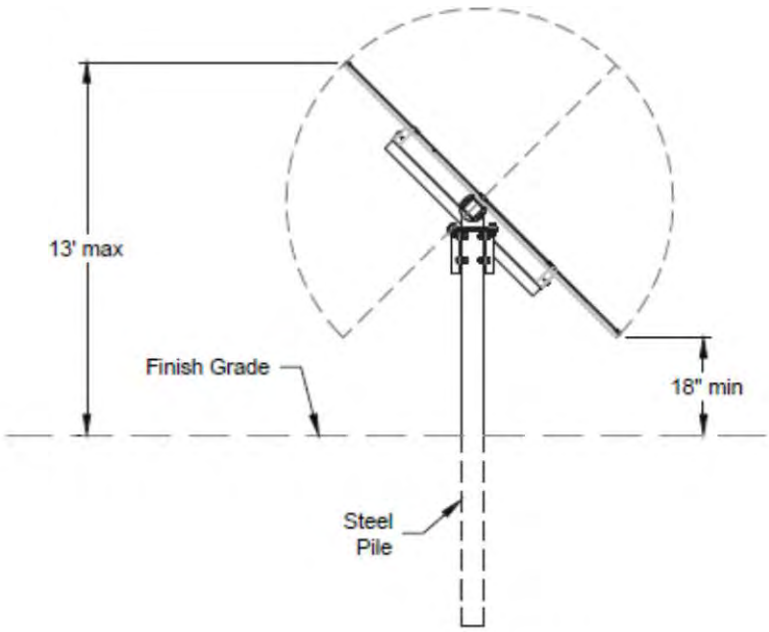

Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

Typical Detail Horizontal-Tracker Structure

FIGURE 1-4

American Kings Solar Project
Typical Tracker Structure

SOURCE: First Solar (2014).
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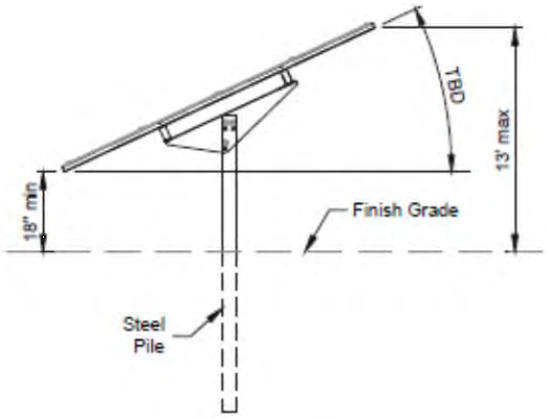

Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

Typical Detail Fixed-Tilt Structure

FIGURE 1-5

American Kings Solar Project
Typical Fixed-Tilt Structure

SOURCE: First Solar (2015).
I:\Fts1407\AI\Revised IS\MND\Figure 1-5.ai (6/19/2015)

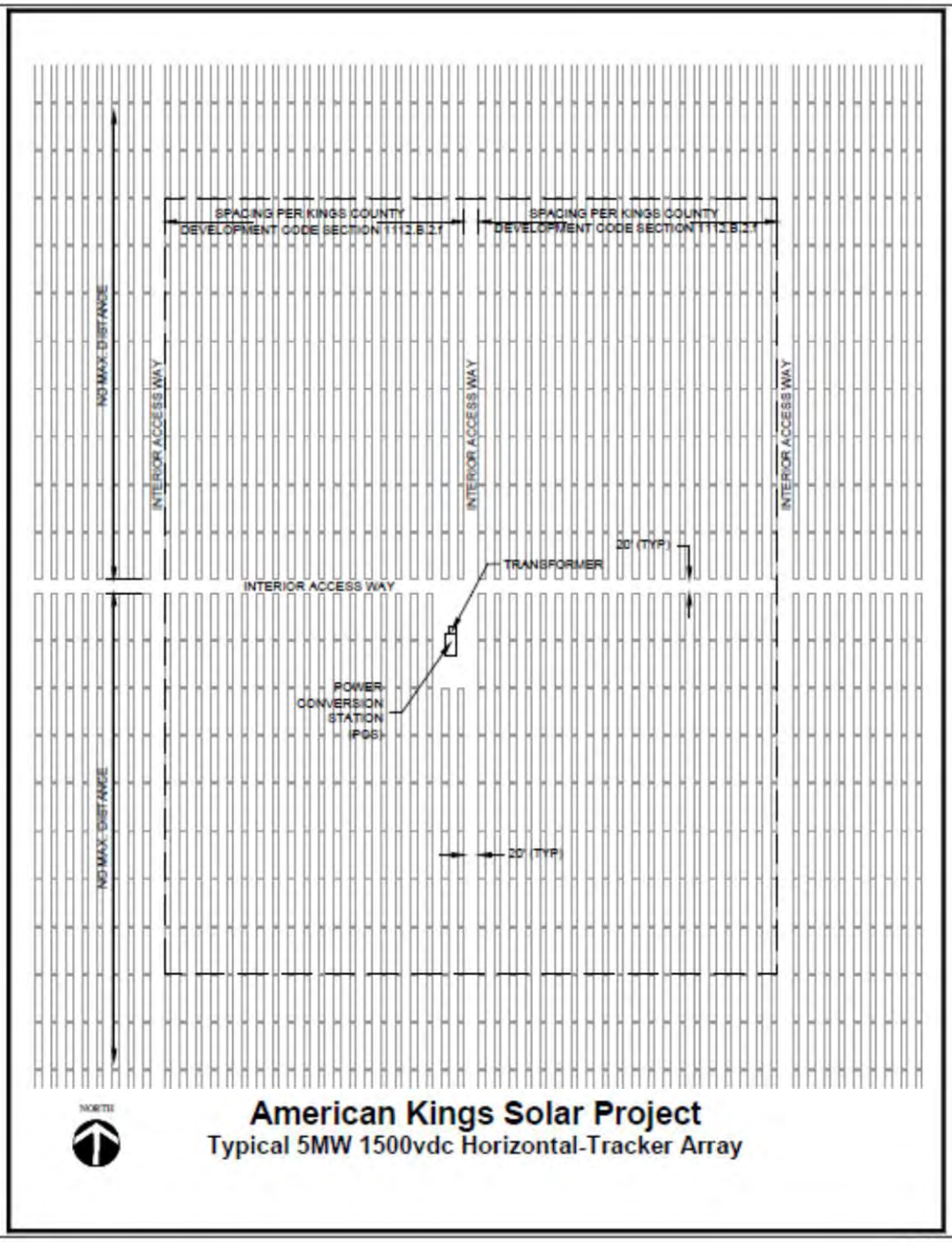

FIGURE 1-6

American Kings Solar Project
Typical Tracker Array Layout

SOURCE: First Solar (2015).
I:\Fts1407\AI\Revised ISMND\Figure 1-6.ai (6/19/15)

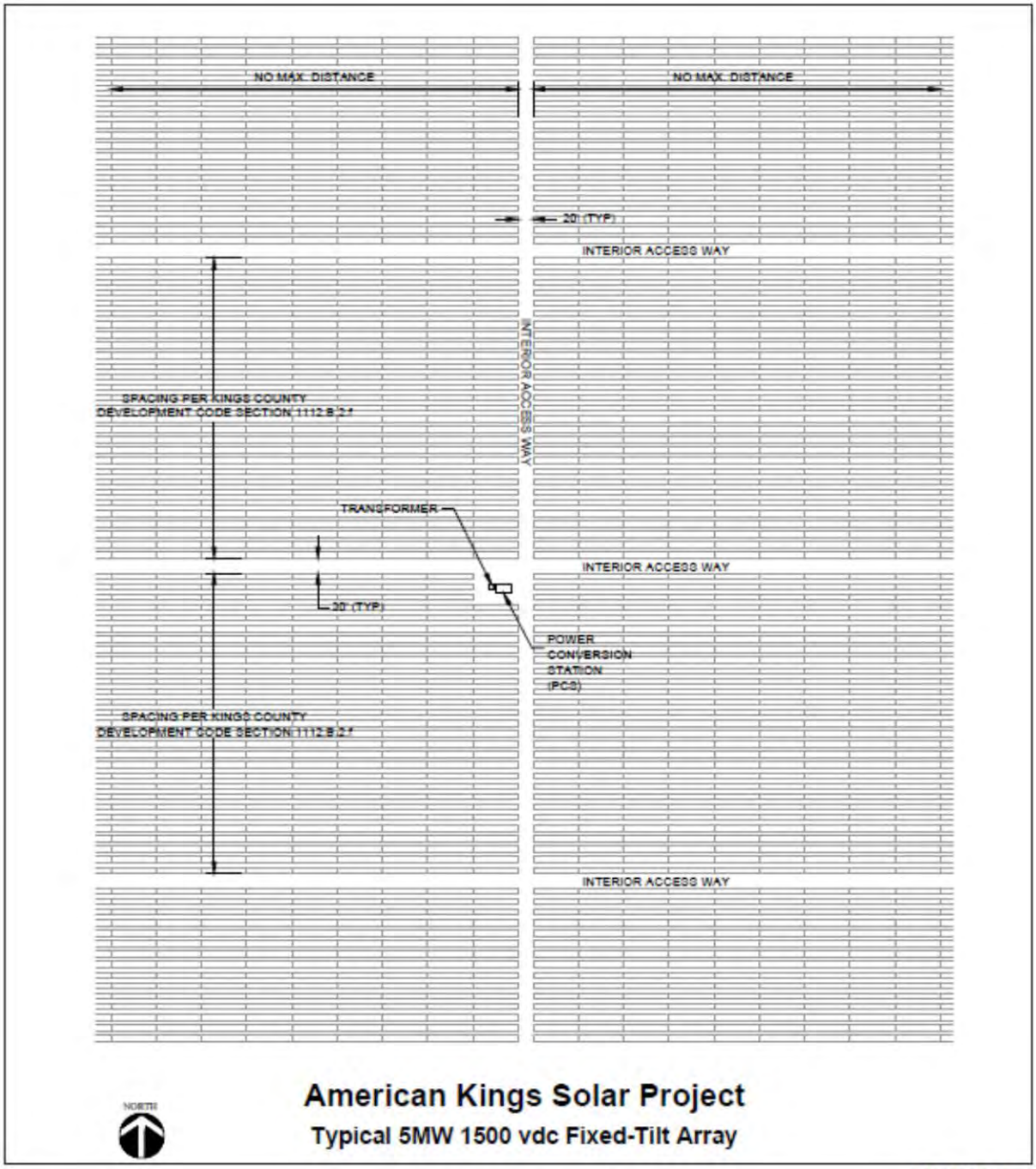

FIGURE 1-7

American Kings Solar Project
Typical Fixed-Tilt Array Layout

SOURCE: First Solar (2015).
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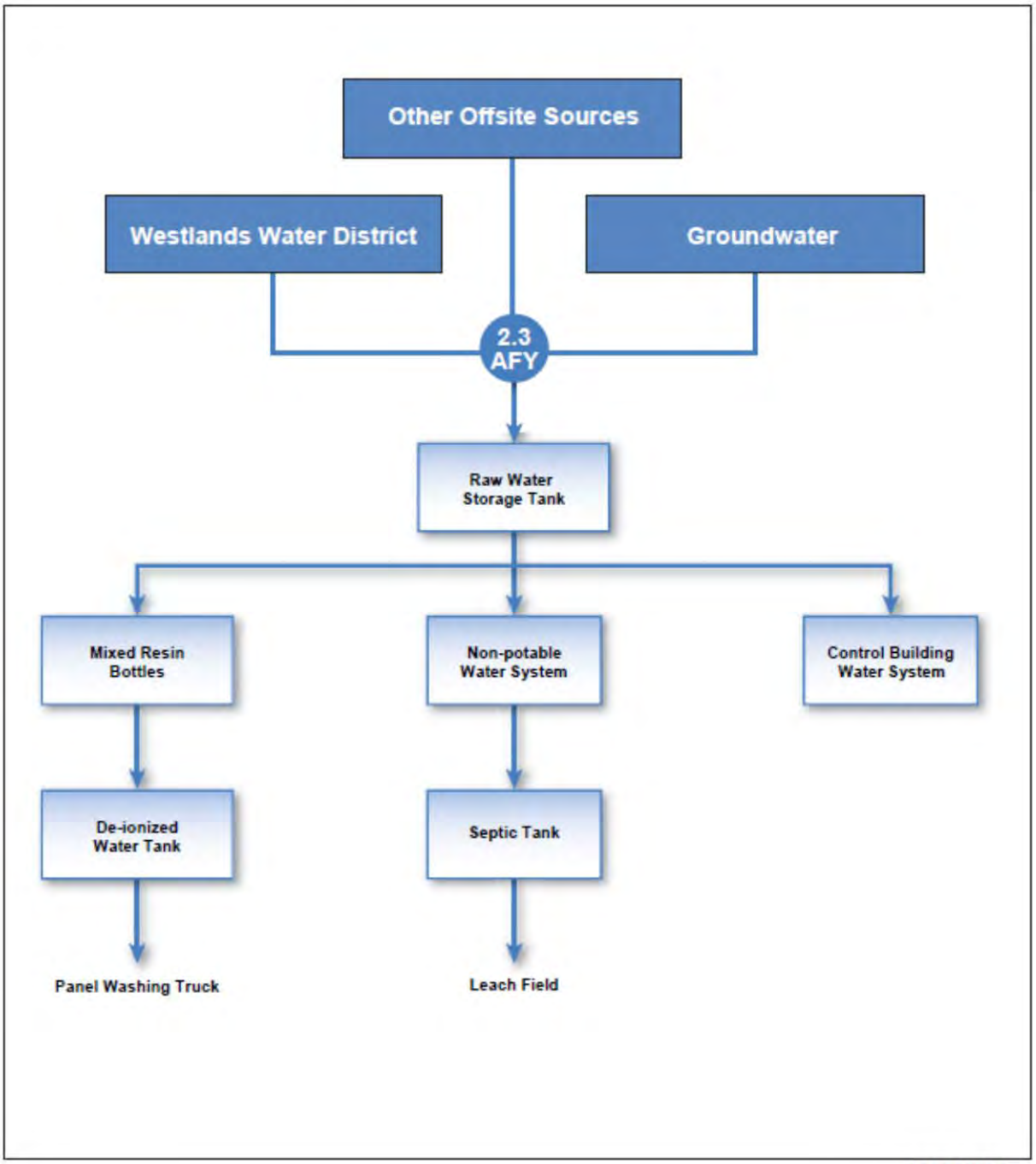

FIGURE 1-8

American Kings Solar Project
Water Flow Diagram

SOURCE: First Solar (2015). NOTES: AFY = acre-feet per year
I:\Fn1407\AI\Revised ISMND\Figure 1-8.ai (6/19/15)

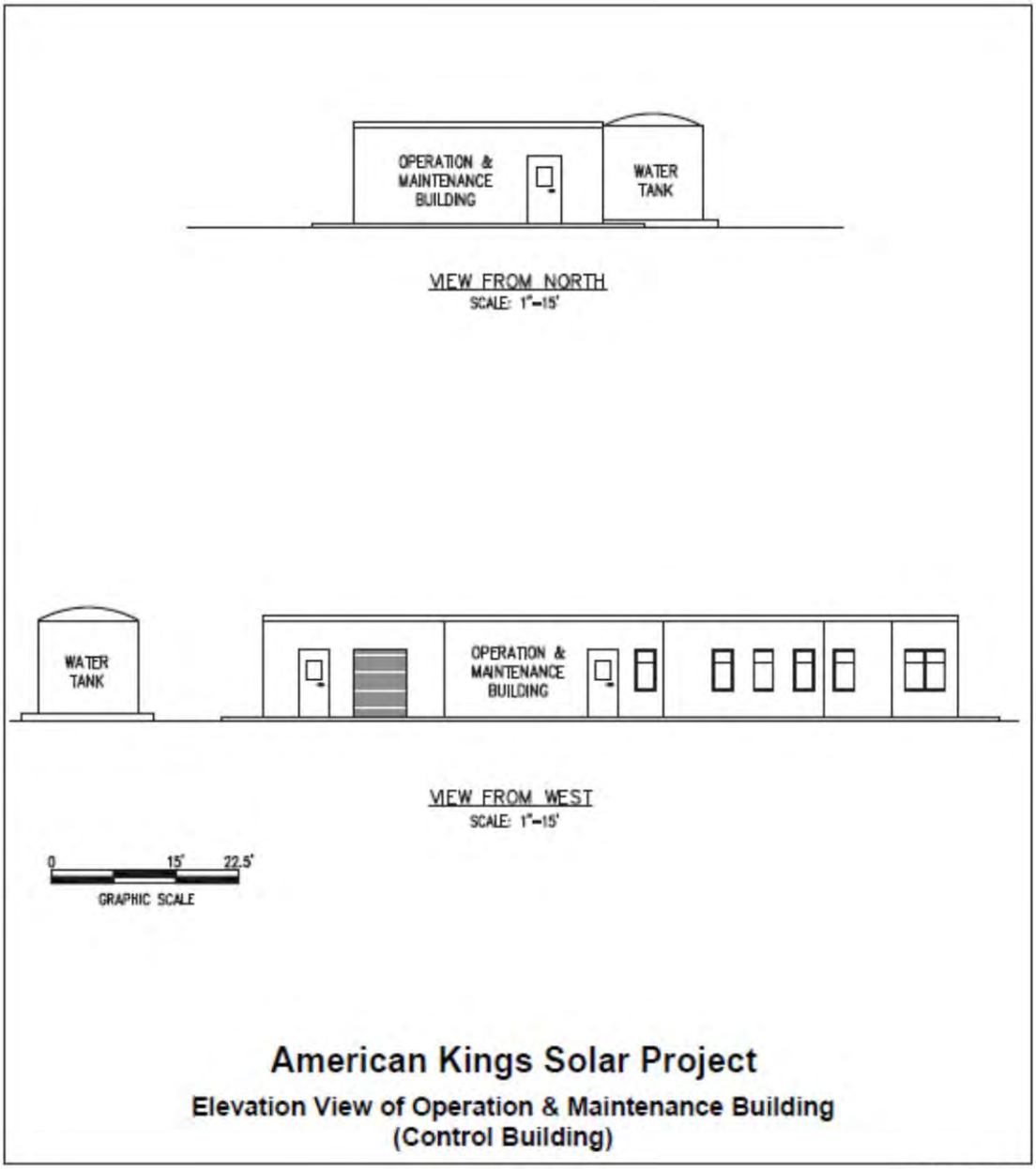

FIGURE 1-9

American Kings Solar Project

Elevation View of Operation and Maintenance Building (Control Building)

SOURCE: First Solar (2015).

I:\Fis1407\AI\Revised IS\MND\Figure 1-9.ai (6/19/15)

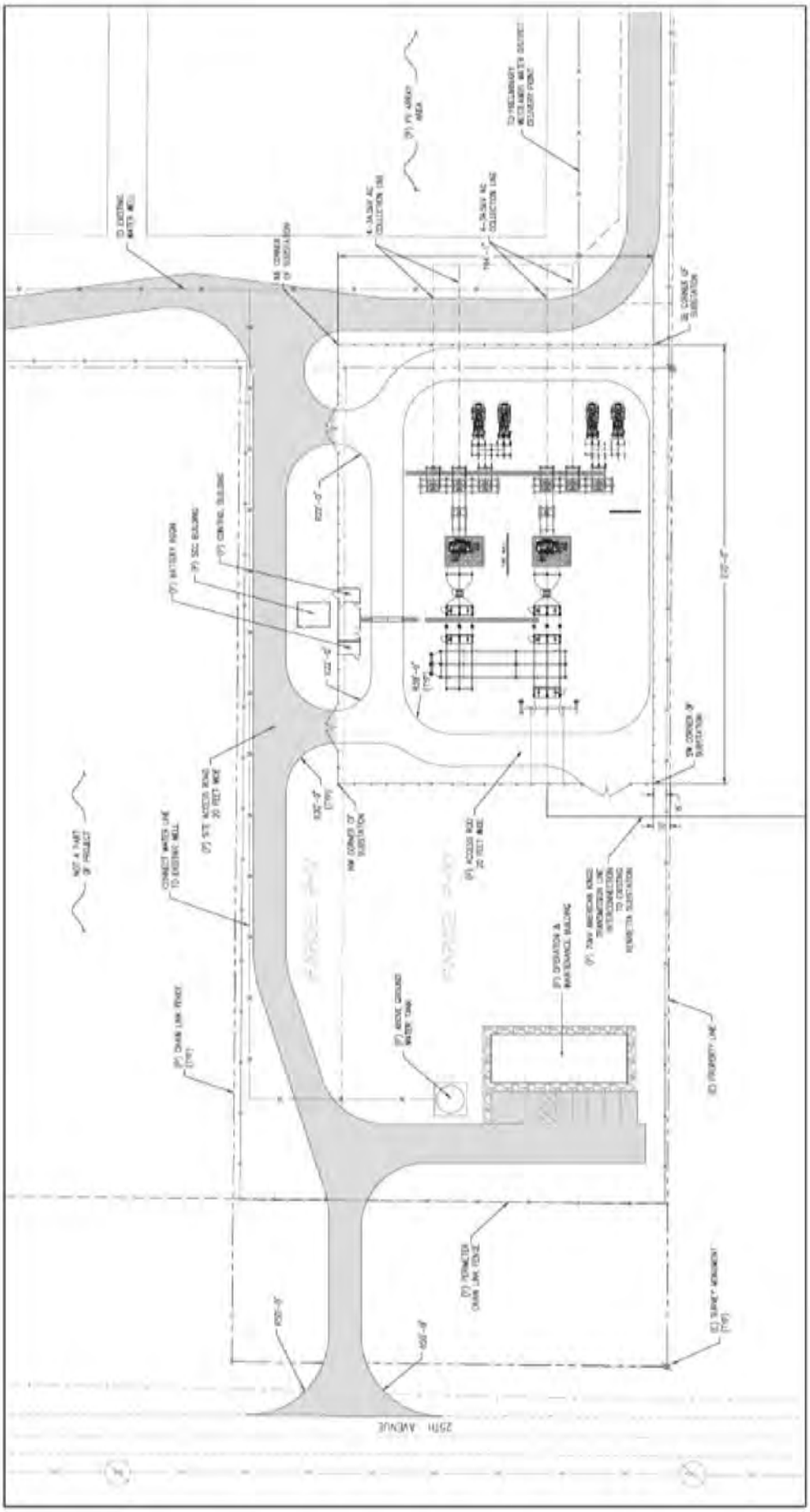

FIGURE 1-10

American Kings Solar Project
Substation O&M Building Area (Control Building)

II. SECTION 2: Discussion

On March 7, 2016, Adams Broadwell Joseph & Cardozo ("ABJ&C") submitted written comments on the Addendum to Conditional Use Permit No. 10-05 (American Kings Solar, LLC), on behalf of Kings County Citizens for Responsible Development, prior to the public hearing. In addition, written comments were submitted by Naval Air Station ("NAS") Lemoore during the public hearing on March 7, 2016. A copy of the ABJ&C letter is attached to this staff report as Attachment No. 1. A copy of the NAS Lemoore letter is attached to this staff report as Attachment No. 2.

On March 7, 2016, the Kings County Planning Commission ("Commission") received the staff report from staff; received written comments from ABJ&C; held a duly noticed public hearing to receive testimony from any interested person; received written comments from NAS Lemoore; closed the public hearing; directed staff to review the comments received from ABJ&C and NAS Lemoore; and adjourned their deliberations to the April 4, 2016, meeting of the Commission. Due to the large amount of information contained in the ABJ&C comments, which consisted of a 33 page comment letter and 671 pages contained in exhibits A through F, it was necessary to cancel the Commission's April 4, 2016 and May 2, 2016 meetings to allow staff adequate time to review all of the comments submitted and prepare responses to comments. The responses to comments are attached to this staff report as Attachment No. 3.

III. SECTION 3: California Environmental Quality Act Guidelines Section 15164

CEQA Guidelines Section 15164 allows for an Addendum to an approved IS/MND to be prepared when minor technical changes or additions are necessary and if the Addendum does <u>not</u> meet any of the requirements stated in Section 15162. Sections V (Impact Analysis) and VI (Modified Project Design Features) of the Addendum detail how the conditions of Section 15162 have <u>not</u> been met.

The Modified Project will remain consistent with the approved CUP and will continue to be subject to the same Conditions of Approval and Mitigation Measures as previously approved by the County Planning Commission, except the modification of Planning Division Condition Number 1; the deletion of Planning Division Conditions 17, 18, 21, 22, and 23; the modification of Building Division Condition Number 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition of NAS Lemoore Condition No. 1; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension of CUP No. 10-05.

The Modified Project would not result in any effects to environmental resources that are more severe than those described in the original IS/MND. All Mitigation Measures and Conditions associated with the original Projects would be applied to the Modified Project, except the modification of Planning Division Condition Number 1; the deletion of Planning Division Conditions 17, 18, 21, 22, and 23; the modification of Building Division Condition Number 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition of NAS Lemoore Condition No. 1; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension of CUP No. 10-05. As with the approved Project, the Modified Project would have a less than significant impact with the implementation of the approved mitigation identified for agriculture, biological resources, cultural resources, and traffic. As required by CEQA Guidelines Section 15162, the County has evaluated each of these circumstances in the Addendum.

IV. SECTION IV: Staff Analysis:

With regard to this amendment, staff comments that:

1. CUP No. 10-05 was found to be consistent with both the Kings County General Plan and Zoning Ordinance on December 6, 2010. This action will: analyze a revision to the Project's CUP that would allow the Project to demonstrate Farmland Security Zone (FSZ) contract compatibility by maintaining reasonably foreseeable agricultural operation onsite determined by site-specific soil and water analysis. Consistent with Kings County Board of Supervisors Resolution No. 13-058, the Addendum would remove the current CUP's requirement for cancellation since the Applicant has provided evidence that surface water availability, soil conditions, and groundwater availability

make dry farm seasonal grazing a reasonably foreseeable agricultural use of the land such that the project could meet the principles of compatibility with an FSZ contract pursuant to Government Code Section 51238.1 with the implementation of dry farm seasonal sheep grazing.

2. All findings and adopted conditions of approval in Resolution No. 10-08 concerning CUP No. 10-05 remains in full force and effect, except the modification of Planning Division Condition Number 1; the deletion of Planning Division Conditions 17, 18, 21, 22, and 23; the modification of Building Division Condition Number 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition of NAS Lemoore Condition No. 1; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension of CUP No. 10-05.

3. The use should not be detrimental to public health and safety, nor materially injurious to properties in the vicinity. An IS/MND was approved for this Project on December 6, 2010. An addendum to the IS/MND has been prepared to analyze potential environmental impacts associated with the CUP Addendum. The Addendum to the IS/MND is attached to Planning Commission Resolution No. 16-05 as Exhibit "A." No potential impacts were identified beyond those identified in the IS/MND. The proposed project may have significant adverse impacts on the environment; however, those impacts can be mitigated to an insignificant level by implementing the adopted project design features and mitigation measures identified in the Mitigation Monitoring and Reporting Plan (MMRP) adopted by the Planning Commission on December 6, 2010, and as modified in Exhibit "B" of Planning Commission Resolution No. 16-05. The original IS/MND and MMRP are incorporated herein by reference.

V. SECTION 5: Recommendation:

Staff has reviewed the comments submitted to the Commission prior to, and during, the public hearing on March 7, 2016, and has provided the responses set forth in Attachment No. 3 to this staff report. The information contained in the comments does not alter the findings or conclusions of the CEQA Addendum. The CEQA Addendum analyzes potential project environmental impacts and provides detailed mitigation to address potentially significant impacts. The analysis demonstrates that project impacts remain less than significant, with mitigation, and is consistent with the original IS/MND analysis findings. The proposed changes to the proposed project are minor, primarily related to the refinement of the layout design to reflect the specific PV technology being proposed. The analysis confirms that there are no substantial changes to the Project, and no significant changes in the surrounding circumstances or newly available information, that would trigger further review under CEQA Guidelines 15162. The CEQA Addendum is appropriate to document the County's environmental review of the proposed increment of changes to the Project. Development of a subsequent MND, let alone an EIR, is not required.

It is recommended that the Commission approve the proposed Amendment and three (3) year extension of time to Conditional Use Permit No. 10-05 as described above and adopt Resolution No. 16-05. Approval of this Resolution will:

1. Find that the proposed Amendment to CUP No. 10-05 will not have significant adverse impacts on the environment with the inclusion of mitigation measures agreed to by the Applicant, and approve the Addendum to the adopted ***Mitigated Negative Declaration***.

2. Find that Planning Commission Resolution No. 10-08 concerning CUP No. 10-05 remains in full force and effect, except for the modifications to Planning Division Condition Number 1; the deletion of Planning Division Conditions 17, 18, 21, 22, and 23; the modification of Building Division Condition Number 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition of NAS Lemoore Condition No. 1; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension of CUP No. 10-05 as described in Exhibit "A" of Planning Commission Resolution No. 16-05.

3. Approve the Amendment to CUP No. 10-05 with specified conditions of approval.

4. Approve a three year time extension for the CUP. CUP No. 10-05 shall lapse and become null and void three (3) years following the date that Resolution No. 16-05 is adopted, unless prior to the expiration of three (3) years a building permit is issued by the Building Official and construction is commenced and diligently pursued toward completion on the site that was subject of the Conditional Use Permit application. This Conditional Use Permit may be renewed for additional periods of time, if an application (by letter) for renewal of the Conditional Use Permit is filed with the Kings County Community Development Agency prior to the permit's expiration date.

PREPARATION:

Prepared by the Kings County Community Development Agency (Sandy Roper) on May 23, 2016. Copies are available for review at the Kings County Community Development Agency, Government Center, Hanford, California, or at the Kings County Clerk's Office, Government Center, Hanford, California.

Attachment No. 1 Adams Broadwell Joseph & Cardozo Comment Letter
Attachment No. 2 NAS Lemoore Comment Letter
Attachment No. 3 Response to Comments including the following:

- Letter from LSA memorializing the biological resources surveys performed for the Modified Project, expanding on information previously incorporated into the CEQA Addendum
- Update to Section 3.3 (Air Quality) of the IS/MND

h:\planning\land development section\zoning admin\cup\2010 to 2019\2010\cup 10-05 american kings (formerly gwf)\addendum\addendum pc reports\6-6-16 pc meeting\cup 10-05 pc staff report for 6-6-16 pc meeting.doc

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Attachment No. 1

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March 7, 2016

Via EMAIL and HAND DELIVERY

Chair Riley Jones and
Honorable Members of the Kings County Planning Commission
Board of Supervisors Chambers, Administration Building No. 1, Kings County Government Center,
1400 W. Lacey Boulevard, Hanford, California 93230
Email: terri.yarbrough@countyofkings.com

VIA EMAIL and U.S. MAIL

Sandy Roper, Principal Planner
Kings County Community Development Agency
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Hanford, CA 93230
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Re: Agenda Item No. 3: Addendum to Conditional Use Permit No. 10-05 (American Kings Solar, LLC)

Dear Chair Riley Jones, Honorable Members of the Kings County Planning Commission, Mr. Roper:

These comments are submitted on behalf of Kings County Citizens for Responsible Development ("Citizens") regarding Agenda Item No. 3: Addendum to Conditional Use Permit ("CUP") No. 10-05 (American Kings Solar, LLC) ("Project" or "American Kings Project"). Originally approved as the GWF Henrietta Solar Project in 2010 ("Original Project"), the Original Project proposed the construction and operation of a 125 megawatt ("MW") solar photovoltaic ("PV") facility on 957 acres of land located east of 25th Avenue, south of State Route 198, and west of Avenal Cutoff Road in Lemoore, California. The Original Project was proposed by applicant GWF Energy LLC ("Original Applicant") and approved by Kings County ("County") on

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December 6, 2010 (CUP 10-05). On January 7, 2013, the County approved a 3-year extension of CUP 10-05. The Original Project was never built.

In February 2015, a new applicant, American Kings Solar, LLC c/o First Solar, ("Applicant"), filed an application with the County to modify the Original Project and extend CUP 10-05 by an additional 3 years. The current Project proposes substantial changes from the Original Project that preclude the County from processing the Project application as a CUP extension and require preparation of a new environmental document, pursuant to the California Environmental Quality Act ("CEQA").[1]

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In particular, the Applicant proposes to expand operations by adding an agricultural sheep grazing operation to the previously approved 125MW solar facility; to delete previously approved mitigation measures to set aside a 978-acre agricultural conservation easement and a 498-acre foraging habitat easement for Swainson's hawk; and to reduce the construction period for the Project from 35 months to just 15-18 months. The Applicant also proposes to expand the Project footprint by adding an additional ten (10) acres of land to the Project site.[2] To facilitate these changes, the Project requires modification or removal of ten (10) of the Original Project's twenty-three (23) Conditions of Approval, and eight (8) of the Original Project's mitigation measures. These changes are far beyond a mere CUP extension request, and instead require the Applicant to seek a CUP amendment or an entirely new CUP under to the County's Development Code.

The Project also fails to comply with CEQA in numerous ways. The changes in the Project were not analyzed in the County's original 2010 Initial Study / Mitigated Negative Declaration ("MND"). Nevertheless, the County failed to prepare a new MND or an environmental impact report ("EIR") to analyze the modified Project. Instead, the County seeks to rely on a mere addendum to the MND ("Addendum"). CEQA addendums are authorized only where an applicant proposes "minor technical changes" to a project, and do not provide a public comment period.[3] As discussed herein, the changes proposed by the Project are substantial, and therefore do not qualify as changes that may be analyzed in a CEQA addendum. A new MND or EIR should have been prepared. The deletion of previously approved mitigation measures

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[1] Pub. Resources Code ("PRC") § 21000 *et seq*.
[2] See March 7, 2016 Planning Commission Staff Report re Addendum and Extension of Time for Conditional Use Permit Nos. 10-05 (American Kings) ("Staff Report"), pp. 1-5.
[3] 14 Cal. Code Regs. ("CCR") § 15164(b).

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also creates an independent requirement for the County to prepare a new CEQA document with a formal public review period.[4]

Finally, the proposed changes to the Project will result in new and more severe significant impacts to biological resources, traffic, agricultural resources, and air quality that were not analyzed in the original MND. The Addendum also fails to set forth an accurate baseline reflecting existing conditions at the Project site, fails to conduct a threshold analysis of several key components of the modified Project and their potentially significant impacts, and improperly defers the creation of mandatory plans and analysis and mitigation of significant Project impacts to a future time. These omissions render the Addendum deficient as matter of law.

As the result of the County's failure to comply with CEQA, the County is precluded from relying on the Addendum to approve the Project and must instead prepare a revised MND or EIR. The Planning Commission also cannot make the findings required by the County Development Code to approve a CUP extension for the Project at this time.[5] A new or amended CUP is required instead.

We prepared these comments with the assistance of biologist Scott Cashen.[6] Mr. Cashen's comment letter and all attachments thereto are incorporated by reference as if fully set forth herein. Citizens expressly reserves the right to supplement these comments at any subsequent hearings and proceedings for the Project.[7]

I. STATEMENT OF INTEREST

Citizens is an unincorporated association of individuals and labor organizations that are concerned about environmental and public health impacts from industrial development in the region where the association's members and their families live,

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[4] *Katzeff v. California Dept. of Forestry and Fire Protection* (2010)181 Cal.App.4th 601, 614; See Exhibit A, November 9, 2011 letter from Gregory Gatzka, Director of the Kings County Community Development Agency to Riley Jones, GWF Power System Company, re Possible amendment of Conditional Use Permit No. 10-05, p. 1.

[5] Kings County Development Code ("Dev. Code") §§ 1707, 1715.

[6] See March 6, 2016 Letter from Scott Cashen to Christina Caro re Comments on the Addendum for Conditional Use Permit Number 10-05 for the American Kings Solar Project ("Cashen Comments"), attached hereto as Exhibit B.

[7] Cal. Public Resources Code ("PRC") § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* ("*Bakersfield*") (2004) 124 Cal. App. 4th 1184, 1199-1203; *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1117.

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work and recreate. The association includes Kings County residents Howard Hite, Brandon Perez, Tikiyie Brooks, Deborah Parrent, Edgardo Orapa and Phonie Orapa, and California Unions for Reliable Energy ("CURE") and its local affiliates, and the affiliates' members and their families, as well as other individuals who live, work and recreate in Kings County. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members of CURE's affiliates may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants or other health and safety hazards that exist onsite.

CURE is a coalition of labor organizations whose members construct, operate, and maintain conventional and renewable energy power plants throughout California. Since its founding in 1997, CURE has been committed to building a strong economy and a healthier environment. CURE has helped cut smog-forming pollutants in half, reduced toxic emissions, increased the use of recycled water for cooling systems and pushed for groundbreaking pollution control equipment as the standard for all new power plants, all while ensuring new power plants are built with highly trained, professional workers who live and raise families in nearby communities.

In addition, CURE has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making it less desirable for businesses to locate and people to live there. Indeed, continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

II. THE PROJECT DOES NOT COMPLY WITH LOCAL LAND USE CONTROLS

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A. The Project Does Not Comply with Existing Conditions of Approval

The County Development Code requires the Planning Commission to impose conditions of approval on projects that are "necessary to protect the public health, safety, general welfare, and the environment."[8] Such conditions may include, *inter*

[8] Dev. Code § 1708(A).

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alia, restrictions on the time period within which a proposed site may be developed,[9] mitigation measures determined to be necessary to avoid or lessen significant environmental effects that may result from the construction and operation of an approved use,[10] and any other conditions necessary to "make possible the development of the County in an orderly and efficient manner, in conformance with the intent and purposes set forth in the Development Code."[11] Failure to comply with approved conditions of approval will result in revocation of a CUP, unless the CUP is amended or a new CUP application is filed.[12]

1. The Project Requires Removal or Modification of Ten of the Original Conditions of Approval.

The Project proposes substantially different operations and mitigation measures from the Original Project which no longer comply with the existing Conditions of Approval for CUP 10-05. In order to facilitate these changes, the Project requires modification or removal of ten (10) of the Original Project's Conditions of Approval. The proposed modifications are identified in the Staff Report. They include:

> [M]odification of Planning Division Condition Number 1; the deletion of Planning Division Conditions 17, 18, 21, 22, and 23; the modification of Building Division Condition Number 3; the modification of Fire Department Condition Numbers 1, 3, and 7; the addition and modification of Project Design Features; the clarification of the project description and environmental analysis; and the request for a three-year extension of CUP No. 10-05.[13]

Condition No. 1 requires "all proposals of the Applicant" to be adopted as conditions of approval.[14] The Staff Report proposes a sweeping change to Condition No. 1 that would incorporate all proposals of the Applicant "as modified by the CUP Addendum" as new Conditions.[15] As discussed below, the Addendum proposes substantial changes to Project operation, footprint, and the construction timeline. The

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[9] *Id*. at (A)(11).
[10] *Id*. at (A)(13).
[11] *Id*. at (A)(14)
[12] Dev. Code § 1716.
[13] Staff Report, p. 37.
[14] Staff Report, p. 29.
[15] *Id*.

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proposed revision to Condition No. 1 would sweep in all of these changes without requiring the CUP to be formally amended.

Conditions Nos. 17 and 18 govern post-Project reclamation of the Project site to return the soil to agricultural use. Condition No. 17 requires preparation of a Soil Reclamation Plan to the County for review prior to the issuance of building permits that originally included a baseline soil analysis and a plan to return the soil to pre-Project conditions within 6 months after expiration of the CUP. As revised, Condition No. 17 extends the 6-month reclamation period to an 18-month period, and adds conditions governing the disposal of Project waste. Decommissioning waste may include hazardous materials such as construction debris, which must be processed at a specially licensed materials recovery facility.[16] The changes proposed to Condition No. 17 effectively create a requirement to defer creation of the decommissioning plan for the Project until after CEQA review has concluded. This type of deferral is prohibited by CEQA, thus rendering revised Condition No. 17 inconsistent with CEQA. These are also substantial changes to the scope of Condition No. 17 that were not analyzed in the MND, and which are not meaningfully addressed in the Addendum.

Conditions Nos. 21, 22, and 23 originally required the Applicant to cancel the existing Farmland Security Zone ("FSZ") contract for the Project site and mitigate the loss of 978 acres of farmland of statewide importance by providing funding to place farmland of equal or greater value into an agricultural conservation easement within the County.[17] The Applicant now proposes to delete these Conditions entirely, and replace them with new Conditions that remove the requirement to cancel the FSZ contract, retain FSZ classification by maintaining a seasonal sheep grazing operation onsite, and eliminate the 978-acre mitigation easement. These are fundamental changes to the Project's design that have not been analyzed in any prior CUP application and are not analyzed in the Addendum.

Building Division Condition No. 3 provides height and design requirements for the Project's perimeter fencing. The Applicant proposes revisions to Condition No. 3 that would reduce the fence height from 8 feet to 6 feet, and would add a foot of barbed wire around the perimeter.[18] No analysis is provided of the impacts that these changes will have on other activities at the Project site, including resulting impacts on dust control and wildlife movement.

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[16] *Id.* at pp. 16 (PDF AG-1), 31.
[17] *Id.* at p. 33.
[18] *Id.* at p. 34.

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Fire Department Conditions Nos. 1, 3, and 7 set forth requirements for spacing of solar panel rows, access driveways, and fire training for Project site personnel.[19] Condition No. 1 sets a 400-foot limit on the allowable length of solar panel rows.[20] The Applicant proposes to delete this Condition entirely, and replace it with a requirement that access driveways be provided within the solar array.[21] Although the new Condition appears to address fire vehicle access at the site, it would have the effect of removing a previously approved site layout restriction that may have the unintended result of allowing substantial changes to the design and layout of the solar panels at the Project site. No discussion is provided about the practical implications of the proposed revision to Project design, and the Staff Report does not state whether potential changes to the solar array layout would require a new site plan review.

The Applicant's proposed revisions to the existing Conditions of Approval would create de facto CUP amendments that must be processed as a new CUP application by the County. The Applicant cannot skirt Development Code requirements by portraying the Project as the same project that was originally approved in 2010, when, in fact, it is not the same project. Under the Development Code, changes to conditions of approval and substantial changes to a site plan, such as those proposed here, require an amendment to the CUP or a new CUP entirely. They cannot be processed as an extension.[22] The CUP approval process is designed to afford proposed conditional uses "special consideration so that they may be located properly with respect to their effects on surrounding properties and the environment."[23] By contrast, a CUP extension merely gives the applicant additional time to complete implementation of a project that has been previously considered and approved by the County.[24]

The Staff Report and Addendum acknowledge that the CUP extension is only one of several modifications to the Project that have been proposed by the Applicant.[25] The modifications were not part of the Original Project, and have not been analyzed in any prior CEQA document.[26] The proposed modifications would require substantial

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[19] *Id*. at pp. 35-36.
[20] *Id*.
[21] *Id*. at p. 35.
[22] Staff Report, p. 29, Condition of Approval No. 2 (any expansion of use that is a substantial change from the conceptually approved site plan "will require either an amendment to the approved Conditional Use Permit or a new zoning permit."); Dev. Code § 1701.
[23] Dev. Code § 1701.
[24] *Id*. at § 1715(B), (C).
[25] Staff Report, p. 37
[26] *Id*.

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revisions to the existing Conditions of Approval. The modifications therefore require more than a mere extension to the existing CUP. The Project has changed to the extent that a new or amended CUP, and a new CEQA document, are required for the Project.

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2. The Project Fails to Comply With Remaining Conditions of Approval.

The Applicant proposes to retain Conditions of Approval Nos. 2 and 3 as currently drafted. Conditions Nos. 2 and 3 set threshold standards for processing CUP amendments and new permits, and mandate that the Project must comply with the County Development Code. Conditions 2 and 3 actually clarify that the Project cannot be processed as a CUP extension, and must instead be processed as a CUP amendment or a new permit. The Project would therefore violate both Conditions if approved in its current form.

Condition No. 2 prohibits expansions of use or substantial deviations from a previously approved site plan unless the CUP is amended. It states:

> No expansion of use, regardless of size, which would increase the projected scale of operations beyond the scope and nature described in this Conditional Use Permit application, will be allowed. ***Any expansion that is a substantial change from the conceptually approved site plan will require either an amendment to the approved Conditional Use Permit or a new zoning permit***.[27]

Here, the Project proposes to expand the Project footprint by 10 acres, expand on-site operations by adding a seasonal sheep grazing operation, and remove the size restriction on rows of solar arrays, thereby implicitly allowing an unlimited number of solar array rows on the site. Implementation of the Project will result in expansions of use that are not authorized under the current CUP. By Condition No. 2's own terms, then, the Project therefore requires either a CUP amendment, a new zoning permit, or both.

Condition No. 3 requires the Project to comply with "all regulations of the Kings County Development Code."[28] As discussed below, the Project fails to ensure

[27] *Id*. at p. 29, Condition No. 2 (emphasis added).
[28] *Id.*; Condition No. 3.

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compliance with the Development Code because it proposes to allow the development of a solar site on agricultural land designated as "Medium Priority" without requiring compensatory mitigation and without substantial evidence that the Project's proposed sheep grazing operation will be comparable to existing uses at the site.[29]

B. The Project Fails to Ensure Compliance with the County Development Code and General Plan

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The Development Code contains standards governing the development of specific land uses and activities within the County, including solar projects.[30] Section 1112(B) applies to development of "commercial solar electric generating facilities" in agricultural zones.[31] The Project is proposed to be located in an Exclusive Agriculture zoning district, and is therefore subject to Section 1112(B).[32] Section 1112(B)(2)(a) provides that commercial solar projects must be sited on agricultural lands designated as lower priority under the General Plan:

> The proposed [commercial solar] site shall be located in an area designated as either "Very Low Priority," "Low Priority," or "Low-Medium Priority" land according to Figure RC-13 Priority Agricultural Land (2035 Kings County General Plan, Resource Conservation Element, Page RC-20). "Medium Priority" land may be considered when comparable agricultural operations are integrated, the standard mitigation requirement is applied, or combination thereof.[33]

The Staff Report and Addendum fail to discuss Section 1112(B), and fail to state whether the Project site lands are designated as "Very Low Priority," "Low Priority," "Low-Medium Priority," or "Medium Priority" under Figure RC-13 of the General Plan's Resource Conservation Element.[34] Buried in Appendix A to the Addendum, the redlined MND states that the Project site is designated as "Medium Priority" pursuant to Figure RC-13.[35] This is also apparent from a comparison with Project mapping (see figures below).

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[29] Dev. Code § 1112(B)(2)(a).
[30] Dev. Code, Article 11, Standards for Specific Land Uses and Activities.
[31] Dev. Code § 1112.
[32] Staff Report, p. 1.
[33] Dev. Code § 1112(B)(2)(a).
[34] See e.g. Addendum, pp. 53-57 (Agricultural Resources).
[35] 2010 MND, p. 3.2-1.

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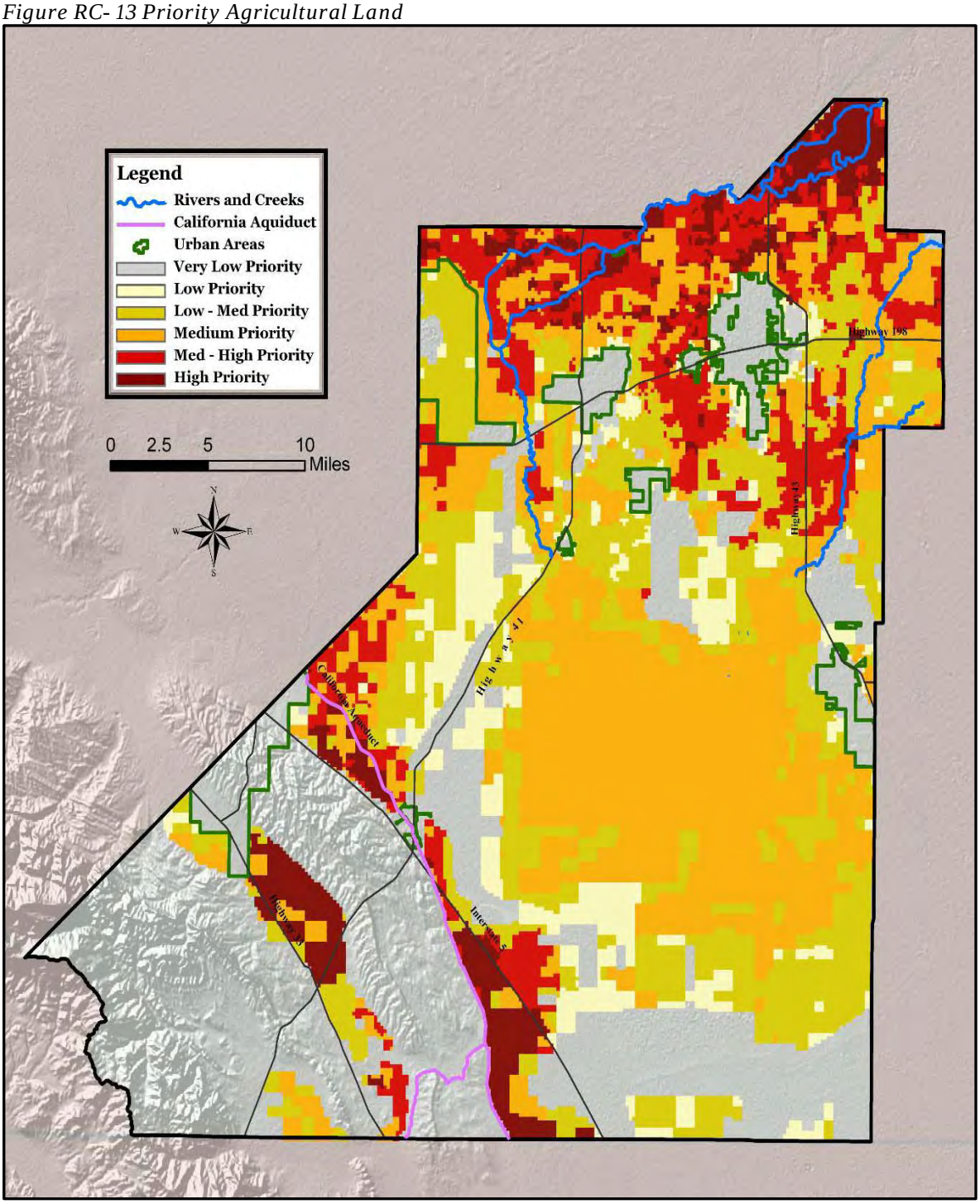
Figure RC- 13 Priority Agricultural Land



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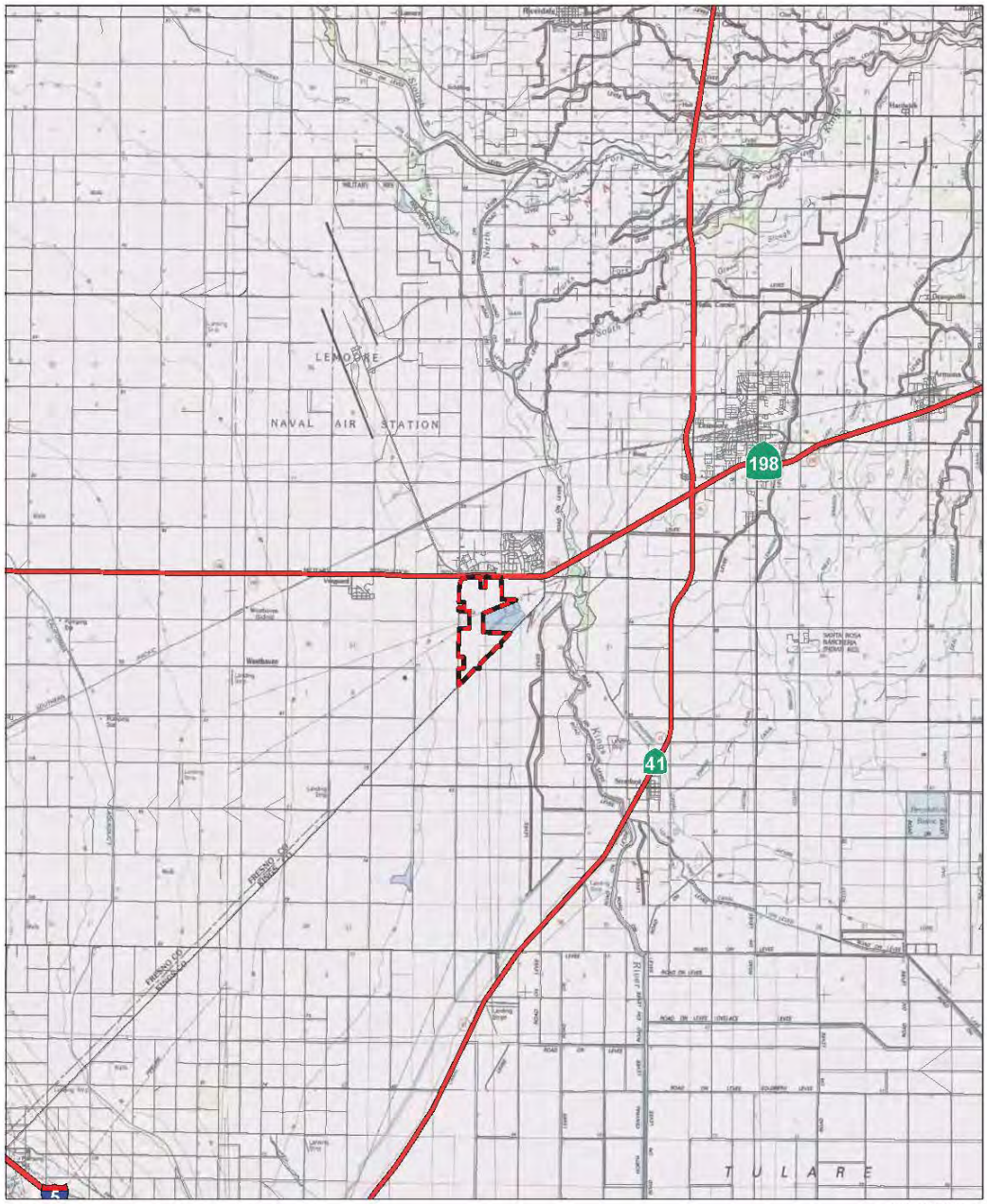

LEGEND

Project Site

FIGURE 1-1

0 1.5 3
MILES

SOURCE: USGS Topographical Map (Kings County)

I:\Fts1407\AI\Revised ISMND\Figure 1-1.ai (6/19/2015)

American Kings Solar Project
Vicinity Map

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Since the Project site is considered "Medium Priority," Development Code Section 1112(B)(2)(a) should require that the Project include "comparable" agricultural operations or provide mitigation for the loss of the "Medium Priority" use. However, this requirement is never discussed.

Instead, the Staff Report and Addendum discuss County Resolution No. 13-058 (2013). Resolution No. 13-058 amended the County's "Implementation Procedures for the California Land Conservation "Williamson" Act of 1965 Including Farmland Security Zones ("Implementation Procedures") and established a process for evaluating growing conditions on agricultural lands in the vicinity of the Project site on a site by site basis to determine whether certain agricultural uses can be deemed "compatible" with solar use.[36] Under the amended Implementation Procedures, the County may make a finding of agricultural "compatibility" if the County has substantial evidence that current soil conditions impair agricultural use to the extent that the solar project will not interfere with agricultural operations and will instead provide a "compatible" operation at the site.[37] The Staff Report and Addendum appear to generally rely on Resolution No. 13-058 to conclude that the proposed sheep grazing operation will satisfy all County agricultural requirements related to solar development.[38]

However, Resolution No. 13-058 does not exempt a project from complying with the Development Code because it did not amend either the Development Code or the General Plan. Therefore, the Implementation Procedures do not negate the Development Code's mandatory requirement that solar projects built on "Medium Priority" agricultural sites, as defined by the General Plan, must either maintain "comparable" agricultural use or provide compensatory mitigation for loss of agricultural use.[39] The Project proposes to eliminate the Original Project's agricultural mitigation requirement, but the Staff Report and Addendum fail to provide any analysis of whether the proposed sheep grazing operation is "comparable" to the existing alfalfa, tomato, and cotton farming operations at the site.

Furthermore, even with respect to the compatibility findings that the County is required to make under Resolution No. 13-058, the Addendum fails to include any evidence to support such findings because the Agricultural Management Plan ("AMP") on which the County intends to rely to determine whether ongoing sheep grazing is a

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[36] Staff Report, p. 14.
[37] *Id.*; see Exhibit C, November 26, 2013 County Staff Report for Resolution 13-058.
[38] Staff Report, p. 14.
[39] Dev/ Code § 1112(B)(2)(a).

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"reasonably forseeable" use is not contained in the Addendum. The County therefore lacks substantial evidence to make a finding that Project's proposed agricultural operation will comply with the Development Code without compensatory mitigation.[40]

III. THE PROJECT DOES NOT COMPLY WITH CEQA

A. An EIR or Revised MND is Required for the Project Because Substantial Changes Render it a New Project Under CEQA

1/5

The Project proposes substantial changes to the Original Project that were not analyzed in the 2010 MND. These changes will result in a new agricultural use at the site, an increased Project footprint, reduced mitigation for biological and agricultural impacts, and a potentially significant increase in air quality and traffic impacts from a shortened construction period. These changes amount to a "new project" requiring a full EIR because the Project proposes substantial modifications from the project that was analyzed in the 2010 MND and original CUP proceedings.

When a modification to a previously approved project introduces substantial changes that will result in "new significant environmental effects or a substantial increase in the severity of previously identified significant effects," the project should be treated as a new project requiring renewed CEQA review.[41] This concept derives from CEQA's requirement that an EIR analyze the whole of a project, which consists of the "activity which is being approved" rather than simply the "approvals" themselves.[42] If the prior CEQA document failed to analyze the new activities proposed by a project modification, a new round of CEQA review with public comment is required.[43] In such instances, the fair argument standard applies to an agency's decision of whether or not to prepare an EIR, rather than the substantial evidence

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[40] The Project's inconsistency with this Development Code and General Plan requirement is also a per se significant impact under CEQA. *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 783-4 (project's inconsistencies with local plans and policies constitute significant impacts under CEQA); *Pocket Protectors v. Sacramento* (2005) 124 Cal.App.4th 903.
[41] *Save Our Neighborhood v. Lishman* ("*Lishman*") (2006) 140 Cal. App. 4th 1288, 1296-97 (proposed project "modification" that did not involve minor technical changes or additions to previously approved project, but instead introduced substantial changes that would result in "new significant environmental effects or a substantial increase in the severity of previously identified significant effects" is new project requiring renewed CEQA review); *Sierra Club v. County of Sonoma* (1992) 6 Cal. App. 4th 1307, 1323.
[42] PRC § 21065; 14 CCR § 15378(a).
[43] *Lishman*, 140 Cal. App. 4th at 1296-97; Sierra Club, 6 Cal. App. 4th at 1323.

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standard that would apply to supplemental environmental review of previously approved projects under CEQA Section 21166.[44]

The fair argument test mandates preparation of an EIR in the first instance whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact. If there is substantial evidence of such an impact, contrary evidence is not adequate to support a decision to dispense with an EIR.[45] Section 21151 creates a low threshold requirement for initial preparation of an EIR and reflects a preference for resolving doubts in favor of environmental review when the question is whether any such review is warranted. By contrast, "[S]ection 21166 comes into play precisely because in-depth review has already occurred, the time for challenging the sufficiency of the original EIR has long since expired, and the question is whether circumstances have changed enough to justify repeating a substantial portion of the process."[46]

In *Sierra Club*, a mining company's application to transfer an existing mining designation to a new parcel and obtain a new use permit for operations on that parcel was considered a new project not previously analyzed in the County's mining plan EIR. Similarly, in *Lishman*, the court held that an EIR addendum to a previously approved MND was inappropriate, and a supplemental MND or EIR was required, to analyze the impacts from the change in the number of units, grading, road construction and modification of a wetlands drainage channel for a hotel project.[47] Finally, in *Burbank-Glendale-Pasadena Airport Authority v. Hensler*,[48] the court required an airport authority to prepare an EIR to analyze modifications to an airport runway extension project where the original MND prepared for the project had failed to address the scope of the modifications, the need to acquire private property for the new use, and contained an erroneous description of the physical perimeter of the airport. The *Burbank* court explained the need for a new CEQA document for the proposed modifications:

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[44] *Sierra Club*, 6 Cal. App. 4th at 1317-1319.
[45] PRC § 21151; 14 CCR § 15064(g), (h).
[46] *Sierra Club* at 1317.
[47] *Lishman* at 1292. *Lishman* is the sole reported case addressing application of section 21166 to an approval, where, as here, the original approval was based on a negative declaration supplemented with an addendum. The recent case of *Friends of the College of San Mateo Gardens v. San Mateo County Comm College Dist.* ("*San Mateo Gardens*"), 2013 WL 5377849, 9/26/2013, also struck down the agency's use of an addendum to analyze revisions to a project that was originally approved on an MND. *San Mateo Gardens* is currently pending before the Supreme Court.
[48] (1991) 233 Cal. App. 3d 577, 594 ("*Burbank Airport*").

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> We can only conclude on our record that the project which was the subject of the 1985 negative declaration was a substantially different project than the one which was the basis of Resolution No. 224. Because there is no evidence that the Authority, in adopting Resolution No. 224, ever conducted a threshold initial study under CEQA, or considered the issue of whether an additional environmental document needed to be prepared due to subsequent changes in the project (see Guidelines, § 15162), these issues are ones, among others raised by appellant, which should be addressed by the Authority in the first instance.[49]

Here, just as in *Sierra Club*, the Project will occupy new parcels of property that were not known, and were not analyzed, in the original MND. The Project also proposes to eliminate the previously approved requirement to provide 498 acres of mitigation habitat for Swainson's hawk, and to drastically shorten the Project construction schedule from 35 months to 15-18 months. The modified construction schedule will increase the number of construction worker trips from 105/day to 1200/day, and will increase the total number of construction-related vehicle trips from 96/day to 2412/day.[50] Just as in *Lishman*, the Project will result in substantial modifications to the previously analyzed construction component of the Project. Furthermore, the Applicant is proposing to add a new seasonal sheep grazing operation to the previously approved 125MW solar facility.[51] Just as in *Burbank Airport*, the 2010 MND made no reference to maintaining on-site agricultural operations, and did not consider the physical components of this addition to the Project. Finally, as discussed further below, the Applicant proposes to delete two mitigation measures from the Original Project, including the requirements to provide 498 acres of mitigation habitat for Swainson's hawk, and 978 acres of agricultural conservation easement lands.[52],[53]

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[49] *Id.*.
[50] Addendum, p. 17.
[51] Staff Report, pp. 53-57.
[52] Staff Report, pp. 17, 33.
[53] Mr. Cashen's comments also provide substantial evidence supporting a fair argument that elimination of the Swainson's hawk measures is likely to have significant impacts that the County has not adequately analyzed and mitigated. Also, the County lacks substantial evidence to support its conclusion that elimination of the agricultural mitigation lands will not have a significant impact on agriculture because the Addendum fails to provide an analysis to confirm whether the Project's proposed grazing operations will remain viable through the life of the Project.

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None of these proposed changes in construction and operation of the Project were analyzed in the Original Project MND, or even known at the time the Original Project was approved. This is therefore a new project for which a new EIR or revised MND is required.

B. The Project Proposes to Delete Previously Approved Mitigation Measures Without Preparing a New CEQA Document and Circulating It for Public Comment

1/6

The Applicant asks the County to delete two previously adopted mitigation measures from the Original Project. PDF-BIO 1 requires the Applicant to provide 498 acres of mitigation habitat lands for Swainson's hawk. Condition of Approval No. 21 requires the Applicant to set aside or fund 978 acres of agricultural conservation easement lands.[54] The County cannot authorize the removal of these mitigation measures without preparing a subsequent MND or EIR to analyze the impacts of its actions in a CEQA document, and without providing a public comment period. CEQA mandates that "where a public agency has adopted a mitigation measure for a project, it may not authorize destruction or cancellation of the mitigation—whether or not the approval is ministerial—without reviewing the continuing need for the mitigation, stating a reason for its actions, and supporting it with substantial evidence."[55] The County has failed to comply with this requirement.

1. Swainson's Hawk.

PDF-BIO 1 requires the Applicant to set aside a 489-acre easement as foraging habitat for Swainson's hawk. The measure was adopted into the Mitigation Monitoring and Reporting Program ("MMRP") for the Original Project to mitigate the loss of foraging habitat caused by installation of the 125MW solar farm.[56] In 2010, the MND concluded that the impacts on Swainson's hawk from the Project would be significant and that mitigation was necessary to reduce the impacts to less than significant levels.[57]

In 2011, a year after the Original Project was approved, GWF Solar wrote a letter to the County Planning Division to ask whether CUP 10-05 could be amended to

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[54] Staff Report, pp. 17, 33.
[55] *Katzeff*, 181 Cal.App.4th at 614, citing *Lincoln Place Tenants Assn. v. City of Los Angeles* (2005) 130 Cal.App.4th 1491.
[56] MND, p. 3.2-4.
[57] *Id.*

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remove this mitigation measure.[58] The County's response recognized that subsequent CEQA review would be required in order to remove the mitigation.

> It is possible to amend the existing approval of CUP No. 10-05, if new information is provided showing that the loss of Swainson's hawk foraging habitat is not significant and that mitigation is not necessary. However, ***the Mitigated Negative Declaration (MND) that was previously approved for CUP No. 10-05 would need to be revised to reflect the new information, and re-circulated for a new public review period***, before the amendment could proceed to the Planning Commission for a new public hearing.[59]

The County now proposes to delete the same mitigation measure without preparing a new MND and without recirculating a new MND for public comment. This contradicts the County's prior representations to the Applicant (and the public) and is prohibited by CEQA. Where a mitigation measure or condition has been required for an approved project, that mitigation may only be modified or removed through a subsequent CEQA review process.[60] In *Katzeff*, the Department of Forestry ("DPF") approved permits allow a timber owner to cut down a wind buffer tree zone that had been previously adopted as a mitigation measure under a timber harvesting plan, without first conducting CEQA review for the removal of the buffer zone. The court held that the condition could not be eliminated on a ministerial basis, and instead required full CEQA review to justify its elimination. The court explained that "where a public agency has adopted a mitigation measure for a project, it may not authorize destruction or cancellation of the mitigation . . . without reviewing the continuing need for the mitigation, stating a reason for its actions, and supporting it with substantial evidence."[61] Otherwise, "any mitigation required by CEQA . . . could be nullified simply by the passage of time . . ."[62]

The County's reliance on a CEQA Addendum is akin to DPF's ministerial removal of the buffer zone requirement in *Katzeff*. An addendum is authorized only

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[58] See Exhibit A.
[59] *Id*. at p. 1 (emphasis added).
[60] *Katzeff,* 181 Cal.App.4th at 614.
[61] *Id*. at 611.
[62] *Id*. This same result was reached in *Lincoln Place Tenants v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1507 n22, which holds that "it cannot be argued CEQA does not apply to the . . . demolition on the ground the demolition permits are ministerial acts."

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for "minor technical changes" to an approved project, and does not provide a public comment period.[63] In approving a project modification based on an addendum, the County has no duty to respond to public comments even if they are submitted.[64] Thus, as with a ministerial approval, the public has no meaningful opportunity to comment on an addendum, nor is an addendum required to respond to those comments or provide the level of detailed analysis required for an MND or EIR. The Addendum is therefore the functional equivalent of a ministerial approval for purposes of the proposed deletion of Measure PDF-BIO 1. This is not the informational result intended by CEQA. An EIR or new MND must be prepared to analyze the deletion of mitigation.

The County also lacks substantial evidence to support its conclusion that the deletion of Measure PDF-BIO 1 will not result in significant impacts to Swainson's hawk because the County did not conduct a new biological analysis in preparing the Addendum. The County relies on a 2012 study, the Estep Report, prepared for a different set of Kings County solar projects, to conclude that PDF-BIO 1 is no longer necessary mitigation for the Project site.[65] The Estep Report analyzed impacts on Swainson's hawk at three solar project sites located west of the Project site.[66] The Estep Report concluded that little or no mitigation was required for the loss of Swainson's hawk foraging habitat at the adjacent project sites.[67] However, the Estep Report is four years old, and was prepared for a different project. Mr. Cashen explains that the Estep Report contains fundamental flaws in its analysis that preclude reliance on the Report as substantial evidence of impacts to Swainson's hawk from the Project.

Mr. Cashen explains that the Estep Report was based on an assumption that Swainson's hawks require an average of 6,820 acres of foraging habitat.[68] However, Estep's analysis is considered an "outlier" among biologists. As explained by Mr. Cashen, biologists generally report a considerably larger mean home range size of 9,978 acres.[69] In addition, Mr. Cashen explains that the Estep Report failed to take into account variations in Swainson's hawk home range size that may be present in the Project area. Furthermore, Mr. Cashen noted that the Estep Report failed to

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[63] 14 CCR § 15164.
[64] *Id.*
[65] Staff Report, p. 58.
[66] *Id.*
[67] *Id.*
[68] Exhibit B, p. 5.
[69] *Id.*

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consider impacts on the loss of foraging habitat at the Project site.[70] Finally, because the Estep Report did not analyze the Project, it did not discuss whether the Project's proposed sheep grazing operation would, or would not, provide suitable foraging habitat for Swainson's hawk at the Project site. Mr. Cashen concludes that the County's proposal to forego compensatory mitigation based on the Estep Report conflicts with existing CDFW mitigation guidelines and does not meet the State's requirement for "full mitigation" for impacts to listed species.[71] CDFW's "full mitigation" standard requires mitigation to be roughly proportional to the extent of the impacts of a given taking,[72] and is intended to ensure that the status of the species is the same or better after project and mitigation implementation as it was prior to project implementation.[73]

The County further proposes to defer its study of impacts to Swainson's hawk to a future, post-approval time, and then possibly require the Applicant to pay an in lieu mitigation fee at a 0.5/1 mitigation ratio if significant impacts are discovered.[74] There is no new biological study to support the County's conclusions regarding this modification. Deferring the threshold determination of whether the modified project and the deletion of previously approved mitigation measures will, or will not, have significant impacts does not constitute substantial evidence that deletion of Measure PDF-BIO 1 is appropriate.

2. Agricultural Mitigation Lands.

1/7

The Addendum suffers from a similar flaw in its proposal to delete Condition No. 21 without preparing a subsequent MND or EIR. Condition No. 21 requires the Applicant to provide a conservation easement to mitigate the loss of 978 acres of farmland of statewide importance.[75]

Conditions of approval are designed to limit permitted uses at a project site, and are commonly used by lead agencies to incorporate required mitigation measures

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[70] *Id.*
[71] *Id.*
[72] 14 CCR § 783.4.
[73] See Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California State of California California Energy Commission and Department of Fish and Game, June 2, 2010 at p. 2, available at https://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html.
[74] Staff Report, pp. 18-19 ("To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases…").
[75] Staff Report, p. 33.

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into the use permit.[76] The purpose of such conditions is to ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded.[77] Thus, conditions of approval are the functional equivalent of mitigation measures in that they are mandatory, and the Applicant's failure to carry out those conditions is a material breach of its use permit, as well as a violation of CEQA. *Id.*

The County contends that Condition No. 21 is no longer necessary because the proposed sheep grazing operation will keep the Project site in active agricultural use. However, as discussed above, the County has not yet prepared the AMP, leaving several unresolved questions regarding the adequacy and viability of the proposed grazing operation. First, the Addendum fails to account for the reduced carrying capacity of the agricultural resource caused by the acreage occupied by the solar panels. Second, since there is no AMP in the Addendum, it is impossible to determine whether the Project site would be agriculturally restored and seeded to forage forbs and grasses, or whether the Applicant merely intends to let grow whatever can survive the Project installation. Lastly, there is no mention of animal safety or protection of solar panels from damage by Project sheep. The Addendum fails to discuss whether the sheep's proximity to the solar panels poses a risk of injury to either the animals or the equipment, and, if so, how the Applicant proposes to mitigate those risks. There is also no evidence that the Applicant has any experience in running an agricultural operation or will be able to sustain it for the life of the Project.[78]

The County purportedly relies on the AMP to "analyze existing and future agricultural conditions at the Project site," as well as to "describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Resolution 13-058."[79] However, since the AMP has not been prepared, neither the Applicant nor the County have yet performed the threshold analysis required to determine whether the elimination of the conservation easement will be adequately mitigated by the Project's proposed grazing operation.

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[76] PRC § 21081.6(b); 14 CCR § 15126.4(a)(2) (mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments).
[77] *Katzeff,* 181 Cal. App. 4th at 613; *Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal. App. 4th 1252, 1261.
[78] See e.g. http://www.firstsolar.com/en/About-Us.aspx (First Solar "About Us" page indicates that the Applicant "is a global leader in photovoltaic (PV) solar energy solutions," but contains no discussion of agricultural projects.
[79] Addendum, Appendix A, Revised MND, p. 68.

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The County must justify its decision to delete this Condition of Approval with a thorough CEQA analysis. If that analysis concludes that deletion of the Condition is unjustified, the County must continue to require sufficient compensatory mitigation to offset the Project's agricultural impacts.[80]

C. The Addendum Fails to Disclose Baseline Conditions at the Project Site

1/8

The Addendum fails to include information about current baseline conditions at the Project site against which to compare the Project's impacts. Alternatively, the Addendum relied on a legally erroneous baseline which purports to consider the "baseline" to be the hypothetical situation in which the Project, as originally approved, was already constructed.[81] In either case, the failure to describe the baseline is legal error.

Every CEQA document must describe the "baseline" upon which the significance of impacts is measured. The CEQA "baseline" is the set of environmental conditions against which to compare a project's anticipated impacts.[82] Section 15125(a) of the CEQA Guidelines[83] states in pertinent part that a lead agency's environmental review under CEQA:

> "…must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time [environmental analysis] is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant."[84]

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[80] *Katzeff*, 181 Cal. App. 4th at 614.
[81] Citizens anticipates that the County may argue that it is not required to state the existing level of operations because it is relying on the original MND, which previously analyzed maximum permitted levels for the Original Project. PRC § 21166; *Benton v. Bd. Of Supervisors* (1991) 226 Cal. App. 3d 1467. However, those standards do not apply to a baseline determination. The CEQA baseline for the Project must be the actual level of operations at the time of the current CUP application. 14 CCR § 15125(a).
[82] *Communities for a Better Environment v. So Coast Air Qual. Mgmnt. Dist.* ("*CBE v. SCAQMD*") (2010) 48 Cal. 4th 310, 321.
[83] 14 CCR § 15125(a).
[84] See *Save Our Peninsula Committee v. County of Monterey* (2001) 87 Cal.App.4th 99, 124-125 ("*Save Our Peninsula*").

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In *CBE v. SCAQMD*, the Supreme Court held that the CEQA baseline is ***not*** the maximum permitted limit, but rather, the actual level of operations that exists at the time CEQA review is performed.[85] Here, that time is when the Addendum was prepared. The Supreme Court explained:

> Like an EIR, an initial study or negative declaration "must focus on impacts to the existing environment, not hypothetical situations." (*County of Amador v. El Dorado County Water Agency,* 76 Cal.App.4th at p. 955.) An approach using hypothetical allowable conditions as the baseline results in "illusory" comparisons that "can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts," a result at direct odds with CEQA's intent. (*Environmental Planning & Information Council v. County of El Dorado,* 131 Cal. App. 3d at p. 358.) The District's use of the prior permits' maximum operating levels as a baseline appears to have had that effect here, providing an illusory basis for a finding of no significant adverse effect despite an acknowledged increase in NOx emissions exceeding the District's published significance threshold.[86]

Using a baseline based on maximum permitted operations, "mislead(s) the public" and "draws a red herring across the path of public input."[87] The sole exception to using the actual environment as the CEQA baseline is when the project proponent proposes to complete the exact same project that was approved in the past, and build it out only to the level that was previously permitted and subjected to CEQA analysis.[88] In such cases, no further CEQA review is necessary, and thus no new baseline analysis is needed, because there are no changes to the project that was previously approved. Thus, if the Applicant had simply purchased the entitlements for the Original Project, and sought to construct it as approved, it could do so without further CEQA review. Here, however, the Applicant is proposing substantial

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[85] *CBE v. SCAQMD*, 48 Cal. 4th at 322.
[86] *Id.*
[87] *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 656; *Woodward Park Homeowners v. City of Fresno* (2007) 150 Cal.App.4th 683, 708-711.
[88] See *Committee for a Progressive Gilroy v. State Water Resources Control Bd.* (1987) 192 Cal. App. 3d 847, 862–865 (restoration of a sewage treatment plant's operation to the originally approved level was the continued operation of an existing facility and did not require supplemental CEQA analysis).

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modifications to the Project. Therefore, the CEQA baseline upon which to measure the impacts is the actual environment at the time such modifications are proposed.

The Addendum suffers from precisely this fundamental error throughout.

1. Biological Resources.

1/9

The Addendum fails to provide current information on baseline biological conditions at the Project site for any wildlife and plant species, including special-status species that are the subject of Project mitigation measures, such as Swainson's hawk, San Joaquin kit fox, and burrowing owl, including those mitigation measures that the Applicant now proposes to eliminate. The only exception to this are December 2014 surveys that were not included in the Addendum but that the Applicant purportedly performed for Swainson's hawk on the new Project parcels totaling 10 acres.[89] The Applicant did not survey the other 900+ acres of the Project site, despite proposing changes to mitigation for impacts on those 900+ acres.[90] Thus, the Addendum's baseline information for biological resources is incomplete, inaccurate and out-of-date.

2. Hazardous Materials.

1/10

The Addendum fails to include baseline information about existing hazardous materials conditions at the new Project parcels. The 2010 MND included a Phase I Environmental Site Assessment ("ESA") for the Original Project site.[91] However, the Phase I ESA did not analyze the 4 new parcels that the Project proposes to add. Like the rest of the Project site, the new parcels are currently active agricultural land.[92] They are therefore likely to contain some historic pesticide contamination. The new parcels are also located in the vicinity of a formerly used defense site ("FUDS") which has historic soil contamination from prior military uses.[93] The Addendum fails to discuss or disclose whether the new parcels contain any existing contamination that may be disturbed during Project construction.

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[89] Addendum, p. 58.
[90] *Id.*
[91] Addendum, Appendix A, p. 126.
[92] Staff Report, p. 2.
[93] See Exhibit D (Envirostor data).

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3. Air Quality.

The Addendum fails to include baseline information about the current state of air quality in the San Joaquin Air Basin, which is necessary to valuate whether the shortened construction period will result in significant impacts.[94] The Addendum refers to information from 2009 about the Air Basin's pollutant levels and attainment status for various pollutants.[95] This is the same information referenced in the 2010 MND and is clearly out-of-date. The Addendum admits that the Project will have significantly increased construction emissions, but concludes that the emissions remain less-than-significant with mitigation.[96] Without current information about the state of air quality in the Air Basin against which to compare the revised emissions, the Addendum's significance conclusions remain unsupported. 1/11

4. Traffic.

The Addendum fails to include baseline information about existing traffic which is necessary to evaluate traffic from the modified Project. The Project's shortened construction schedule will cause a significant increase in the number of construction worker trips estimated for the Original Project from 105/day to 1200/day, and will increase the total number of construction-related vehicle trips from 96/day to 2412/day.[97] However, similar to the deficiencies in the Air Quality analysis, the Addendum refers only to outdated traffic counts and levels of service ("LOS") from 2009 and 2010.[98] This information fails to set forth the existing setting and fails to support the Addendum's significance conclusions. 1/12

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[94] Citizens notes that there are inherent inconsistencies in the baseline information provided in the Addendum for biological resources, air quality, and traffic. Despite the fact that all three of these issues have new impacts resulting from the Project changes, the Addendum provides some current baseline information for Swainson's hawk (December 2014 surveys of new parcels), and some recent air quality information, yet continues to rely on certain outdated air quality and traffic baseline information from the original MND. See Addendum, Appendix A, pp. 75-77; 168-169.
[95] See e.g. Addendum, Appendix A, p. 74.
[96] Citizens reserves the right to file supplemental comments on the adequacy of the Addendum's new air quality modeling and analysis.
[97] Addendum, p. 17.
[98] Addendum, Appendix A, pp. 16-169.

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5. Cumulative Impacts.

The Addendum contains no information or analysis whatsoever about cumulative impacts. This is a fatal deficiency in the County's CEQA analysis.[99] The Addendum is replete with references to other solar and renewable energy projects that have been approved since the Original Project was considered in 2010.[100] These new projects are therefore reasonably forseeable cumulative developments in the vicinity of the Project. However, the Addendum fails to incorporate these other projects into a cumulative impacts analysis. These other projects, along with any other past, present, and reasonably probable future projects in the geographical vicinity of the Project site must form the baseline for an assessment of the Project's cumulative impacts to air quality, agricultural resources, traffic, biological resources, and all other relevant cumulative impacts. 1/13

D. The Project Meets the Criteria for a Subsequent CEQA Document[101]

1/14

After an MND has been adopted, a subsequent or supplemental MND or EIR is required to be prepared in any of the following instances: (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report; (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.[102]

As discussed above, the Applicant proposes substantial changes to the Original Project that more than satisfy Section 15162(a) criteria for changes in a project

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[99] CEQA requires the agency to consider "past, present, and probable future projects producing related or cumulative impacts." PRC § 21083; 14 CCR §15130(b)(1)(A); *CBE v. CRA*, 103 Cal.App.4th at 117.
[100] See e.g. Exhibit A, County references to 2010 Proposed RE Kansas South LLC Solar Generation Facility; Staff Report, pp. 58 (proposed RE Mustang, LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities).
[101] As discussed above, the fair argument standard applies in situations such as this one where an applicant proposes substantial changes to a project that amount to a "new" project, but the agency fails to prepare an MND or EIR to analyze the project changes. *Sierra Club*, 6 Cal. App. 4th at 1317-19; *Burbank Airport*, 233 Cal. App. 3d at 594. However, in this case, Project impacts and informational deficiencies in the Addendum are so significant that they equally meet the standards requiring preparation of a subsequent CEQA document under PRC § 21166 and 14 CCR § 15162.
[102] PRC § 21166; 14 CCR §§ 15162(a), (b).

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triggering the need for a subsequent EIR. Additionally, as discussed below, there have been substantial changes in the circumstances surrounding the Project site from newly approved facilities, increased regional air pollution and traffic, and new information about biological resources impacts which the Addendum failed to address, and which require preparation of a subsequent EIR.

1. *The Project's Proposal to Delete the Existing Swainson's Hawk Mitigation and Replace it With 0.5:1 Compensatory Mitigation Will Have New and More Severe Significant Impacts On Swainson's Hawk.* 1/15

The Addendum proposes to remove the existing requirement to set aside a 498-acre easement for Swainson's hawk and replace it with possible habitat compensation at a 0.5:1 ratio if a later-conducted census-level analysis determines that the Project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat.[103] Mr. Cashen explains that the newly proposed mitigation ratio is not consistent with CDFW guidelines and, thus, does not ensure that the Project's impacts on Swainson's hawk will be mitigated to less than significant levels.[104]

CDFW mitigation guidelines apply to all projects that would affect foraging habitat within 10 miles of an active nest, with no exceptions.[105] CDFW mitigation guidelines indicate projects within five miles of an active nest tree shall provide minimum habitat compensation at a 0.75:1 ratio.[106] Active nest sites used by Swainson's hawks are known to occur within five miles of the Project site (Figure 4).[107] Even if the County determines the Project would not cause a significant reduction in available foraging habitat for the Swainson's hawk territories in the study area, habitat compensation is required at a minimum 0.75:1 ratio to support the needs of additional territories as the existing impaired population of Swainson's hawk located near the Project site recovers. Mr. Cashen concludes that, absent this heightened mitigation level, the Project's impacts to Swainson's hawk will remain inadequately mitigated and significant.[108]

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[103] Staff Report, pp. 58-59.
[104] Exhibit B, p. 10.
[105] *Id.*; Exhibit B, p. 10.
[106] California Department of Fish and Game. 1994. Staff report regarding mitigation for impacts to Swainson's hawks (*Buteo swainsoni*) in the Central Valley of California. p. 12.
[107] Live Oak Associates. 2015. Biological Evaluation for the Westside Solar Project. Figure 5. Available at: < http://www.countyofkings.com/home/showdocument?id=8779>.
[108] Exhibit B, pp. 10-11.

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2. The Project's Newly Shortened Construction Schedule May Have New and More Severe Significant Impacts On Traffic and Air Quality. 1/16

Citizens and its technical consultants are currently reviewing the Addendum's air quality and traffic analyses. The Addendum acknowledges a major increase in construction emissions and construction traffic resulting from the new Project's shortened 15-18 month construction period. A preliminary review indicates that the County may have underestimated construction air emissions and traffic impacts. Citizens reserves the right to provide further comments on the Project's impacts on traffic and air quality following the completion of our review and at subsequent proceedings for the Project.

3. Substantial Changes Have Occurred with Respect to the Circumstances Under Which the Project is to Be Undertaken Which May Substantially Increase the Severity of the Project's Cumulative Impacts. 1/17

Numerous new renewable energy projects have been approved since the Original Project was considered in 2010.[109] These projects, at a minimum, along with any other past, present, and reasonably probable future projects in the geographical vicinity of the Project site must be included in an analysis of the Project's cumulative impacts to air quality, agricultural resources, traffic, biological resources, and all other relevant cumulative impacts.

4. New Information Shows that the Project Will Have Significant Impacts on Biological Resources. 1/18

a. Avian Collision Hazards.

Since the original CUP for the Project was approved in 2010, the scientific community has acquired evidence that solar projects pose a threat to birds. Whereas the extent of the threat remains unknown, the recent presence of dead and injured birds at solar facilities operating (or under construction) in California demonstrates that solar arrays presents a significant collision hazard to birds. Mr. Cashen explains the issue:

[109] See e.g. Exhibit A, County references to 2010 Proposed RE Kansas South LLC Solar Generation Facility; Staff Report, pp. 58 (proposed RE Mustang, LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities).

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> At PV facilities, birds appear to mistake the broad reflective surfaces of the solar arrays for water, trees, and other attractive habitat. When this occurs, the birds become susceptible to mortality by: (a) colliding with the solar arrays; or (b) becoming stranded (often injured) on a substrate from which they cannot take flight, thereby becoming susceptible to predation and starvation.[110]

There is also recent evidence that PV solar panels produce polarized light pollution that attracts insects, which in turn attract insect-eating birds.[111] Those birds then become susceptible to injury or death because they cannot distinguish insects on a PV panel from insects that really are on (or in) attractive habitat. Dead and injured insectivores then attract avian predators and scavengers, which too become susceptible to collision with the PV panels and other project features.

Incidents of reported bird deaths and related studies on avian collision hazards with PC panels are new information that has resulted in recent conclusions by biologists and regulatory agencies that avian collisions are a significant impact of solar PV projects like the Project. Recent biological studies reported in 2014 demonstrate that avian collision poses risks not only to birds but can render an entire food chain vulnerable to injury and death.[112] In May 2014 the U.S. Fish and Wildlife Service ("USFWS") sent a letter to solar developers in California and Nevada, stating: "recent information collected at solar facilities by Service personnel indicates that wildlife, particularly avian species, can be negatively affected by solar energy development." The letter identified mitigation measures and warned that unmitigated solar projects could result in unpermitted "take" of species protected under the Endangered Species Act and the Migratory Bird Treaty Act.[113]

The Addendum provides no analysis of avian collisions with the Project's solar facilities. Substantial evidence shows that impacts due to avian collisions are potentially significant and must be mitigated. Consequently, the County must analyze the avian collision hazard as a potentially significant impact, and it must provide adequate mitigation.

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[110] Exhibit B, pp. 5-6; see also Exhibit E, Scientific American, Solar Farms Threaten Birds, August 27, 2014, available at http://www.scientificamerican.com/article/solar-farms-threaten-birds/.
[111] *Id.*
[112] See Exhibit B, pp. 5-6.
[113] *Id.*

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b. Burrowing Owl.

1/19

New information demonstrates that the mitigation measures described in the 2010 MND are no longer accepted by CDFW, the regulatory agency responsible for the listing and protection of burrowing owl, because the mitigation measures in the 2010 MND have *proven ineffective* in the conservation of burrowing owls.[114]

Burrowing owls are a California Species of Special Concern. The 2010 MND found significant impacts to burrowing owl and relied on CDFW's 1995 Staff Report to select mitigation measures for the Original Project. The Addendum proposes to adopt the same mitigation measures. However, in 2012, CDFW issued a revised Staff Report on Burrowing Owl Mitigation, the CDFW 2012 Guidelines. The CDFW 2012 Guidelines include new information that did not exist at the time the original MND was approved, including new information pertaining to the status of the burrowing owl population in the State, methods that should be used for surveys and impact assessments, and mitigation measures that should be implemented to avoid and minimize impacts to the species.[115]

The CDFW 2012 Guidelines identify specific mitigation measures to mitigate project impacts to burrowing owl that are considerably different from the mitigation measures analyzed in the original MND. If implemented, the measures set forth in the CDFW 2012 Guidelines would substantially reduce the Project's impacts to burrowing owl. The Addendum improperly failed to consider these new mitigation measures.[116]

E. The Addendum Improperly Defers Impact Analyses By Deferring the Creation of Mandatory Plans and Mitigation Measures

1/20

The Addendum improperly defers the County's analysis of Project impacts on agricultural lands, air quality, biological resources, and decommissioning by relying on Conditions of Approval and mitigation measures which purportedly require the creation of mitigation plans based on future analysis. This is prohibited by CEQA.

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[114] See Exhibit B, p. 13; California Department of Fish and Game. 2012. Staff Report on Burrowing Owl Mitigation. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843>, p. 1.

[115] *Id.*

[116] 14 CCR § 15162(a)(3)(D).

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A lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding.[117] An agency abuses its discretion by failing to proceed in a manner required by law when it fails to address a potentially significant impact in the EIR.[118] In particular, a "clearly inadequate or unsupported study is entitled to no judicial deference."[119]

1. Agricultural Management Plan.

As discussed above, the County purportedly relies on the AMP to "analyze existing and future agricultural conditions at the Project site" and to "describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Resolution 13-058."[120] However, since the AMP has not been prepared yet, neither the Applicant nor the County have performed the threshold analysis required to determine whether the Project's elimination of Condition No. 21's agricultural conservation easement will be adequately mitigated by the Project's proposed grazing operation. 1/21

2. Air Quality.

The Addendum fails to include the Project's proposed Dust Control Plan, and fails to state whether the Applicant has initiated compliance proceedings with the Air District for Rule 9510 pursuant to Air District Rule 9510. Proposed Mitigation Measure PDF AQ-1 requires the Applicant to submit its Air Impact Assessment ("AIA") application to the Air District.[121] Since this mitigation measure will not become effective until the Project is approved, compliance with Measure PDF AQ-1 will not be triggered unless or until the County approves the Project's MMRP. However, Rule 9510 requires the AIA to be submitted to the Air District "not later than" the time at which the applicant submits its application to the lead agency for final discretionary approvals.[122] Thus, the Applicant should have already submitted its AIA to the Air District at the time it submitted its CUP extension application to the County in 2015. The Addendum should have disclosed the status of the Applicant's AIA application, and whether and to what extent the Project would be required to implement mitigation or pay mitigation fees pursuant to Rule 9510. 1/22

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[117] *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.
[118] *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal. App. 4th 713, 722.
[119] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[120] Addendum, Appendix A, Revised MND, p. 68.
[121] Addendum, Appendix A, p. 77.
[122] Rule 9510, available at https://www.valleyair.org/rules/currntrules/r9510.pdf.

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3. Biological Resources.

1/23

As discussed above, revised Mitigation Measures PDF-BIO 1 proposes to conduct a future study of Swainson's hawk at the Project site to determine whether, and to what extent, compensatory mitigation should be required to mitigate the loss of foraging habitat.[123] The County's approach is improper because, not only does Measures PDF-BIO 1 defer the selection of mitigation measures, it defers the initial baseline analysis of impacts to Swainson's hawk that the County was required to include in its CEQA document in the first place.

4. Decommissioning.

1/24

The Addendum fails to analyze the decommissioning phase of the Project, and instead disguises a requirement to develop a decommissioning plan for waste disposal as part of the Project's deferred AMP.

CEQA mandates that lead agencies must include in a project description the "whole of an action" which is being approved, including *all* components and future activities that are reasonably anticipated to become part of the project.[124] This includes, but is not limited to, "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[125] The requirements of CEQA cannot be avoided by chopping a large project into many little ones or by excluding reasonably foreseeable future activities that may become part of the project.[126]

The Project would be operational for at least 30 years and has three distinct phases: construction, operation, and decommissioning.[127] However, the Addendum fails to make even a reasonable attempt to describe Project decommissioning activities in any detail. The Addendum contains a single paragraph discussing the decommissioning phase.[128] As a condition of retaining the FSZ designation for the Project site, the Applicant will be required to decommission the Project and reclaim Project soils to pre-Project agricultural production levels.[129] Decommissioning of the

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[123] Staff Report, Exhibit B, MMRP, p. 6.
[124] 14 CCR §15378 (emphasis added).
[125] *Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263, 283-84.
[126] Pub. Resources Code § 21159.27 (prohibiting piecemealing); see also, *Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 370.
[127] Addendum, pp. 10-11.
[128] Addendum, p. 11.
[129] Staff Report, p. 16.

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Project at the end of its useful life is therefore a reasonable certainty, and a phase of the Project that should have been analyzed in detail in a CEQA document.

Evidence in the Addendum suggests that decommissioning will have impacts similar to the construction phase of the Project, and will entail removal and disposal of both ground-level and underground components, thus involving soil disturbing activities.[130] Since Project construction will entail the use of diesel-emitting construction equipment and numerous haul truck trips to transport equipment and facility components to the Project site, clearly decommissioning (or deconstruction) of the Project will require similar equipment to remove those items from the Project site. There can be no reasonable question that, if construction activities will result in significant impacts to air quality and biological resources, then surely decommissioning activities will as well.[131] Nevertheless, the Addendum makes no attempt to quantify the number or types of construction equipment and haul trucks that will be required to remove the solar equipment from the Project site. Nor does the Addendum contain any mitigation measures or pre-construction survey requirements to address biological impacts that will occur during the decommissioning phase.

As a result, the Addendum fails to describe the full scope of the Project being approved, and fails to disclose the full range and severity of the Project's significant environmental impacts from decommissioning. This is a project-level CEQA document, not a program-level EIR. The County, as the lead agency, must analyze the whole of the Project in a single environmental review document and may not piecemeal or split the project into pieces for purposes of analysis. The steps and environmental impacts of the refurbishing and ultimate decommissioning phases of the Project must be described and analyzed in an EIR with the fullest degree of detail available in order to provide the public with sufficient information to permit "an intelligent evaluation of the potential environmental effects of [the] proposed activity."[132]

A new CEQA document must be prepared and circulated for public comment to remedy these grave deficiencies in the County's impacts analysis. 1/25

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[130] Addendum, p. 11.

[131] Recognizing the magnitude of potentially significant impacts from decommissioning a renewable energy project, other lead agencies, such as the California Energy Commission ("CEC"), regularly require extensive analyses of decommissioning in their EIRs for renewable energy projects. See Exhibit F.

[132] *San Joaquin Raptor,* 27 Cal. App. 4th at 730.

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IV. CONCLUSION

For the reasons set forth above, the County may not approve an extension of CUP 10-05 for the new / modified Project until it prepares a legally adequate CEQA document that fully analyzes the Project's potentially significant impacts, and identifies and incorporates all feasible mitigation measures to minimize these impacts.

We urge the Planning Commission to deny the CUP extension, recommend that the previously approved CUP be set aside, and direct that a subsequent CEQA analysis be prepared for the revised Project. Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

Sincerely,

Christina M. Caro

CMC:ric

Attachments

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Attachment No. 2

DEPARTMENT OF THE NAVY
COMMANDING OFFICER
NAVAL AIR STATION
700 AVENGER AVENUE
LEMOORE, CALIFORNIA 93246-5001

IN REPLY REFER TO:

4100
Ser N00/0232
4 Mar 16

Mr. Greg Gatzka
Community Development Director
1400 W. Lacey Blvd.
Hanford, CA 93230

Dear Mr. Gatzka,

Thank you for allowing Naval Air Station (NAS) Lemoore the opportunity to continue to comment on First Solar's American Kings Solar Photovoltaic Project (Conditional Use Permit 10-05). NAS Lemoore staff re-reviewed the project and has found no anticipated impact to operations with the addendums proposed; however, after additional discussions with the developer, NAS Lemoore Staff determined the proposed transmission line on the project's west side may impact the assurance of navigation signal reception. 2/1

The transmission line proposed, just south of the existing sub-station, is proposed at 90ft and directly under the NAS Lemoore Runway 32L approach corridor. As a result, I would encourage the Planning Commission to require FAA notification and evaluation of this location and associated structures in accordance with Code of Federal Regulations (CFR) Title 14 Part 77.9 "Safe, Efficient Use, and Preservation of the Navigable Airspace."

NAS Lemoore continues to support well-planned compatible growth and is thankful for Kings County's support of NAS Lemoore's need to maintain an encroachment free operating environment.

If you require additional information, please contact my Community Planning and Liaison Officer, Ms. Marlana Brown, at (559) 998-4093 or Marlana.Brown@navy.mil.

Sincerely,

MONTY G. ASHLIMAN
Commanding Officer
Naval Air Station Lemoore

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American Kings Solar Project - Proposed Responses to Comments

LETTER 1

Adams Broadwell Joseph & Cardozo on behalf of Kings County Citizens for Responsible Development (March 7, 2016)

Response 1/1

The commenter states that the proposed Project fails to comply with CEQA and the County's Development Code in that changes are substantial and extensive enough to require a new CEQA document and a new CUP. To support the assertion that a new CEQA document is required, as well as a new or amended CUP, the commenter states that proposed Project changes were not analyzed in the 2010 IS/MND, that changes will result in new and significant impacts associated with biology, traffic, agriculture, and air quality, and that baseline conditions were not adequately defined. In addition, the commenter states that the Addendum improperly defers creation of plans and analysis, and mitigation to a future time.

The assertion that the Applicant is proposing substantial changes to the project originally approved is not accurate, and changes are not extensive enough to require preparation of a new MND or EIR, or require the issuance of a new CUP. The proposed changes under the modified Project result from a refinement of Project development characteristics associated with minor modifications to Project boundaries, specific equipment selection, interconnection characteristics and current County development standards and policies.

The commenter, on page 2, misstates the standard for an Addendum to an IS/MND. CEQA Guidelines section 15164(b) states: "An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred." As described in the CEQA Addendum and in the Staff Report/Draft Resolution dated March 7, 2016, and as addressed in detail throughout these responses, the County has properly determined that the Project meets the criteria for an Addendum, because none of the conditions in Section 15162 have occurred.

Accordingly, changes that are proposed by the modified Project have been addressed through preparation of an Addendum, including revision of the IS/MND where necessary, to reflect these changes. Table 3 of the Addendum, as well as the text of the Addendum, provides an adequate and detailed analysis of CEQA thresholds for both the original IS/MND and the modified Project IS/MND. The IS/MND analysis for the modified Project concluded that, with mitigation, Project impacts to biological resources, traffic, agricultural resources and air quality, remain less than significant; all other impacts remain less than significant with no mitigation required.

It is not accurate that the Applicant is seeking, or that staff is recommending the Planning Commission approve, a mere CUP extension. Rather, as explained in depth throughout the Staff Report dated March 7, 2016, the Applicant seeks several modifications to CUP No. 10-05. Kings County processes such modifications using the term "CUP Addendum" rather than "CUP amendment." Thus, "Addendum" is used in two senses: (1) CUP Addendum, which is the land use approval for the Applicant to construct the proposed solar energy facility, and (2) CEQA Addendum (or Addendum to the IS/MND). See, e.g., March 7, 2016 Staff Report, Recommendation No. 1 ("Find that the proposed *Addendum to CUP No. 10-05* will not have significant adverse impacts on the environment and approve the *Addendum to the adopted Mitigated Negative Declaration.*"); Recommendation No. 3 ("Approve the *Addendum to CUP No. 10-05* with specified conditions of approval.").

For clarity, the Staff Report and draft Resolution have been revised to state in each instance whether the reference is to the CUP Addendum or CEQA Addendum. However, these technical revisions do not change the underlying proposal to both adopt a CUP Addendum and to approve a CEQA Addendum to the prior IS/MND.

Kings County made the Addendum available for public review for a period of 11 days in advance of the scheduled Planning Commission hearing on March 7, and has accepted public comments for review and consideration. Although the Community Development Agency concluded that no further MND or EIR was required for the Project, staff nevertheless prepared a comprehensive CEQA analysis regarding the Project's changes in the form of a nearly 300 page Addendum (including a line-by-line markup showing changes from the original IS/MND) and over another 100 pages of technical appendices. As addressed in more detail in Response 1/6, the Community Development Agency complied with CEQA requirements for modification of adopted mitigation measures, which would only be effective following approval of the CUP Addendum and IS/MND Addendum by the Planning Commission.

The comment introduces additional assertions regarding baseline conditions, new and significant impacts, and deferral of mitigation measures. See Responses 1/2 through 1/7 regarding proposed modifications to the Project, Responses 1/8 through 1/12 regarding baseline conditions, Responses 1/13 through 1/18 regarding alleged changed conditions and new information, and Responses 1/19 through 1/23 for additional response to deferred analysis and mitigation.

Response 1/2

The commenter states that the Addendum fails to comply previous approved conditions and that, under the County Development Code, such changes to conditions of approval and substantial changes to a site plan require an amendment to the CUP or a new CUP. The commenter bases this requirement on the magnitude and nature of proposed changes to the Project operation, footprint, and construction timeline, as well as changes to original CUP conditions of approval Condition No. 1, 17, 18, 21, 22, 23, Building Division Condition No. 3, and Fire Department Condition No. 1. The commenter states that changes are substantial, are not adequately addressed by the analysis, and an amended or new CUP is required to address the magnitude of changes.

The proposed changes in project development characteristics, which are defined in the Addendum, are not substantial with regard to the extent or characteristics of the proposed development. The proposed project footprint is virtually identical to the original project. The area affected by the currently proposed project (966 acres) is actually *smaller than the project area originally studied in the IS/MND* (978 acres); see 2010 IS/MND at 1-2, footnote 2. The 21-acre Boatright Tract land was not included in the final version of the project presented to the Planning Commission in 2010 because the applicant did not have land rights to that tract. However, the 2010 conditions of approval expressly provided that if a new parcel map extinguishing the Boatright Tract was approved by the County, the "CUP allows the applicant to develop land which is obtained and or controlled by the applicant lying within that area covered by the Boatright Tract map." (2010 CUP, Condition 22). Further, the newly added 9 acres are either surrounded by or adjacent to the originally approved project and impacts will be substantially similar, as demonstrated in the environmental analyses for the Addendum.

Operational characteristics of the solar facility also remain substantially similar to those approved in 2010. Continued agricultural use of the site (dry farm seasonal grazing) is consistent with the current use of the site and its existing General Plan and zoning designations (allowed as a matter of right), is compatible with solar power generation, and is consistent with Kings County Board of Supervisors Resolution No. 13-058.

With regard to evaluation of impacts related to changes proposed under the modified Project, the Addendum includes additional surveys and analyses, where appropriate, to supplement the original IS/MND, including biological and cultural surveys of added land, and updated visual, noise, air quality,

and traffic analyses. Additionally, LSA Associates, Inc. has provided a letter memorializing the biological resources surveys performed for the modified Project, expanding on information previously incorporated into the CEQA Addendum. The Addendum also includes a soil and water analysis report (Appendix B to Addendum IS/MND) in support of the appropriateness of continued agricultural use of the site in conjunction with solar energy generation, consistent with Kings County Board of Supervisors Resolution No. 13-058.

Changes to the construction schedule have been evaluated and disclosed in the Addendum to the IS/MND and impacts remain similar in nature to the project, as approved. To the extent any impacts would change, these impacts have been fully disclosed, and remain less than significant.

Although changes to the original CUP conditions of approval are proposed, the Applicant has limited proposed changes to those conditions that are no longer applicable, or those that require modification to more accurately reflect proposed changes in the modified Project characteristics relative to the project authorized in the initial approval. In the Addendum, Table 2 provides a clear basis for the proposed changes to conditions of approval. It is not necessary or appropriate to comply with conditions of approval that are rendered inapplicable by the Addendum.

The substance of Conditions 17 and 18 are not changed from the original approval. The substantive requirements of previous Conditions 17 and 18 would be not only retained, but expanded in the proposed CUP Addendum. For example, while the commenter asserts that the Condition "originally included a baseline soil analysis," new PDF AG-1 provides that the Soil Reclamation Plan "shall contain an analysis of pre-project baseline soil conditions at the solar generating facility" and includes additional requirements to photographically document the pre-construction conditions. PDF AG-1 goes on to elaborate on the performance criteria for reclamation, beyond what was required for the original CUP. These include a statement that the Project will comply with the law in disposing of any solid waste. The fact that the prior conditions did not expressly describe waste disposal requirements does not mean that waste disposal is a "new" component of decommissioning, and the adoption of requirements for proper waste handling and disposal does not constitute a significant change in the Project.

Similarly, Condition 18 previously specified conditions for financial assurances to complete reclamation requirements. These conditions have been incorporated into PDF AG-2, with the addition of minor details. PDF AG-3 has also been added to ensure agricultural management during the life of the Project.

Contrary to the commenter's assertion, these PDFs describe in detail the requirements of the Soil Reclamation Plan and bonding requirements that allow the County to evaluate the adequacy of the plan content, and do not constitute an improper deferral of mitigation under CEQA Guidelines section 15126.4(a)(1)(B) ("Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way."). See also, e.g., *Sacramento Old City Ass'n v. City Council*, 229 Cal. App. 3d 1011, 1029 (1991) (finding that a lead agency "can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval.").

Here, PDF AG-1 provides clear performance criteria to enable the applicant and the County to ensure the mitigation objectives are achieved. All changes to Conditions 17 and 18, by incorporation into the PDFs, have been fully described and analyzed in the Addendum. None of these changes would cause new or more significant environmental impacts, and the commenter has not provided any evidence to support a different conclusion.

Contrary to the commenter's assertion, the changes to the Project involving the retention of agricultural uses on the Project site are the central focus of the Addendum. These changes, and the extent to which they affect the analysis of environmental impacts, are discussed extensively throughout these responses.

Original Conditions 21 through 23 addressed mitigation for the loss of Farmland of Statewide Importance, a provision for use of the Boatright Tract land, and cancelation of Farmland Security Zone contracts. Because the modified Project will continue agricultural use of the property in combination with solar power generation, consistent with Kings County Board of Supervisors Resolution No. 13-058, there will be no loss of Farmland of Statewide Importance and the Project will remain under Farmland Security Zone contract; therefore Conditions of Approval 21 and 23 are not necessary. Further, because the Boatright Tract land will not be utilized for the project, Condition 22 is not applicable.

Proposed changes to fence design (Building Division Condition #3) meet requirements of the National Electric Code, and wildlife permeability features are retained. It is unclear what "impacts on dust control" the commenter believes would occur due to modest changes in fence height. No new or increased impacts would result from reducing the height of the perimeter fencing by one foot. Proposed changes to the Fire Department conditions of approval are consistent with current development code requirements and reflect current Fire Department training requirements. Development plans will be subject to County review and approval. As indicated in Section 4, Condition 2 of the Staff Report and draft resolution presented to the Planning Commission, the adoption of the CUP Addendum would deem the applicant's site plan "conceptually approved," and any "expansion that is a substantial change" from this approval would require an amendment to the CUP or a new zoning permit.

The proposed changes in project development characteristics, including a preliminary site plan, are defined in the Addendum. The proposed generating capacity of the Project (125 MW) is unchanged from the original project, and therefore the Condition will not provide for substantial changes to the design and layout. The CEQA Addendum conservatively discloses the maximum Project impacts within the 966 acre Project site, and the elimination of a 400-foot panel row length does nothing to change the extent or nature of these impacts. See, e.g., Addendum at 7, describing 966 acres of disturbed land, vs. 2010 IS/MND at 1-2, describing 978 acres of disturbed land. It is unclear what "substantial changes" the commenter believes would result relating to layout and design, where the entire project site was already assumed to be impacted.

In summary, the proposed changes to the Project are not substantial, and based on the updated analysis contained in the Addendum, do not result in new or significant impacts. To adapt to proposed project development changes, and for consistency with the County's Development Code, proposed changes to the CUP conditions are clearly defined in the CEQA Addendum. Table 3 of the CEQA Addendum as well as the text of the Addendum provides detailed analysis of CEQA thresholds for both the original IS/MND and the modified Project IS/MND. This analysis demonstrates that the modifications would not result in significant impacts.

Response 1/3

The commenter claims that Project fails to comply with remaining Conditions 2 and 3 of the original approval and therefore a CUP amendment or new CUP is required. The commenter states that the addition of 10 acres to the Project footprint and addition of a sheep grazing operation, and removal of the row size restrictions (allowing for an unlimited number of solar array rows on the site), represent expansions not authorized under the current CUP. In addition, the commenter states that the Project fails to demonstrate that a grazing operation would be comparable to existing uses and that, without this demonstration, compensatory mitigation should be required.

The commenter claims that Project fails to comply with Conditions 2 and 3 of the original approval because these conditions require amendment of the CUP to accommodate changes in the Project. Here, the applicant is seeking such amendments through a CUP Addendum. Under the commenter's circular formulation, it is not clear how a CUP amendment could ever be adopted, if any amendment to CUP conditions constitutes a violation of those CUP conditions.

As discussed in Responses 1/1 and 1/2, the proposed Project changes are within the size parameters defined in the original approval, i.e., the Project's generating capacity remains at 125 MW and the acreage is within that originally evaluated in the 2010 IS/MND and considered in the CUP review and approval process. Regarding the commenter's assertion that the Addendum would allow for "an unlimited number of solar arrays," this is incorrect; the current Project would not increase the generating capacity of the approved Project (125 MW), which corresponds to the upper limit of solar arrays that would be placed on the site. The row spacing in the previous approval was based on Kings County Development Standards that have changed since the original approval. The proposed conditions of approval for the modified project require plan review by Kings County for conformance with County development standards.

The ongoing agricultural use proposed is based on Kings County Board of Supervisors Resolution No. 13-058, which acknowledges that due to impaired soil and water conditions in that portion of Kings County south of State Route 198 and west of State Route 41, certain parcels in this area that are currently used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing. The resolution states that solar farming as a concomitant use with dry farm seasonal grazing, and may be deemed a compatible use, subject to demonstrating that, based on soil and water conditions, dry farm seasonal grazing is a reasonably foreseeable use of the land. Commenters did not submit written comments or otherwise participate in the public process leading to the adoption of Kings County Board of Supervisors Resolution No. 13-058 and did not challenge the County's adoption of this Resolution.

The results of a site-specific evaluation of soil and water characteristics at the site were presented in the 2014 report 'Soil and Water Analysis Report for American Kings Solar Project' contained in Appendix B to the Addendum. This technical report demonstrates that soil and water conditions at the site are impaired, and therefore, dry farm seasonal grazing is in fact a reasonable foreseeable use of the Project land (see Section 3.2 of the revised IS/MND). Grazing of sheep is listed as a commercial agricultural use in the Uniform Rules for Agricultural Preserves in Kings County (http://www.countyofkings.com/home/showdocument?id=3166). Pursuant to Kings County Board of Supervisors Resolution No. 13-058, solar farming as a concomitant use with dry farm seasonal sheep grazing would not require cancellation of Farmland Security Zone contracts. The grazing activity is subject to County review and approval of an Agricultural Management Plan as defined in PDF AG-3. For additional discussion on agricultural use, see Response 1/4.

Response 1/4

The commenter states that information is not contained in Addendum that is necessary to make a finding that the Project's proposed agricultural operation will comply with the Development Code, including a requirement that the project include a "comparable" agricultural operation or provide mitigation for loss of agricultural use, and the requirement to demonstrate that the proposed grazing operation is "comparable" to the existing agricultural use.

The commenter states that the CUP Addendum fails to address compliance with the County's Development Code and General Plan, and that that the County has failed to ensure compliance with the Development Code by not requiring compensatory mitigation for agricultural land and without evidence that the proposed grazing operation would be comparable to existing use at the site.

The CEQA Addendum (Appendix A at p. 63) discloses the Project site's designation as "Medium Priority" under the General Plan's Conservation Element; this is unchanged from the 2010 IS/MND. The Project would not be required to provide compensatory mitigation for agricultural impacts because the Project will incorporate continued agricultural operations that are permitted uses for this zoning designation pursuant to the Development Code. (See Development Code sections 407, 2501; Table 4-1 re AX Zone.) Mitigation would only be required if agricultural land were being "converted" in the absence of continued agricultural operations. A technical report was prepared in September 2014 that

demonstrates that dry farm seasonal grazing is in fact a reasonably foreseeable use of the Project land (see Section 3.2 of the revised IS/MND and CEQA Addendum Appendix B).

Information is provided in Section V, Impact Analysis, of the Addendum (pages 53-57) to support the proposed change in agricultural use relative to the requirements contained in the original approval. As noted in Response 1/3, the Applicant has provided a technical report that demonstrates that ongoing grazing operations would be a reasonably foreseeable use, and would meet Farmland Security Zone contract requirements (see Appendix B to the Addendum) pursuant to Kings County Board of Supervisors County Resolution No. 13-058. The County is entitled to great deference in its interpretation that such a reasonably foreseeable agricultural use meets the "comparable" standard of the Development Code. See, e.g., *Anderson First Coalition v. City of Anderson*, 130 Cal. App. 4th 1173, 1193 (2005). It should also be noted that this approach is consistent with the interpretation the County has applied to other recently proposed solar projects (without challenge from the commenters or others), including the RE Mustang, RE Orion, and RE Kent South projects, on the basis of similar soil and water technical analyses.

The County has required, as a condition of approval, that the Applicant provide an Agricultural Management Plan (PDF AG-3) providing details of the proposed grazing activities. The required content of the Agricultural Management Plan is described in detail in PDF AG-3 and the Plan is subject to County review and approval, thus ensuring adequacy of the plan. The County does not rely on the Agricultural Management Plan to determine if dry farm seasonal grazing is a reasonable foreseeable use. This determination is made based on the criteria defined in Kings County Board of Supervisors Resolution No. 13-058, supported by the site specific soil and water analysis. Nevertheless, the implementation of the AMP will be made a binding condition of approval for the Project, and the incorporation of robust performance standards will ensure the continuation of this use.

Also see Responses 1/7 and 1/21 for additional discussion of agricultural practices.

Response 1/5

The commenter contends that the Project proposes substantial changes that were not analyzed in the 2010 MND, including on-going agricultural use, increased project footprint, reduced mitigation, and increased air quality and traffic impacts. Because of these changes, the commenter concludes that to comply with CEQA, an EIR, or a new MND, must be prepared.

The commenter misstates the law in claiming that, where prior CEQA review has been completed and project revisions are proposed, "the fair argument standard applies to an agency's decision of whether or not to prepare an EIR, rather than the substantial evidence standard that would apply to supplemental environmental review of previously approved projects under CEQA Section 21166." (Citing *Sierra Club v. County of Sonoma*, 6 Cal. App. 4th 1307, 1317-19 (1992)). In fact, the case cited by the commenter stands for a different proposition:

> "But when a court reviews an agency decision under *section 21166* not to require a subsequent or supplemental EIR on a project, the traditional, deferential substantial evidence test applies. The court decides only whether the administrative record as a whole demonstrates substantial evidence to support the determination that the changes in the project or its circumstances were not so substantial as to require major modifications of the EIR. [Citations omitted] [7]
>
> 7 **This substantial evidence test also applies when a court evaluates whether an agency properly issued a second negative declaration on a project.** (*Benton v. Board of Supervisors, supra*, 226 Cal.App.3d at pp. 1481- 1483.)"

(*Sierra Club*, 6 Cal. App. 4th 1318, emphasis added). The *Sierra Club* court went on to conclude that the "fair argument" standard applied to the distinct decision whether to prepare a project-level EIR following preparation of a *program EIR* (where no previous project-level analysis had occurred). This substantial evidence principle has been incorporated into the CEQA Guidelines as well:

> "The provisions of sections 15162, 15163, and 15164 apply when the project being analyzed is a change to, or further approval for, a project for which an EIR **or negative declaration** was previously certified or adopted (e.g. a tentative subdivision, conditional use permit). Under case law, **the fair argument standard does not apply to determinations of significance pursuant to sections 15162, 15163, and 15164**."

CEQA Guidelines 15064(f)(7) (emphasis added).

The commenter acknowledges, in a footnote, that a recent case involving an addendum to an IS/MND is on review before the California Supreme Court (*Friends of the College of San Mateo Gardens v. San Mateo County Comm. College Dist.*) However, the commenter does not acknowledge that the Court granted review to consider the precise question of the appropriate standard of review that would apply:

> "When a lead agency performs a subsequent environmental review and prepares a subsequent environmental impact report, a subsequent negative declaration, or an addendum, is the agency's decision reviewed under a substantial evidence standard of review (*Mani Brothers Real Estate Group v. City of Los Angeles* (2007) 153 Cal.App.4th 1385), or is the agency's decision subject to a threshold determination whether the modification of the project constitutes a 'new project altogether,' as a matter of law (*Save our Neighborhood v. Lishman* (2006) 140 Cal.App.4th 1288)?"

As suggested by the Court's grant of review, there is a split of authority regarding the appropriate standard to apply in cases such as the present. In the view of the Community Development Department, the weight of the case law and the CEQA Guidelines supports a conclusion that the substantial evidence standard should apply to a lead agency's decision that an Addendum to an IS/MND is appropriate.

Nevertheless, even if the threshold "new project" test were applied, the commenter has not provided evidence that the proposed project is in fact a "new project" that requires a new IS/MND, let alone a stand-alone EIR. The Project continues to be a 125 MW photovoltaic solar project, in the same location and with only minor adjustments to contiguous parcels within or adjacent to the Project boundary that would result in a 9-acre *decrease* from the project size originally studied in the IS/MND. The modification of certain mitigation measures, discussed extensively throughout the CEQA Addendum and these responses, require amendments to the CUP but do not fundamentally change the underlying objectives, scope or nature of the approved Project or the extent or nature of its potential environmental impacts. (See, e.g., *Benton v. Board of Supervisors, supra*, 226 Cal. App. 3d at p. 1483 [change to an approved winery that increased project size by 120 acres and relocated winery buildings a mile west did not constitute a "new" project].)

The proposed agricultural activities for the Project are described, and impacts are evaluated, in Section V, Impact Analysis, of the CEQA Addendum. Continued agricultural activity at the site is consistent with the Exclusive Agricultural zoning of the site. The CUP Addendum proposes to include dry farm seasonal grazing on the project site along with solar power generation. This proposal is consistent with Kings County Board of Supervisors Resolution No. 13-058. PDF AG-3 addresses in detail the required content of Agricultural Management Plan that will be developed for the Project and must be approved by the County. It is unclear what "physical components" of the on-site agricultural operations the commenter believes were not considered in the CEQA Addendum.

Section V, Modified Project Description, Section V, Impact Analysis of the Addendum describes the proposed changes and resulting impacts in construction and operation of the Project, including the proposed changes with respect to Swainson's hawk, increased traffic (due to a shortened construction schedule), and agricultural mitigation, and analyzes the impacts of these changes. Table 2 in Section IV provides a side-by-side comparison of the original and proposed project descriptions. Again, none of these modifications changes the underlying objectives, scope, or nature of the Project.

Swainson's hawk mitigation defined in PDF BIO-1 provides for the applicant to conduct a census level survey for Swainson's hawk to determine if sufficient foraging habitat exists to support the Swainson's hawk population in the project vicinity. PDF BIO-1 provides detailed methodology for the survey, following that utilized previously to evaluate impacts on foraging habitat for a nearby solar facility. The PDF defines the required mitigation for loss of foraging habitat if the study finds existing foraging habitat is not adequate.

Traffic impacts from the proposed Project are addressed in Section 3.16 of the IS/MND.

The analysis of impacts from the modified Project, as presented in the Addendum, demonstrate that there are no new impacts, and with mitigation, all impacts remain less than significant.

See also Responses 1/1, 1/2, and 1/3.

Response 1/6

The commenter states that the County cannot remove mitigation without preparation of a subsequent MND or an EIR and providing a public comment period. This argument includes, according to the commenter's interpretation, the argument that PDF BIO-1 is proposed for elimination, and that it has not been demonstrated that deletion of this mitigation will not result in significant impact to the Swainson's hawk. The commenter states that the County relies on a 2012 Estep report prepared for a different solar project, and that forgoing mitigation on this basis conflicts with existing CDFW guidelines. The commenter concludes that with no new biological study to support the deletion of PDF BIO-1, the county is deferring the threshold determination of whether this change will result in a significant impact.

As indicated by the cases cited by the commenter, a lead agency may modify a previously adopted mitigation measure if it reviews the continuing need for the mitigation, explains the reasons for its actions, and supports those actions with substantial evidence. (See, e.g., *Lincoln Place Tenants Ass'n v. City of Los Angeles*, 130 Cal. App. 4th 1491 (2005); *Mani Bros. Real Estate Group v. City of Los Angeles*, 153 Cal. App. 4th 1385, 1388 (2007) [upholding EIR addendum involving deletion and modification of mitigation measures].) Regarding proposed revisions to the applicant's Proposed Design Features, the County has complied with these requirements through preparation of the CEQA Addendum. While the commenter implies that Kings County is attempting to eliminate mitigation on a "ministerial" basis, this is clearly not the case where the Community Development Agency is recommending that the Planning Commission take discretionary action to adopt a CUP Addendum and CEQA Addendum. This is precisely the approach that CEQA calls for.

Contrary to statements made by the commenter, the substantive Swainson's hawk mitigation provided in PDF BIO-1 is not proposed for deletion. PDF BIO-1 remains as a condition of approval, but the original version was formulated to mitigate for both loss of agricultural uses and impacts to Swainson's hawk foraging habitat. It has been modified to reflect the proposed change in agricultural use and the resulting avoidance of significant agricultural impacts relative to the original approval. As discussed above, agricultural impacts are now addressed through revised PDF AG-1 through AG-3, and Swainson's hawk foraging habitat mitigation will be addressed as defined in the revised PDF BIO-1.

The modified PDF BIO-1 would base the determination of compensatory mitigation for Swainson's hawk foraging habitat on an up-to-date, site-specific analysis. It is not accurate to claim, as the commenter does, that the CEQA Addendum relies on a 2012 study for another solar project to conclude that mitigation is not necessary. Instead, the proposed mitigation is to use the *methodology* established in the referenced Estep study to conduct a new, Project-specific study of Swainson's hawk foraging habitat. If a significant impact to Swainson's hawk foraging habitat is identified on either a Project or cumulative level, based on site-specific analysis, mitigation consistent with the original approval is incorporated. Conformance to the Estep study provides the performance criteria necessary to ensure that any impacts will be mitigated, as does the requirement in PDF BIO-1 that mitigation would be provided at a 0.5:1 ratio (consistent with the ratio provided in the original IS/MND). See Response 1/2 regarding deferral of mitigation; see also

Save Panoche Valley v. San Benito County, 217 Cal. App. 4th 503, 525 (2013) (upholding mitigation measures for biological resources where specific mitigation requirements would be based on the results of future studies).

With regard to the methodology presented in referenced report, *The Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities* (Estep 2012), this study had been previously accepted by the County for the solar projects identified in the report. Additionally, CDFW was given opportunity to provide comments or concerns on the analysis and methods therein during public review in 2012. CDFW never commented or identified any issues with the methodology in the analysis at that time, in effect, validating the methodology and results discussion as an accepted approach for those projects.

The County has accepted the methodology and analysis provided in the 2012 Estep report as a valid approach to apply to the American Kings Solar Project based on the reasons identified below.

1. The American Kings Solar Project is a solar project of similar size and scope to those evaluated in the 2012 report.
2. The American Kings Solar Project falls within the same region analyzed in the 2012 report.
3. Calculations analyzed for the American Kings Solar Project fall within the same percentages of significance accepted in the 2012 report.

The commenter's references to "full mitigation" for impacts to listed species are misplaced. This is a requirement for issuance of an Incidental Take Permit pursuant to the California Endangered Species Act, which is not being sought for the Project because the Project is not likely to cause "take" of any listed species. Additionally, the CDFW Swainson's Hawk Staff Report, while instructive, does not have binding effect and expressly recognizes that "Alternative mitigation measures, tailored to specific projects, may be developed if consistent with this report."

Additionally, the fact that the Community Development Agency stated to the prior applicant in 2011 that the MND "would need to be revised to reflect the new information, and re-circulated for a new public review period" is not determinative. The quoted letter was issued following initial review, in response to an informal inquiry and without the benefit of an application or environmental analysis document. Staff accurately indicated that if a subsequent MND were prepared, this would require a public review period. However, following the applicant's submittal of an application for the modified Project, including the modified PDFs, staff reviewed in depth over a period of several months to reach a conclusion that the circumstances warranted an Addendum to the IS/MND rather than a subsequent MND. See Response 1/1 regarding commenter's misstatement of the standard for an addendum to an MND. See also Response 1/5.

Response 1/7

The commenter states that proposed deletion of CUP Condition No. 21 has not been adequately analyzed, and because the Agricultural Management Plan for grazing operations has not been prepared, there are unresolved questions regarding the viability of the proposed grazing operations. The commenter identifies several issues that have not been evaluated including reduced grazing capacity, site restoration and seeding to support the proposed grazing, animal safety and compatibility with solar equipment. The commenter concludes that only with analysis of these details can the County justify elimination of compensatory mitigation for agricultural impacts.

See Response 1/6 regarding modification of mitigation measures. If the Planning Commission approves modification of existing conditions of approval, the applicant's implementation of the modified conditions of approval does not constitute a "failure to carry out" original conditions or a "material breach of its use permit," let alone a violation of CEQA.

The Applicant proposes to continue a lower intensity agricultural production at the site, rather than completely eliminate agricultural production as previously proposed under the original approval. As described in the Responses 1/2, 1/3, and 1/4, it has been demonstrated that the Project site suffers from impaired soil and water conditions, and therefore, under current County policy (Kings County Board of Supervisors Resolution No. 13-058) a lower intensity agricultural use is considered a compatible use for agricultural lands under Farmland Security Zone contracts. Elimination of significant impact to agricultural lands eliminates the need for the farmland mitigation specified in Condition No. 21. Therefore, Condition No. 21 is proposed for elimination based on changes to the proposed project that eliminate the significant impact to agricultural lands.

Agricultural use of the site is allowed by right under the site zoning and can continue at the discretion of the Applicant. The requirements for the Agricultural Management Plan, as defined in PDF AG-3, will address site characteristics, the combined industrial and agricultural use of the site, and any required restoration and seeding to ensure success of the proposed agricultural use. The Agricultural Management Plan must demonstrate that the proposed agricultural use meets the compatibility requirements defined in Kings County Board of Supervisors Resolution No. 13-058, and will be subject to County review and approval prior to issuance of a building permit.

Sheep grazing is an existing, accepted, and compatible practice at solar facilities similar to the Project. PDF AG-3, requiring an AMP in accordance with Kings County Board of Supervisors Resolution No. 13-058, defines performance standards to adequately ensure agricultural use that meets the compatibility requirements established by the County. The experience of the Applicant (or more accurately, its subcontractors) in managing agricultural operations is not relevant to the adequacy of the CEQA analysis, nor are animal safety (which would be appropriate to address in the AMP) or the protection of solar panels from damage by sheep. If the applicant were unable to sustain agricultural operations, this could constitute a violation of legally enforceable mitigation measures and the CUP, which could lead to revocation of the CUP or other enforcement action; however, this outcome is speculative and does not warrant consideration in the CEQA Addendum.

Response 1/8

The commenter claims that the Addendum fails to disclose baseline conditions in that it fails to include information about current baseline conditions at the project site.

As stated in Response 1/1 and 1/2, the proposed modifications to the Project design and construction characteristics are not substantial. Where a prior CEQA document has been prepared and certified or adopted by the lead agency, it is proper to focus subsequent environmental review only on the *increment* of change from the previously approved project. (See, e.g., *Benton v. Board of Supervisors*, 226 Cal. App. 3d 1467, 1487 (1991); *Abatti v. Imperial Irrig. Dist.*, 205 Cal. App. 4th 650 (2012); see also *Comms. for Better Envt. v. So. Coast Air Qual. Mngmt. Dist*. (2010) 48 Cal.4th 310, 326 [citing *Benton*, and noting that the case's holding applies as an exception to the general rule that actual conditions should inform a project baseline rather than maximum permitted conditions]). CEQA does not require the entire analysis to be reopened; rather, it is appropriate to limit the analysis in accordance with the factors described in CEQA Section 21166 and CEQA Guidelines sections 15162-15164.

> "In a case in which an initial EIR has been certified, section 21166 comes into play precisely because in-depth review of the project has already occurred, the time for challenging the sufficiency of the original CEQA document has long since expired, and the question before the agency is whether circumstances have changed enough to justify repeating a substantial portion of the process. [Citations] These same principles apply with even greater force in a case such as this, in which the initial environmental review resulted in the issuance of a negative declaration, rather than an EIR. **If a limited review of a modified project is proper when the initial environmental document was an EIR, it stands to reason that no greater review should be required of a project that initially raised so few environmental questions that an EIR was**

> ***not* required, but a negative declaration was found to satisfy the environmental review requirements of CEQA.** To interpret CEQA as requiring a greater level of review for a modification of a project on which a negative declaration has been adopted and a lesser degree of review of a modified project on which an EIR was initially required would be absurd."

Benton, 226 Cal. App. 3d at 1479-80 (emphasis added).

As a general matter, and to the extent that the commenter appears to be asserting deficiencies regarding the underlying IS/MND (not just the Addendum), the County notes that the commenter did not submit comments regarding the Project when it was originally proposed and approved in 2010, and the time to comment on the impacts of the overall Project has long since passed. The only issues properly before the County concern the minor increment of change proposed from the 2010 project.

The commenter is correct that the applicant could construct the Project as previously approved (subject only to a CUP extension) without further CEQA review. However, the commenter misstates the law in claiming that, with respect to the determination of baseline, the "sole exception to using the actual environment as the CEQA baseline is when the project proponent proposes to complete the exact same project that was approved in the past …" Although not directly relevant here, the California Supreme Court's decision in *Neighbors for Smart Rail v. Exposition Metro Line Construction Auth.*, 57 Cal. 4th 439 (2013), makes clear that lead agencies may be justified in using alternative baselines in a number of circumstances – there is no such "sole exception" to the general rule that the baseline constitutes existing conditions. The sole legal authority cited by the commenter for the position that the CEQA Addendum must update baseline conditions in all cases is CEQA Guidelines section 15125, which applies to the baseline in an Environmental Impact Report *in the first instance*, not an IS/MND, or a project undergoing subsequent environmental review pursuant to Guidelines sections 15162 to 15164.

In short, it is appropriate for the County to limit the revisions to the IS/MND to the Project's specific changes rather than comprehensively updating background information. However, with respect to certain baseline claims raised by the commenter, updates are provided for informational purposes in the responses that follow.

Response 1/9

The commenter states that the Addendum fails to provide current information on baseline biological conditions, and that 900+ acres of the Project site was not surveyed for biological resources and therefore baseline information is incomplete, inaccurate, and out-of-date.

As the CEQA Addendum thoroughly discloses, the Project site is subject to active cultivation for agricultural production. Site characteristics, from the standpoint of biological resources, have not changed since the original survey work. Field surveys were conducted for the additional parcels added to the Project development area in 2014, and these surveys are noted in the Addendum. From a practical standpoint, because of ongoing active cultivation, baseline conditions have not changed since the original analysis was conducted. The text edits in the biological resources section of the revised IS/MND are minimal, owing to the fact that site characteristics were essentially the same. However, mitigation for Swainson's hawk (PDF BIO-1 and BIO-2), burrowing owl (PDF BIO-2), San Joaquin kit fox (PDF BIO-3), and nesting birds (PDF BIO-4) provide for, among other requirements, pre-construction surveys to identify species presence and use at and in the vicinity of the site just prior to construction. These pre-construction surveys will ensure that species present prior to any start of construction activity are identified and mitigation implemented to avoid any significant impacts.

The Applicant has not proposed to eliminate mitigation for Swainson's hawk, but instead has proposed to conduct additional survey work prior to construction to determine if impact to Swainson's hawk foraging habitat is significant, based on up-to-date cumulative conditions. If such impacts are not determined to be significant, mitigation is not required. In the event foraging habitat impact is significant, mitigation consistent with the original approval is incorporated as a requirement. The only other proposed changes to

mitigation for biological resources are limited to an additional design feature for perimeter fence permeability for San Joaquin kit fox. The analysis in the CEQA Addendum has properly focused on the increment of change from the approved project.

Response 1/10

The commenter states that the Addendum fails to include baseline information about the existing hazardous materials conditions at the new parcels incorporated into the Project, and therefore fails to disclose whether there is any existing contamination that may be disturbed during construction.

The applicant has submitted an updated Phase 1 Environmental Site Assessment for the Project site, conducted in April 2014, for inclusion in the CEQA Addendum. The Phase 1 does not identify any Recognized Environmental Conditions. It also includes, in an appendix, a Phase 2 assessment from 2012, evaluating potential contamination from pesticides and fertilizers in the soil, which similarly concluded that these conditions were not Recognized Environmental Conditions. With respect to the newly added 9 acres proposed for the CUP Addendum, located within or directly adjacent to the original Project site, existing conditions are similarly agricultural, under common ownership with the original Project site, and no evidence exists of different or additional environmental contamination risk factors.

With respect to the Lemoore Naval Air Station and related facilities, described as a formerly used defense site or "FUDS" in the commenter's letter, these facilities clearly pre-dated the 2010 approval; this does not represent a change from the approved Project or new information for purposes of CEQA Guidelines section 15162. Further, no evidence exists that the facilities have resulted in environmental contamination on the original Project site, and if it did, the time for the commenter to raise such concerns under CEQA would have been in 2010. Similarly, no evidence exists that the defense facilities would have different or increased contamination risk at the parcels that are proposed to be added through the CUP Addendum process.

Response 1/11

The commenter states that current baseline air quality information is not provided in the Addendum and the information that is provided is out-of-date. Based on this, the commenter concludes that the potential significance of Project impacts on air quality, including the shortened construction schedule are not adequately evaluated and the Addendum's significance conclusions remain unsupported.

The Addendum provides an updated analysis of air quality impacts associated with the changes to Project construction characteristics. Reduction of the timeframe for construction will reduce the duration of temporary impacts, and analysis of the associated changes to equipment operation and construction - related traffic have been analyzed. Modeling results (IS/MND Table 3.3-5) indicate that construction emissions are similar to those estimated for the original approval, and remain below SJVAPCD significance thresholds. Based on the updated analysis, changes to the construction schedule would not result in significant impacts.

As described above, although the County has concluded that CEQA does not require a comprehensive update to baselines for the proposed Project modifications, the Addendum did refer to updated air quality attainment status. See Addendum to IS/MND at 75, citing SJVAPCD attainment status from 2014 (at the time the CUP Addendum application was under preparation; attainment status has not subsequently changed). Additionally, the following information is provided for disclosure purposes only. SJVAPCD has updated the footnotes to its attainment status table (available at https://www.valleyair.org/aqinfo/attainment.htm); however, the designations/classifications listed on that table have not changed from those cited in either the 2010 IS/MND or the CEQA Addendum. Similarly, the California Ambient Air Quality Standards remain the same notwithstanding certain footnote updates. With respect to National Ambient Air Quality Standards, updated standards have been adopted for $PM_{2.5}$ and SO_2. SJVAPCD has also incorporated new thresholds into its Guide for Assessing and Mitigating Air Quality Impacts. These updates to regulatory standards and guidance do not affect the physical baseline

in which the Project would be built, do not reflect material changes in the thresholds applicable to the project, and do not affect the CEQA Addendum's analysis of compliance with applicable thresholds of significance. Although no revision to the Addendum IS/MND is necessary, an updated version of IS/MND Section 3.3 (Air Quality) has nevertheless been provided, showing modifications from the prior Addendum IS/MND, to avoid any doubt that no substantive changes have occurred to the physical or regulatory setting.

Response 1/12

The commenter states that the Addendum fails to include the baseline information about existing traffic that is necessary to evaluate Project impacts, and therefore, the Addendum's significance conclusions are unsupported.

The CEQA Addendum provides an updated analysis of the traffic impacts anticipated from the modified Project (see Addendum to IS/MND Section 3.16). Table 3.16-5 of the Addendum to the IS/MND presents an analysis of level of service on local roadways based on anticipated Project construction traffic characteristics. This analysis demonstrates that the Project traffic impacts to local roadways will be less than significant.

There have not been substantial changes to the baseline traffic conditions used for analysis from the 2010 IS/MND. Both the 2010 IS/MND and the CEQA Addendum analysis are based in part on data developed for the Kings County General Plan and its related EIR, which projected cumulative traffic conditions out to 2035. To document the lack of significant changes, and for the purposes of disclosure, a comparison of the traffic volumes used for the MND analysis and the latest Caltrans annual average daily traffic (AADT) volume counts (http://traffic-counts.dot.ca.gov/), dated 2014, along Interstate 5 (I-5), State Route 41 (SR-41), State Route 43 (SR-43), and State Route 198 (SR-198), is provided in the table below.

Highway	Segment	No. of Lanes	Daily Capacity	Existing AADT Volumes		Project Construction ADT Volumes
				MND	Caltrans (2014)	
I-5	Between SR-41 and Avenal Cutoff Road	4	64,000	32,500	35,000	0
SR-41	Between Jackson Avenue and Fresno County Line	2 (assumed in MND)	15,000	7,600	-	0
	Between Jackson Avenue and SR-198	2	15,000	-	12,000	0
	Between SR-198 and Fresno County Line	4	30,000	-	18,000	0
SR-43	Between Fresno County Line and SR-198	2	15,000	10,300	11,500	0

Highway	Segment	No. of Lanes	Daily Capacity	Existing AADT Volumes		Project Construction ADT Volumes
				MND	Caltrans (2014)	
SR-198	Between Fresno County Line and Avenal Cutoff Road	2	15,000	3,400	4,850	2,412

Based on the existing AADT volumes (from the MND and Caltrans), I-5, SR-41, SR-43, and SR-198 are well within their highway capacities and operate at satisfactory level of service (LOS). In addition, project construction would only add ADT to SR-198 (the project would not add traffic to the other highway facilities). The existing plus construction traffic ADT along SR-198 would be less than half of its 15,000 vehicle per day capacity, which would result in satisfactory LOS.

Although current traffic count data is not available for Avenal Cutoff Road, 25th Avenue, or Jackson Avenue, the existing AADT volumes shown in the MND (i.e., fewer than 3,400 AADT) represent less than one-fourth of their 15,000 vehicle per day roadway capacities and these roadways operate at satisfactory LOS A. Even if these volumes were doubled, less than half of the daily capacity would be utilized. In addition, project construction would only add ADT to 25th Avenue (the project would not add traffic to Avenal Cutoff Road or Jackson Avenue). Therefore, satisfactory LOS would also result along these roadways.

From the above discussion, these updates do not affect the analysis of traffic impacts from construction and operation of the Project. The conclusion that traffic impacts are less than significant, as presented in the Addendum, remain valid.

Response 1/13

The commenter states that the Addendum contains no information on other projects in the vicinity of the Project site that must form the baseline for assessment of Project cumulative impacts to air quality, agricultural resources, traffic, biological resources, and all other relevant cumulative impacts. The commenter identifies this as a fatal deficiency in the CEQA analysis.

The commenter asserts that the CEQA Addendum lacks cumulative impacts analysis. As a general matter, if this is a "fatal deficiency" as the commenter states, then it was a deficiency at the time of the 2010 Project approval. However, the commenter did not submit comments regarding such a deficiency at that time; the period for commenting on the 2010 Project has long since passed, and the Addendum does not reopen the underlying CEQA analysis for reconsideration.

In any case, the CEQA Addendum meets the requirements for cumulative impacts analysis in an Addendum to an IS/MND. The CEQA Guidelines (section 15064(h)(2)) provide:

> "A lead agency may determine in an initial study that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. When a project might contribute to a significant cumulative impact, but the contribution will be rendered less than cumulatively considerable through mitigation measures set forth in a mitigated negative declaration, the initial study shall briefly indicate and explain how the contribution has been rendered less than cumulatively considerable."

Unlike an EIR, an IS/MND is not required to include an exhaustive analysis of cumulative impacts. See EIR requirements in Guidelines section 15130(b)(1); see also Guidelines section 15063(a)(3) ("[A]n initial study is neither intended nor required to include the level of detail included in an EIR.").

In accordance with these principles, the CEQA Addendum, Appendix A at 182-183, describes the Project's contributions to cumulatively considerable impacts. The IS/MND – both as adopted in 2010 and as revised through the Addendum in 2016 – concludes that the only cumulative impacts to which the Project could have a considerable contribution would be biological resources. However, with the implementation of PDFs BIO-1 through BIO-4, which include completion of a census-level analysis of potential impacts to Swainson's hawk on a cumulative level and providing mitigation as warranted, this contribution would be less than considerable.

Response 1/14

The commenter states that substantial changes to the original project are proposed and that there have been substantial changes in the circumstances surrounding the Project site from a resource and development standpoint and thus concluding that a subsequent EIR should be prepared.

As discussed in Responses 1/1, 1/2, and 1/3, the Project, as defined in the Addendum, is not substantially different from the original project. The modified Project is in fact, substantially similar to the original project in that it remains the same size with regard to generating capacity, location, solar technology, and retains the same interconnection point (Henrietta Substation), and actually results in decreased acreage from the Project studied in the 2010 IS/MND. Examples of proposed changes defined in the Addendum that reflect a refinement of design and construction details include shortening of the construction schedule, an update to the agricultural use of the site, and changes to storm water management. The proposed changes are not substantial, and the implications of all proposed changes have been thoroughly evaluated in the Addendum. This evaluation confirms that Project impacts, with mitigation, remain less than significant. Development of a subsequent MND, let alone an EIR, is not required.

See Response 1/5 regarding standards of review for subsequent environmental analysis.

Response 1/15

The commenter states that the proposed deletion of the existing Swainson's hawk mitigation and replacement with 0.5:1 compensatory mitigation will result in significant impacts on Swainson's hawk. The commenter further states that the mitigation ratio is not consistent with current CDFW guidelines.

As discussed in the Response 1/6, the Applicant does not propose to delete Swainson's hawk mitigation if the Project's site-specific impact on foraging habitat is found to be significant. Under the original approval, the mitigation for loss of up to 978 acres of Farmland of Statewide Importance was to establish conservation easements for 489 acres of similar value agricultural land, or at a ratio of 0.5:1. As defined in the Addendum, the Applicant proposes an ongoing, lower intensity agricultural use consistent with impaired soil and water conditions at the site. This change in proposed use eliminated the need for agricultural mitigation lands. With regard to Swainson's hawk habitat, mitigation is provided in PDF BIO-1 that will ensure that Swainson's hawk foraging habitat loss due to the Project, if significant, will be mitigated at the same 0.5:1 ratio.

To the extent that the commenter views the underlying mitigation ratio of 0.5:1 as insufficient, this comment could and should have been raised prior to the 2010 approval, as it is based on CDFW guidelines promulgated in 1994. The suggested mitigation ratio is not "new information" or a change in circumstances that would trigger a more intensive form of subsequent environmental review. See, e.g., *Concerned Dublin Citizens v. City of Dublin*, 214 Cal. App. 4th 1301, 1319-20 (2013). See also Response 1/6.

Response 1/16

The commenter states that changes to the construction schedule may result in new and more severe impacts on traffic and air quality.

The implications of construction schedule change, as defined in the CEQA Addendum, on traffic and air quality impacts have been evaluated in the Addendum to the IS/MND. The project is substantially similar to the original project approved in 2010 and the nature of impacts to traffic and air quality remains unchanged. The impacts to traffic and air quality resulting from the change in construction schedule have been evaluated in the Addendum to the IS/MND (Sections 3.16 and 3.3, respectively). Impacts on local roadways from associated truck and vehicle trips have been evaluated, see Addendum to the IS/MND, Table 3.16-5. Project construction air emissions estimates were updated in Section 3.3 of the Addendum IS/MND and the discussion has been further updated to reflect more recent SJVAPCD guidance relating to thresholds; see Addendum to the IS/MND Table 3.3-5 (May 2016 revisions). These analyses conclude that all traffic and air quality impacts remain less than significant.

With regard to the commenter stating that citizens may provide further comments on traffic and air quality following completion of their review - Comment noted.

Response 1/17

The commenter states that substantial changes have occurred with respect to circumstances in the geographical vicinity of the Project site which may substantially increase the severity of the Project's cumulative impacts.

With respect to changed circumstances, the mere fact that additional renewable energy projects have been approved is not enough to trigger a subsequent EIR or MND. CEQA Guidelines section 15162(a)(2) provides that once an EIR has been certified or a negative declaration prepared for a project, *no subsequent EIR shall be prepared* unless:

> "Substantial changes occur with respect to the circumstances under which the project is undertaken *which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects*."

The commenter has not provided any evidence that changed circumstances will require major revisions due to new or changed significant environmental effects. Additionally, each of the projects referred to in the commenter's letter – RE Kansas South, RE Mustang, RE Orion, and RE Kent South – were approved on the basis of an MND (without any comments from the current commenter) because the County concluded that each would have less than significant individual and cumulative environmental effects, as would the Project. Therefore, the fact that other renewable energy projects have been approved, by itself, does not trigger the requirements of section 15162. See also Response 1/13 above.

Response 1/18

The commenter indicates that new information on avian impacts associated with solar arrays demonstrates that the Project may have significant impacts on biological resources, and that the Addendum provides no analysis of this hazard.

First, although the commenter characterizes potential avian collision hazards as "new information," the fact that birds may collide with all types of structures in the built environment (including buildings, electrical lines, fences, and fossil-fuel power plants) is well-established and was established before the original Project was approved in December 2010. This is acknowledged in the sources provided by commenter. See, e.g., Cashen letter, footnote 31 (citing an article titled "Preventing Bird-Window Collisions" from 2009); Cashen letter, footnote 29, citing USFWS interim guidelines regarding Avian and Bat Protection Plans for solar facilities from September 2010, and which cites various earlier sources). The potential for solar energy facilities in particular to cause avian fatalities was studied as early as the

1980s in a widely-cited study. (McCrary, M.D., R.L. McKernan, R.W. Schreiber, W.D. Wagner, and T.C. Sciarrotta, 1986, "Avian Mortality at a Solar Energy Power Plant," *Journal of Field Ornithology* 57: 135–141.) Although research continues, the potential for avian species to collide with solar facility structures is not "new information" which "could not have been known with the exercise of reasonable diligence at the time the … negative declaration was adopted." CEQA Guidelines section 15162(a)(3); see also *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, 196 Cal. App. 4th 515, 532 (2011); *Concerned Dublin Citizens v. City of Dublin*, 214 Cal. App. 4th 1301, 1319-20 (2013).

Additionally, even if it were appropriate to raise claims regarding avian collision at this point, it is speculative to claim, as the commenter does, that photovoltaic solar facilities have had significant effects on avian populations. See, e.g., Walston et al., "A Review of Avian Monitoring and Mitigation Information at Existing Utility-Scale Solar Facilities," April 2015, available at http://www.evs.anl.gov/news/2015/04-27-solar-avian-impacts.cfm, describing the "current state of knowledge" on the topic and identifying a "paucity" of information to support this conclusion. Even if the fatalities that have been detected in the vicinity of solar facilities are assumed to have been caused by those facilities, no evidence exists that the number of fatalities detected at solar facilities to date could have a measurable impact on avian populations or species as a whole. Based on empirical data from other PV solar facilities, as indicated by the source cited above, the Project is unlikely to have significant effects with respect to bird species populations, and no further analysis is required. (See CEQA Guidelines section 15064(d)(3); section 15145.)

Response 1/19

The commenter states that the Addendum fails to incorporate measures defined in CDFW's 2012 guidelines for burrowing owl, and that these guidelines would substantially reduce Project impacts to burrowing owl.

CDFW's preparation of the 2012 Staff Report on Burrowing Owl Mitigation does not constitute "new information" that would trigger preparation of a subsequent MND or EIR. See *Fort Mojave Indian Tribe v. Dep't of Health Services*, 38 Cal. App. 4th 1574, 1605 (1995), rejecting claims that supplemental review was required due to designation of critical habitat for desert tortoise where the change was "not in physical circumstances but in impending federal legal and scientific review." Additionally, CEQA does not require incorporation of any particular survey or mitigation recommendations of other agencies. See, e.g. *N. Coast Rivers Alliance v. Marin Muni. Water Dist.*, 216 Cal. App. 4th 614, 643 (2013).

The Addendum did not propose any changes that would result in new or more significant impacts to burrowing owl, or any changes to burrowing owl mitigation (PDF BIO-2) from those currently required under the County approval. Mitigation retains the requirement for pre-construction surveys, implementation of mitigation measures according to CDFW guidelines in place at the time of Project approval, and submittal of survey findings and reports to CDFW and the County. Field surveys identified the presence of burrowing owls off-site near the wastewater ponds east of the site.

Implementation of the measures defined in PDF-BIO-2, incorporated as conditions of approval, will ensure that any Project-related impacts remain less than significant.

Response 1/20

The commenter states that the County has improperly deferred analysis and mitigation for Project impacts to agricultural lands, air quality, biological resources, and decommissioning.

The Addendum does not improperly defer analysis of Project impacts by relying on conditions of approval and mitigation measures requiring mitigation plans. See Response 1/2 regarding deferral of mitigation. Mitigation measures (PDFs) for agriculture (PDF AG-1, AG-2 and AG-3), air quality (PDF AQ-1, AQ-2, and AQ-3), and biological resources (PDF BIO-1, BIO-2, BIO -3, and BIO-4), require

specific actions, plan development, and mitigation implementation. The analysis and mitigation measures, which are also conditions of Project approval, are not improperly deferred because these conditions of approval contain sufficient performance criteria to ensure the Project's impacts to these resources will be less than significant.

Response 1/21

The commenter states that the County has not performed the necessary analysis required to support elimination of the agricultural conservation easement previously required under Condition No. 21, because the Agricultural Management Plan has not been developed.

See Response 1/2 regarding deferral of mitigation, and Response 1/4 and 1/7 regarding the previous requirement for an agricultural conservation easement. Mitigation to ensure that ongoing agricultural use and restoration of the Project site upon decommissioning is defined in PDFs AG-1, AG-2, and AG-3. The Agricultural Management Plan requirement (PDF AG-3) contains sufficient performance criteria and must conform to the compatibility requirements contained in Kings County Board of Supervisors Resolution No. 13-058. The Agricultural Management Plan is required to be developed and submitted to the Kings County Community Development Agency for review and approval prior to issuance of a building permit. Conformance to the Agricultural Management Plan will be a binding condition of approval. These actions will ensure that impacts to changes in agricultural activities at the Project site will be consistent with County policy and that impacts to agricultural use remain less than significant.

Response 1/22

The commenter states that the Addendum does not contain the Project's proposed Dust Control Plan, nor does it state whether the Applicant has initiated compliance with Air District Rule 9510. The commenter also states that the Applicant should have submitted its AIA in 2015, and the Addendum should disclose the status of the AIA application.

See Response 1/2 regarding deferral of mitigation. As stated in the Addendum, the Project will be required to comply with SJVAPCD Rules and Regulations including the Regulation VIII Fugitive PM10 Prohibition during construction and Rule 9510 ISR. The measures incorporated into the Project, and included as conditions of approval, including PDFs AQ-1, AQ-2, and AQ-3, define the requirements for compliance with local SJVAPCD rules and regulations. The demonstration of NOx emissions compliance and submittal of a dust control plan are pre-construction activities. The requirements for NOx compliance and dust control are adequately specified in the regulations and are not required to be incorporated as draft plans into the CEQA review.

The original Project Applicant has submitted an AIA for the Project and received an AIA approval from the SJVAPCD in 2010. This approval included approval of a fee deferral schedule. The applicant will be required to comply with this approval, or seek an amendment based on revised project schedule and characteristics defined in the Addendum currently being considered for approval by the County. Although the commenter asserts that the applicant "should have already submitted its AIA to the Air District," claims regarding the applicant's adherence to the procedures specified by another public agency have no bearing on the adequacy of the substantive environmental analysis.

Response 1/23

The commenter states that the County has improperly deferred analysis and mitigation for the Swainson's hawk.

See Response 1/2 regarding deferral of mitigation. As also discussed in Response 1/5, 1/6 and 1/15, PDF BIO-1 contains sufficient performance criteria to ensure adequate analysis and mitigation for potential loss of Swainson's hawk habitat. The survey methodology defined in BIO-1 has been used on previous solar projects subject to Kings County review and approval, and is based on more detailed analysis of habitat availability and population of nesting Swainson's hawks in the vicinity of the project site. In the

event that the study required under BIO-1 determines that the project would have a significant impact on Swainson's hawk foraging habitat, mitigation land is provided at a ratio of 0.5:1, which is consistent with the required mitigation defined in the initial project approval. Implementation of the requirements defined in BIO-1 will ensure that the Project's impacts to Swainson's hawk foraging habitat will be less than significant.

Response 1/24

The commenter claims that the Addendum fails to analyze impacts from Project decommissioning, stating that if construction impacts to air quality and biological resources are significant, decommissioning impacts will be significant as well. The commenter concludes that decommissioning impacts must be described in an EIR

See Response 1/2 regarding deferral of mitigation. As an initial matter, the comments regarding decommissioning do not meet the tests outlined in CEQA Guidelines section 15162 because decommissioning does not represent a substantial change or "new information" regarding the Project, let alone one that indicates a significant environmental effect. See 2010 IS/MND at section 1.8.4, Operation/Maintenance and Site Reclamation ("At the end of the project life, the applicant would remove all project facilities from the site. … The project site would be re-leveled and the onsite soil would be reclaimed to a condition that would once again support agriculture.") The CEQA Addendum simply adds details regarding decommissioning together with a detailed PDF addressing soil reclamation. To the extent the commenter asserts that the CEQA Addendum lacks analysis of the Project's decommissioning phase, this claim concerns the underlying IS/MND and is not subject to public review and comment at this late date.

Moreover, as a condition of approval, the project will be required to develop a Soil Reclamation Plan to be submitted to the County for review and approval prior to issuance of building permits. The content of the Soil Reclamation Plan (see PDF AG-1) will require the removal of all project fixtures, equipment, and non-agricultural roads, and will require restoration of compacted soil. In addition, financial assurance (PDF AG-2) is required to be submitted to the Planning Division of the Kings County Community Development Agency prior to the issuance of a building permit to ensure the removal of all project fixtures, equipment, and non-agricultural roads and restoration of compacted soil. The Project applicant will be required to confirm with the County that it has satisfied these standards within 18 months of the expiration of the Project's use permit.

The Agricultural Management Plan (PDF AG-3) will address ongoing agricultural use of the project site during project operation, and the Soil Reclamation Plan and financial assurances are required to be prepared prior to issuance of a building permit. Compliance with these conditions will ensure that the Project's impacts to agricultural resources will be less than significant.

Response 1/25

The commenter states that a new CEQA document must be prepared and circulated for public comment to remedy deficiencies in the current impact analysis.

As described throughout these responses, the Addendum analyzes potential project environmental impacts and provides detailed mitigation to address potentially significant impacts. The analysis demonstrates that project impacts remain less than significant, with mitigation, and is consistent with the original IS/MND analysis findings. The proposed changes to the proposed project are minor, primarily related to the refinement of the layout design to reflect the specific PV technology being proposed. The analysis confirms that there are no substantial changes to the Project, and no significant changes in the surrounding circumstances or newly available information, that would trigger further review under CEQA Guidelines 15162. The CEQA Addendum is appropriate to document the County's environmental review of the proposed increment of changes to the Project.

LETTER 2

Department of the Navy, Naval Air Station Lemoore (March 4, 2016)

Response 2/1

Commenter states that the Project's transmission line on the west side is directly under the NAS Lemoore Runway 32L approach corridor and may impact the assurance of navigation signal reception. Based on this, the commenter encourages that the County require FAA notification and evaluation of this location and associated structures in accordance with Code of Federal Regulations (CFR) Title 14 Part 77.9 "Safe, Efficient Use, and Preservation of the Navigable Airspace."

The County has incorporated into the CUP conditions of approval a requirement that the Applicant file any necessary FAA notices for the transmission structures referenced by the commenter. Prior to issuance of a building permit, Applicant shall submit to the County evidence of notification of the FAA pursuant to Code of Federal Regulations Title 14 Part 77.9. Prior to initiating construction of facilities subject to FAA notification, Applicant shall adopt and incorporate all requirements specified in the FAA determinations issued for each notice.

3.3 AIR QUALITY

Table 3.3-1 Air Quality Checklist

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under and applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Setting

Existing Air Quality

The project site is located in Kings County within the San Joaquin Valley Air Basin (SJVAB), under the jurisdiction of the SJVAPCD. The SJVAB consists of the following counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare, and the western portion of Kern County. The SJVAPCD is the local agency charged with preparing, adopting, and implementing stationary and area air emission control measures and standards. Therefore, the project is required to comply with SJVAPCD Rules and Regulations including the Regulation VIII Fugitive PM_{10} Prohibition during construction and Rule 9510 ISR.

The SJVAPCD is required to monitor air pollutant levels to ensure that the air quality standards are met, or if they are not met, to develop strategies to meet the standards. Ambient pollutant concentrations recorded in the San Joaquin Valley are among the highest in California. The SJVAPCD measures air pollutant concentrations at 19 monitoring stations throughout the air basin. Pollutants monitored include ozone, carbon monoxide, nitrogen dioxide (NO_2), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). Depending on whether or not the standards are met or exceeded, an air basin is classified as being in “attainment” or “nonattainment.” The basin currently exceeds state and federal ambient air quality standards for several pollutants and is required to implement strategies that would reduce the pollutant levels to achieve the recognized standards. The entire air basin is designated as nonattainment for the state 1-hour and 8-hour ozone standards, the state 24-hour and the annual particulate matter less than 10 microns in diameter (PM_{10}) standards, as well as the state annual $PM_{2.5}$ standard. The air basin is also designated as nonattainment for the

federal 8-hour ozone standard and the federal 24-hour and annual $PM_{2.5}$ standards (SJVAPCD, ~~2009~~2016).

The SJVAB's nonattainment status is a result of several factors: the meteorological conditions that limit the dispersion of pollutants; the limited capacity of the local airshed to eliminate pollutants from the air; and the number, type, and density of emission sources within the air basin. The SJVAPCD is required to develop Air Quality Management Plans (AQMPs) for pollutants for which the air basin is designated as nonattainment for the federal standards. AQMPs provide strategies for the attainment or maintenance of the federal air quality standards. The following lists the SJVAPCD's AQMPs approved by the California Air Resources Board (ARB) and the U. S. Environmental Protection Agency (USEPA):

- On April 7, 2015, the USEPA finalized the San Joaquin Valley's reclassification from Moderate to Serious Nonattainment of the federal 1997 $PM_{2.5}$ standard under Clean Air Act Subpart 4.
- On November 9, 2011, the USEPA approved SJVAPCD's *2008 PM2.5 Plan* for the 1997 $PM_{2.5}$ Standard.
- On May 4, 2010, the ~~U.S. Environmental Protection Agency (~~USEPA~~)~~ approved SJVAPCD's redesignation request from serious to extreme nonattainment for the federal 8-hour ozone standard.
- On March 8, 2010, the USEPA approved SJVAPCD's *2004 Extreme Ozone Attainment Plan* for 1-hour ozone.
- On September 25, 2008, the USEPA redesignated the San Joaquin Valley to attainment for the PM_{10} federal standard and approved the PM_{10} Maintenance Plan.
- The *2007 Ozone Plan* for the 8-hour federal ozone standard was adopted by SJVAPCD and approved by the ~~California Air Resources Board (~~ARB~~)~~. The USEPA approved the *2007 Ozone Plan* in 2012, but revoked the 1997 ozone standard for all purposes effective April 5, 2015. The SJVAPCD remains obligated to continue implementing the emissions controls as adopted to meet anti-backsliding requirements.
- In 2004, the ARB approved revisions to the 1998 CO maintenance plan.

Table 3.3-2 shows the current attainment status for regulated air pollutants in the air basin.

Regulatory Setting

Federal. The Federal Clean Air Act (CAA) establishes the statutory framework for regulation of air quality in the United States. Pursuant to this act, the USEPA has established various regulations to achieve and maintain acceptable air quality, including the adoption of NAAQS, mandatory State Implementation Plan (SIP) or maintenance plan requirements to achieve and maintain the NAAQS, and emission standards for both stationary and mobile sources of air pollution. NAAQS have been established for the following air pollutants (called "criteria" pollutants): CO, ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$ and Pb. The NAAQS represent levels established by the USEPA to avoid specific adverse health and welfare effects associated with each pollutant with a margin of safety. Table 3.3-3 summarizes the ambient air quality standards.

State. The ARB is the state agency responsible for California air quality management, including establishment of CAAQS, mobile source emission standards, GHG regulations, and oversight of local

air quality districts and preparation of implementation plans, including regulations for stationary sources of air pollution. The CAAQS are generally more stringent (except for 1-hour average NO_2 and SO_2) and include more pollutants than the NAAQS. Similar to the USEPA, the ARB designates counties in California as in attainment or nonattainment for the CAAQS. Table 3.3-3 above includes the state attainment status for the SJVAB.

Table 3.3-2 Attainment Designations

Pollutant	Designation/Classification	
	Federal Standards[a]	**State Standards[b]**
Ozone – 1 hour	No Federal Standard[c]	Nonattainment/Severe
Ozone – 8 hour	Nonattainment/Extreme[d]	Nonattainment
PM_{10}	Attainment ~~(maintenance)~~[d~~c~~]	Nonattainment
$PM_{2.5}$	Nonattainment/Moderate[f~~e~~]	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (particulate)	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81.
[b] See CCR Title 17 Sections 60200-60210
[c] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications; however, subsequent litigation and regulatory actions reinstated many of the revoked 1-hour ozone requirements. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010), but revoked its approval in 2012, explaining that additional elements must be included in a new plan. SJVAPCD adopted the *2013 Plan for the Revoked 1-hour Ozone Standard* on September 19, 2013. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
[d] Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
[d~~,e~~] On September 25, 2008, the USEPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS).
~~[e] The Valley is designated nonattainment for the 1997 national $PM_{2.5}$ standards.The USEPA released final designations for the 2006 $PM_{2.5}$ standards in December 2008 (effective in 2009), designating the Valley as nonattainment for the 2006 $PM_{2.5}$ standards.~~
[f] The Valley is designated nonattainment for the 1997 national $PM_{2.5}$ standards. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).
Source: SJVAPCD, ~~2010~~2015.

Table 3.3-3 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California ~~Ambient Air Quality~~ Standards (CAAQS)[a]		Federal Standards (NAAQS)[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[d,c,f]	Method[g]
Ozone (O_3)	1-Hour ~~8 hours~~	0.09 ppm (180 µg/m^3) ~~0.070 ppm~~	Ultraviolet Photometry	~~0.075 ppm~~	Same as Primary Standard ~~0.08 ppm~~	Ultraviolet Photometry
	8-Hour ~~1 hour~~	0.070 ppm (137 µg/m^3) ~~0.09 ppm~~		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour ~~Annual arithmetic mean~~	50 µg/m^3 ~~20 µg/m^3~~	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard ~~150 µg/m^3~~	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean ~~24 hours~~	20 µg/m^3 ~~50 µg/m^3~~		~~150 µg/m^3~~		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour ~~Annual arithmetic mean~~	~~12 µg/m^3~~		35 µg/m^3 ~~15 µg/m^3~~	Same as Primary Standard ~~15 µg/m^3~~ ~~35 µg/m^3~~	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean ~~24 hours~~	12 µg/m^3 ~~35 µg/m^3~~	Gravimetric or Beta Attenuation	15 µg/m^3 ~~35 µg/m^3~~		
Carbon Monoxide (CO)	8-Hour ~~8 hours~~	9.0 ppm (10 mg/m^3) ~~9.0 ppm~~	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3) ~~9 ppm~~		Non-Dispersive Infrared Photometry (NDIR)
	1-Hour ~~1 hour~~	20 ppm (23 mg/m^3) ~~20 ppm~~		35 ppm (40 mg/m^3) ~~35 ppm~~		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[h]	Annual arithmetic mean	0.03 ppm (57 µg/m^3) ~~0.03 ppm~~	Gas Phase Chemi-luminescence	53 ppb (100 µg/m^3) ~~0.053 ppm~~	Same as Primary Standard ~~0.053 ppm~~	Gas Phase Chemi-luminescence
	1 hour	0.18 ppm (339 µg/m^3) ~~0.18 ppm~~		100 ppb (188 µg/m^3) ~~0.100 ppm~~		
Lead (Pb)[j,k]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[k]	Same as Primary Standard	
	Rolling 3-Month Average[i]	–		0.15 µg/m^3		

Table 3.3-3 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California ~~Ambient Air Quality~~ Standards (CAAQS)[a]		Federal Standards (NAAQS)[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[d,c,f]	Method[g]
Sulfur Dioxide (SO_2)[i]	24-Hour ~~Annual arithmetic mean~~	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)[i] ~~0.03 ppm~~		Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour ~~24 hours~~	~~0.04 ppm~~		~~0.14 ppm~~	0.5 ppm (1300 µg/m^3)	
	1-Hour ~~3 hours~~	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	~~0.5 ppm~~	
	Annual Arithmetic Mean ~~1 hour~~	~~0.25 ppm~~		0.030 ppm (for certain areas)[i] ~~0.042 ppm~~[g]		
Visibility-reducing particles[l]	8 hours	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.[f]		No Federal Standards		
Sulfates	24 hours	25 µg/m^3	Ion Chromatography			
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m^3) ~~0.03 ppm~~	Ultraviolet Fluorescence			
Vinyl chloride[ei]	24 hours	0.01 ppm (26 µg/m^3) ~~0.01 ppm~~	Gas Chromatography			

~~[a] California standards for ozone, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, and suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded.~~

~~[b] National standards other than ozone, PM, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standards. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentration, averaged over 3 years, is equal to or less than the standard.~~

~~[c] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.~~

~~[d] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.~~

~~[e] The ARB has identified Pb and vinyl chloride as toxic air contaminants (TACs) with no threshold level of exposure for adverse health effects determined. ARB made this determination following the implementation of control measures at levels below the ambient concentrations specified for these pollutants.~~

~~[f] Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.~~

~~[g] Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.~~

Table 3.3-3 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California ~~Ambient Air Quality~~ Standards (CAAQS)[a]		Federal Standards (NAAQS)[b]		
		Concentration[c]	Method[d]	Primary[c,e]	Secondary[c,f]	Method[g]

~~Notes:~~
~~µg/m³ = micrograms per cubic meter~~
~~ppm = parts per million (by volume)~~
~~Source: ARB, 20105.~~

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[h] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb are identical to 0.100 ppm.

[i] On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standards to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[j] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[1] In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
ppb = parts per billion
ppm = parts per million
mg/m^3 = milligrams per cubic meter
$\square g/m^3$ = micrograms per cubic meter

Source: California Air Resources Board, 2015.

The California CAA requires each local air district in the state to prepare an air quality plan (part of the SIP) to achieve compliance with CAAQS. The ARB has ultimate responsibility for the SIP for nonattainment pollutants but relies on each local air district to adopt mandatory statewide programs and provide tailored additional strategies for sources under their local jurisdiction. The ARB combines its data with local district data and submits the completed SIP to the USEPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by the ARB, as well as attainment plans adopted by the air districts and approved by the ARB.

Local. The 2035 King's County General Plan adopted by the King's County Board of Supervisors on January 26, 2010 recognizes the problem of air pollution within the San Joaquin Valley. The General Plan Air Quality Element fulfills a number of objectives that are very important to King's County, including ensuring that growth occurs in ways that protect and enhance the health of the county's residents, and complying with air quality regulations.

General Plan Air Quality objectives and policies that are pertinent to the project include:

- **AQ Objective C1.1:** Accurately assess and mitigate potentially significant local and regional air quality and climate change impacts from proposed project within the County.
- **AQ Policy C1.1.1:** Assess and mitigate project air quality impacts using analysis methods and significance thresholds recommended by the SJVAPCD and require that projects do not exceed established SJVAPCD thresholds.
- **AQ Policy C1.1.3:** Ensure that air quality and climate change impacts identified during CEQA review are minimized and consistently and fairly mitigated at a minimum, to levels as required by CEQA.
- **AQ Objective E1.1:** Increase the use of energy conservation features, renewable sources of energy, and low-emissions equipment in new and existing development projects within the County (Kings County, 2010)

The local governmental entity tasked with implementing these and other strategies within Kings County is the SJVAPCD. The SJVAPCD is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. Therefore, the project is required to comply with SJVAPCD Rules and Regulations including the Regulation VIII Fugitive PM_{10} Prohibition during construction and Rule 9510 ISR.

3.3.2 Environmental Impacts and Mitigation Measures

Project Design Features

The proposed project includes the following PDFs that minimize or avoid impacts to air quality as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to air quality.

PDF AQ-1: Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD.

PDF AQ-2: Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.

PDF AQ-3: Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.

Construction and Operation Emissions

Air pollutant emissions would occur as a result of the proposed project. For analysis purposes, project construction is discussed separately from project operation. The reason for this separation is that construction would produce only temporary impacts, whereas project operation would result in long-term emissions.

Project Construction. Short-term emissions associated with construction of the project would occur as a result of the following activities:

- Site clearing and grading
- Trenching
- Fence installation
- Pile installation
- Racking installation
- Electrical installation
- Module installation
- Dust mitigation
- Construction of inverter stations, substations, and control building
- Worker commutes
- Material/equipment deliveries

Construction emissions were calculated based on construction information provided from the project applicant. This information is included in Section 6 of this initial study.

The SJVAPCD has established CEQA thresholds of significance on an annual basis so construction emissions expected to occur within each calendar year were calculated by year using the construction

equipment usage for each year estimated by the applicant. Since the construction dates are unknown, the air quality impacts were modeled in a worst-case scenario assuming 12 months of construction in a single calendar year.

Based on these assumptions, emission estimates from the activities listed above were summed for comparison to the SJVAPCD CEQA Threshold of Significance for the following pollutants of concern in the SJVAB:

- PM_{10} and ozone Precursors (NO_x and ROG) from equipment exhaust

Air quality CEQA Thresholds of Significance for construction set forth by SJVAPCD are presented in Table 3.3-4, below (SJVAPCD, 2015~~02~~).

Table 3.3-4 Air Quality Thresholds of Significance for Construction

Pollutant	Tons per Year
CO	100
SO_x	27
Reactive Organic Gas	10
NO_x	10
~~Fugitive~~ PM_{10}	~~N/A~~15
$PM_{2.5}$	15

Note:
~~N/A = SJVAPCD has not established a threshold for this pollutant.~~
Source: SJVAPCD, 20~~02~~15.

In addition to the CEQA Thresholds of Significance in Table 3.3-4, the SJVAPCD has set NO_x and PM_{10} thresholds of 2 tons per year (tpy) each for applicability of ISR.

PM_{10} Emissions from Fugitive Dust Sources. Emissions of fugitive PM_{10} are expected as a result of road grading activities and travel on unpaved roads. The SJVAPCD's latest approach to CEQA analyses of construction PM_{10} fugitive dust impacts is to require implementation of effective and comprehensive control measures ~~rather than~~ and to require~~d~~ detailed quantification of emissions (SJVAPCD, 20~~02~~15). Compliance with SJVAPCD Regulation VIII is no longer considered to be ~~sufficient~~ a guarantee that a ~~to reduce a~~ project's construction-related fugitive dust impacts would be reduced to less than significant. The project's fugitive dust emissions have been quantified as shown in Table 3.3-5. Through PDF-3, the applicant would require that all contractors ensure compliance with SJVAPCD Regulation VIII and that fugitive dust control measures are implemented. ~~Therefore, t~~The project would comply with Regulation VIII during construction and as shown in Table 3.3-5 below, the fugitive dust (PM_{10}) and exhaust emissions from project construction would have a less than significant impact on air quality.

Ozone Precursors (NO_x and ROG) and PM from Vehicle and Equipment Exhaust. Construction of the project would include emissions from both on-road and off-road construction vehicles and equipment. On-road emissions would result from trucks delivering materials/equipment and construction worker commute trips. Off-road emissions would result from the use of diesel-fueled construction equipment, such as graders or forklifts.

To evaluate on-road vehicle emissions, the California Emissions Estimator Model was used which incorporates emission factors from the EMFAC2011 Motor Vehicle Emission Factor Model as well as the ARB's OFFROAD2011. Detailed assumptions and calculations from the model are presented in Section 6.

Construction of the project would also involve off-road emissions from the use of diesel-fueled construction equipment. Emission factors from the~~, URBEMIS2007~~ OFFROAD2011 model were used. Specific emission factors for each type of equipment for calendar years and 2016[1] were obtained from the URBEMIS2007 Software User's Guide (Jones & Stokes, 2007). Detailed assumptions and calculations for all off-road equipment emissions are presented in Section 6.

A summary of the estimated construction exhaust emissions is presented in Table 3.3-5.

Table 3.3-5 Unmitigated Construction Exhaust Emissions Estimates Summary in Tons per Year

Construction Year	ROG	NO_x	CO	SO_x	Total PM_{10}	Total $PM_{2.5}$
Year 1	0.51	4.7	3.6	0.007	0.61~~0.22~~	0.3~~0.20~~
Year 2	1.3	5.6	13	0.025	1.89~~0.29~~	0.31~~0.27~~
SJVAPCD CEQA Thresholds of Significance	10	10	100	27	15	15
SJVAPCD ISR Threshold	N/A	2	NA	N/A	2	N/A

Source: LSA Associates, Inc., June 2015.
Note: This modeling is based on a maximum of 1,200 construction workers.
Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the California Air Resources Board which created the model determined that the 2007 version included an error that was overestimating emissions of NO_x and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Additionally, newer equipment used in the OFFROAD2011 model has lower emission rates. The analysis used updated equipment emission factors more representative for the proposed year for start of construction, as well as the Project commitment to use a "Clean Fleet." Compliance will be documented as required by SJVAPCD Rule 9510 (ISR). According to the SJVAPCD, the Clean Fleet option under Rule 9510 (ISR) would require construction emissions to be reduced by 20 percent for NOX and 45 percent for PM10. When the Clean Fleet option is selected, the District will require a "monitoring and reporting schedule" under the Rule 9510 with detailed record keeping that gets reported back to the district for each phase of construction. Compliance with this rule is required by PDF AQ-2.
N/A = SJVAPCD has not established a threshold for this pollutant.

CO = carbon monoxide
CO_2 = carbon dioxide
CO_{2e} = carbon dioxide equivalent
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_x = sulfur oxides
ROG = reactive organic gases

[1] Although the construction year is unknown since construction is dependent on completing CEQA review, receiving all necessary construction permits, and meeting preconstruction CEQA conditions, 2015 and 2016 were selected to model emission factors. This is the best available data.

The results presented in Table 3.3-5 show that unmitigated emissions associated with construction of the proposed project would be below the SJVAPCD's Thresholds of Significance for each construction year evaluated. Therefore, construction impacts would be less than significant.

Table 3.3-5 shows that the project construction emissions would exceed the ISR threshold of 2 tons per year for NO_x in both years. As such, the project applicant will submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD. To comply with Rule 9510 for reducing construction NO_x emissions, the construction equipment used for the project would meet the 20 percent reduction in NO_x emissions compared to the statewide average. The construction fleet information to support this reduction would be submitted to SJVAPCD prior to commencing construction. ISR would not be applicable to the PM_{10} emissions because the exhaust PM_{10} emissions would be below the 2 tons per year ISR threshold for each construction year.

Project Operation. Operational emissions associated with the project would be minor and would result from routine solar panel maintenance, cleaning, and inspection activities through the use of on-road vehicles and off-road diesel-fueled equipment. Operation of the solar plant would not include stationary sources of emissions.

To evaluate on-road vehicle emissions, emission factors from the EMFAC2011 Motor Vehicle Emission Factor Model were used. Emission factors were applied to the VMT for each vehicle type and then summed to estimate total annual on-road vehicle emissions. Off-road emissions from the use of the water trucks were estimated using URBEMIS2007 emission factors. Specific emission factors for each type of equipment were obtained from the URBEMIS2007 Software User's Guide (Jones & Stokes, 2007). Detailed assumptions and calculations for Project operation are presented as Section 6.

A summary of the estimated operational emissions are presented in Table 3.3-6.

Table 3.3-6 Project Operational Emissions Estimate Summary – Tons Per Year

~~Construction~~ Operation Year	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Operation Emissions	0.~~05~~12	0.24	0.73	0.001	0.0~~3~~7	0.~~03~~02
SJVAPCD CEQA Thresholds of Significance	10	10	100	27	~~N/A~~15	~~N/A~~15
SJVAPCD ISR Threshold	N/A	2	N/A	N/A	2	N/A

Source: LSA Associates, Inc., April 2015.
Note: N/A = SJVAPCD has not established a threshold for this pollutant.

CO = carbon monoxide
CO_2 = carbon dioxide
CO_{2e} = carbon dioxide equivalent
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_x = sulfur oxides
ROG = reactive organic gases

As shown in Table 3.3-6, operation of the proposed project would not exceed SJVAPCD CEQA Thresholds of Significance. Therefore, project operation~~,~~ impacts would be less than significant.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

LESS THAN SIGNIFICANT IMPACT. The SJVAPCD's primary means of implementing air quality plans is by adopting rules and regulations. Construction activities related to the project, as designed, would not conflict with or obstruct implementation of any SJVAPCD air quality plans, rules, or regulations that outline the long-term strategies designed to have regional air quality comply with NAAQS and CAAQS. The emission inventory, as part of SJVAPCD's plan, includes emissions from off-road equipment, such as construction equipment and fugitive dust. The emissions associated with project construction would be temporary and would represent only a very small fraction of the regional emission inventory included in SJVAPCD's plan. Therefore, project construction emissions are not expected to substantially contribute to the regional emissions. Project construction equipment would also be operated in compliance with applicable federal, state, and local regulations as outlined by the SJVAPCD, including applicable fugitive dust control measures pursuant to the Fugitive Dust Control Plan that would be prepared by the applicant. The Fugitive Dust Control Plan would be submitted to the SJVAPCD prior to the initiation of construction. An ISR application and AIA would be filed with the SJVAPCD to address NO_x emissions from construction.

Additionally, in 2007, the SJVAPCD adopted a "Fast-Track Action Plan" designed to improve the valley's air quality sooner than the 2024 federal attainment deadline. The Fast-Track Plan includes a comprehensive list of strategies and measures including "energy conservation and alternative energy" that encourage the use of electric, solar, hydrogen fuel cells and other low-emitting sources of energy. The proposed project would further the goals of the Fast-Track plan by installing solar energy capacity within the SJVAPCD's jurisdiction.

The project would not emit significant levels of pollutants during operation because no new stationary source would be operating as part of the project. Therefore, no conflicts with the SJVAPCD plans would result from operation of the project.

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

LESS THAN SIGNIFICANT IMPACT. Emissions generated from construction activities are anticipated to cause temporary increase in ambient air pollutant concentrations. Given that construction activities would be transient and would impact specific locations for only limited durations, long-term impacts would not occur.

The project design incorporates several PDFs that are designed to minimize temporary impacts associated with the construction of the project. Project construction emissions would be less than the SJVAPCD CEQA thresholds for determining whether projects have significant adverse air quality impacts. Therefore, emissions from project construction would have a less than significant impact on air quality.

Once operational, the project would not result in direct emissions, other than occasional inspection and maintenance vehicles for panel washing. Panel washing would occur approximately 4 times per year with water trucks driving between the panel rows. As indicated above, operational emissions would be below the CEQA Thresholds of Significance set by the SJVAPCD, resulting in a less than significant impact.

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

LESS THAN SIGNIFICANT IMPACT. The project would occur in an area that has been designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$. As indicated above, the short-term impacts from construction would be less than significant. Implementation of the PDFs listed above would reduce air pollutant emissions resulting from construction activities including emissions of NO_x and fugitive PM_{10}. Operation of the project would result in minor, long-term emissions which would be less than the SJVAPCD thresholds.

Because project related emissions would be below the SJVAPCD thresholds, the project would have a less than significant cumulative impact on air quality.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. Sensitive receptors are generally defined as facilities that house or attract groups of children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Schools, hospitals, residential areas, and convalescent facilities are examples of sensitive receptors.

The proposed project site is located in an unincorporated area of Kings County that is currently zoned “Exclusive Agriculture” with a very limited amount of public establishments nearby. Although there are sensitive receptors (schools) located approximately 1.6 miles north of the project site, project operation would not include stationary emission sources that would emit TACs. TACs are air

pollutants that may cause adverse health effects, particularly cancer or reproductive harm. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in September 1987. The Act requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory; that risk assessments be conducted according to methods developed by the Office of Environmental Health Hazard Assessment; and that the public be notified of significant risks posed by nearby facilities. The project is not a stationary source subject to AB 2588 requirements. Therefore, air toxics emissions from operation of the project would be considered less than significant.

Construction of the project has the potential to emit TACs in exhaust emissions, such as diesel PM. However construction would be short-term with most project construction activities taking place over 1.6 miles from the nearest school. Operation of the project would result in minor, long-term emissions which would be less than the SJVAPCD thresholds. Therefore, the project would have a less than significant impact on sensitive receptors during construction and operation.

e. Would the project create objectionable odors affecting a substantial number of people?

LESS THAN SIGNIFICANT IMPACT. The SJVAPCD has determined some common types of facilities that have been known to produce odors in the San Joaquin Valley, along with reasonable distances from the source where the degree of odors could possibly be significant. These facilities include, but are not limited to wastewater treatment facilities, sanitary landfills, chemical manufacturers, and food processing plants. Solar PV plants are not listed in this guidance, nor are any of the listed "odorous" facilities similar to a solar PV plant. Accordingly no objectionable odors are expected from the operation of this type of facility.

Construction of the proposed project may have the potential to result in near-field odors from diesel fuel combustion in construction equipment, but as mentioned above, the construction periods are short-term. Furthermore, diesel-type construction odors are not typically detectable offsite and therefore are not considered a "nuisance" by the general public. Therefore, objectionable odors are not expected to be a significant concern during either project construction or operation.

References

California Air Resources Board (ARB). 2010 & 201~~4~~5. California Ambient Air Quality Standards.

Jones and Stokes Associates (Jones & Stokes). 2007. Software User's Guide: URBEMIS2007 for Windows, Version 9.2 Emissions Estimation for Land Use Development Projects. November.

Kings County. 2010. 2035 Kings County General Plan. Air Quality Element. Adopted January 26. Pages cited: AQ-1, AQ-2, AQ-25, AQ-26, AQ-28.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2002. Guide for Assessing and Mitigating Air Quality Impacts. Revised ~~January 2010.~~ March 19, 2015.

San Joaquin Air Pollution Control District (SJVAPCD). 2010 & 201~~4~~5. Ambient Air Quality Standards & Valley Attainment Status.

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May 3, 2016

Roy Skinner
Director, Project Execution
First Solar, Inc.
135 Main Street, 6th Floor
San Francisco, CA 94105

Subject: American Kings Solar Project - Biological Resources for IS/MND Addendum

Dear Mr. Skinner:

This letter summarizes the results of a biological reconnaissance survey conducted by LSA for the American Kings Solar project (project) near Lemoore, Kings County, California.

This letter describes the literature review and survey methods, results of the survey, a discussion of potential impacts to biological resources, and project design features (PDFs) that should be implemented for four project parcels that were not previously included in the analysis of the original Initial Study/Mitigated Negative Declaration (IS/MND), prepared in 2010. The analysis presented in this letter was previously incorporated directly into an Addendum to the IS/MND prepared for modifications to the project; however, it is being provided separately in order to fully document the effort and the basis for inclusion in the Addendum.

PROJECT DESCRIPTION

The project, as originally proposed, would be constructed on approximately 978 acres of land that is bounded by State Route 198 (SR-198) to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. Subsequent to the preparation of the IS/MND in 2010, certain parcels comprising approximately 21 acres were removed and four parcels comprising approximately 9.6 acres were added to the project site, bringing the site to approximately 966 acres. In addition, there currently are public rights-of-way that cross the project site and that are included in the 966 acres of land. The applicant will initiate the right-of-way abandonment process with Kings County to eliminate those public rights-of-way. Adjacent to the project site is the existing Pacific Gas & Electric Company (PG&E) Henrietta Substation and the existing Henrietta 95-Megawatt (MW) Peaker Power Plant. The proposed Mustang, Orion, and Kent South Solar Projects are located on the west side of 25th Avenue, and the Westside Solar Project is located at the southwest corner of 25th Avenue and Avenal Cutoff Road.

Major components and features of the project include:

- 966 acres of disturbed land;[1]
- Polycrystalline or thin-film PV solar collection field; single-axis tracking or fixed-tilt mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access driveways; water treatment systems and storage for service water, de-mineralized water, and potable and non-potable water; septic system; and meteorological stations;
- Control Building to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance;
- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the electrical grid; and
- A new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation.

INTRODUCTION

Subsequent to the preparation of biological resources surveys conducted for the original 978-acre project site in support of the IS/MND, LSA conducted a biological reconnaissance survey of four newly added, undeveloped areas (parcels) consisting of 9.61 acres within the greater 966 acre project site (as shown in Photos 1-3). The parcels vary in size (4.70, 1.0, 2.85, and 1.06 acres) for a total area of approximately 9.61 acres (survey are). This survey focused on assessing the existing and potential biological resources occurring at and around each parcel. This maximum footprint of disturbance ensures that all vegetation and other resources (e.g., special-status species) that may be potentially impacted were assessed.

The project site is located in the *Westhaven, California 7.5*-minute quadrangle United States Geological Survey (USGS) topographic map. Elevations within the project site range from approximately 220 to 227 feet above sea level.

METHODS

Prior to conducting fieldwork, LSA Senior Biologist Matthew Willis reviewed *Section 3.4 Biological Resources* of the Final IS/MND prepared by CH2MHill in October 2010. The California Natural Diversity Data Base (CNDDB) *Rarefind* 5.0 (California Department of Fish and Wildlife [CDFW] 2014) program and the California Native Plant Society's (CNPS) *Online Inventory of Rare and Endangered Plants of California* were queried to update information and records for potentially occurring special-status species adjacent to and within three miles of the project site. United States Fish and Wildlife Service (USFWS) critical habitat maps were also reviewed to determine if any designated critical habitat for federally-listed species occurs within or adjacent to the project site.

[1] Development of the project would occur over the individual parcel lines within the project boundary.

For the purpose of this letter, special-status species include plants and animals that are federally or State-listed, proposed for listing, candidate species, and plants with California Rare Plant Ranks (CRPRs) 1A, 1B, 2A, or 2B, or species of local concern.
Mr. Willis conducted the biological reconnaissance survey on December 5, 2014, between 8:45am and 2:15pm. The weather during the survey consisted of temperatures ranging from approximately 55 to 60 degrees Fahrenheit, with 2 to 5 mile-per-hour winds and overcast skies.

Although the survey was not conducted at the time of year when most botanical species that are expected to occur in the survey area are evident and identifiable, or within the nesting-bird season to more accurately identify any active nests within and adjacent to the survey area, this survey focused on documenting and assessing the existing and potential biological resources within and adjacent to the project site through database review and field identification of potential habitat at the target parcels.

Aerial photographs of the survey area and parcels to be surveyed were used in the field for orientation and mapping. The entirety of the approximately 9.61 acre survey area (four parcels) was covered on foot by one biologist in one survey effort. This effort included identifying and classifying vegetation present within each of the four parcels, searching for any special-status species present or potentially occurring on site, documenting potential habitat, and photo documenting the general site conditions.

RESULTS

Setting

All four parcels are actively farmed with row crops. These four agricultural field parcels are devoid of natural vegetation or natural communities and were recently disced. The agricultural field borders and roadsides are sparsely vegetated with weedy annual grasses and herbs. Apparent herbicide use and discing of these marginal areas limits the plant growth outside of the fields. There is a small roadside canal west of 25th Avenue near the northwest parcel that supports a wetland; however, this area is outside the project site and will not be impacted. There are no wetlands or drainage features within the four parcels. The wastewater pond complex along the eastern boundary of the project site that abuts Avenal Cutoff Road is also outside the project site and will not be impacted.

Vegetation

The four parcels are active agricultural fields consisting primarily of bare ground as they were recently disced or planted with new crops. Remnant vegetation at these four parcels included wheat (*Triticum aestivum*), cheeseweed (*Malva parviflora*), goosefoot (*Chenopodium* sp.), and dock (*Rumex* sp.).

Wildlife

The parcels offer limited foraging, roosting, or breeding habitat for wildlife species, as they are primarily active agricultural fields. However, some birds and mammal species may forage when crops are present, and may utilize the open ground and vegetated margins for nesting or den sites. No active nests were observed in or adjacent to any of the parcels.

Wildlife species observed or otherwise detected within and adjacent to the survey site during the survey included American coot (*Fulica americana*), American kestrel (*Falco sparverius*), barn owl, Brewer's blackbird (*Euphagus cyanocephalus*), common moorhen (*Gallinula chloropus*), common raven (*Corvus corax*), great egret (*Ardea alba*), horned lark (*Eremophila alpestris*), house finch (*Carpodacus mexicanus*), killdeer (*Charadrius vociferus*), least sandpiper (*Calidris minutilla*), lesser goldfinch (*Carduelis psaltria*), loggerhead shrike, mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), red-winged blackbird (*Agelaius phoeniceus*), rock dove (*Columba livia*), savannah sparrow (*Passerculus sandwichensis*), Say's phoebe (*Sayornis saya*), white-crowned sparrow (*Zonotrichia leucophrys*), yellow-rumped warbler (*Dendroica coronata*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), deer mouse (*Peromyscus maniculatus*), and desert cottontail (*Sylvilagus audubonii*).

Special-Status Species

Special-status species are those plants or animals that: (1) are federally and/or State-listed, (2) are currently proposed for listing, or (3) have some other special designation from a resource agency or a recognized conservation organization (e.g., CNPS). Records from the CNDDB and the CNPS electronic inventory were reviewed to determine the known presence of special-status species within and adjacent to the project site.

No special-status plant species were observed within or adjacent to the project area during the survey. The four agricultural field parcels are primarily devoid of vegetation (aside from the crops) and are routinely maintained for agriculture. It is highly unlikely that any parcel supports special-status plant species.

No special-status animal species were observed within or adjacent to the project area during the survey. However, evidence of one special-status bird species, loggerhead shrike (*Lanius ludovicianus*), was observed in the form of cached prey items in vegetation and barbed wire in the proximity of the project site. The project site is likely used by loggerhead shrike for foraging purposes only as the vegetation does not provide good quality nesting habitat for this species. Similarly, the parcels provide suitable foraging habitat for Swainson's hawk (*Buteo swainsoni*), but no nesting habitat.

No western burrowing owl (*Athene cunicularia*) or San Joaquin kit fox (*Vulpes macrotis mutica*) individuals, their sign (i.e., scat, tracks, etc.), or suitable burrows or den sites were observed in the survey area. However, areas in the proximity of the project site, such as the wastewater ponds to the east, provide suitable burrows or den sites for western burrowing owl and San Joaquin kit fox. The survey site may be used as foraging habitat, but does not contain suitable burrows or dens and is therefore unlikely to support western burrowing owl or San Joaquin kit fox.

In December 2014, the California Fish and Game Commission approved an emergency listing of the tricolored blackbird under the California Endangered Species Act (CESA), upgrading it from its prior status as a species of special concern; although this emergency listing has since expired, it is currently designated a candidate species under CESA. Neither tricolored blackbird, nor suitable nesting habitat were observed during this survey, but they were addressed as being observed at the wastewater ponds east of the project site in May 2010. The wetland associated with the canal west of 25th Avenue near the northwest parcel is likely not large enough to support a breeding population of tricolored

blackbirds and the wastewater ponds to the east may not contain enough emergent vegetation to provide suitable nesting habitat. Tricolored blackbird will use agricultural lands as wintering and foraging habitat, so depending on the seasonal conditions of the project site, tricolored blackbird may use the project site for these purposes.

Critical Habitat

There is no designated critical habitat within or adjacent to any of the parcels or the project site. Therefore, the project will have no impact on critical habitat.

Nesting Birds

Nesting bird species are protected by California Fish and Game Code (CFGC) Sections 3503, 3503.5, and 3800, and by the Migratory Bird Treaty Act (MBTA) of 1918 (16 United States Code [USC] 703–711), which make it unlawful to take, possess, or needlessly destroy the nest or eggs of any migratory bird or bird of prey. Although the project site is primarily composed of active agricultural fields and vegetation associated with disturbed areas, potential nesting habitat, albeit low potential, occurs throughout the project site.

Wetlands and Potential Jurisdictional Drainages

The proposed project is not expected to impact any jurisdictional waterbodies subject to United States Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), or CDFW regulations.

IMPACTS AND PROJECT DESIGN FEATURES

Impacts

Although the project site is an actively managed agricultural area, there is a potential (albeit low) for the project site to provide seasonally suitable habitat for special-status species such as Swainson’s hawk, western burrowing owl, San Joaquin kit fox, and nesting birds (including loggerhead shrike and tricolored blackbird).

Project Design Features

The applicant has incorporated the following Project Design Features (PDFs) (consistent with those described in the 2010 Draft IS/MND, with modifications as described in the Addendum) into the project to avoid, minimize, or mitigate impacts to these species:

PDF BIO-1: The project applicant shall retain a qualified biologist to conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact CDFW to determine the appropriate actions to undertake.

The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat.

To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted.

If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines.

If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.

PDF BIO-2: A pre-construction clearance survey for burrowing owl shall be performed by a qualified biologist, not more than 30 days prior to construction, to ensure avoidance of this species during construction. If burrowing owls are determined to be present, avoidance measures in accordance with the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) shall be implemented. Copies of any survey results and forms shall be submitted to the USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.

PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.

The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site. Implement and maintain a weed control program around the perimeter fence.

PDF BIO-4: A qualified biologist shall conduct a preconstruction survey for nesting bird species that are protected by the MBTA not more than 30 days prior to commencement of construction.

Photo 1. Row crops associated with the 4.70-acre parcel, facing northeast.

Photo 2. Row crops associated with the 2.85-acre and 1.00-acre parcels with Henrietta Substation in the background, facing southeast.

Photo 3. Row crops associated with the 1.06-acre parcel with Henrietta Substation in the background, facing southwest.

Sincerely,

LSA ASSOCIATES, INC.

Matt Willis

BEFORE THE KINGS COUNTY PLANNING COMMISSION
COUNTY OF KINGS, STATE OF CALIFORNIA

IN THE MATTER OF AN AMENDMENT TO)	**RESOLUTION NO. 16-05**
CONDITIONAL USE PERMIT NO. 10-05)	
(AMERICAN KINGS SOLAR, LLC))	**RE: 15671 25TH AVENUE, LEMOORE**

WHEREAS, on August 9, 2010, GWF Solar LLC, filed Conditional Use Permit No. 10-05 to establish a 125 megawatt photovoltaic solar facility; and

WHEREAS, the application was determined to be complete on August 19, 2010; and

WHEREAS, on November 12, 2010, the thirty day public review period for the proposed Initial Study/Mitigated Negative Declaration for this project closed; and

WHEREAS, on September 1, 2010, the Kings County Community Development Agency recommended that the Mitigated Negative Declaration be approved for the proposal; and

WHEREAS, on September 1, 2010, the Kings County Community Development Agency staff notified the applicant of the proposed recommendation on this project; and

WHEREAS, on December 6, 2010, this Commission held a duly noticed public hearing to receive testimony from any interested person; and

WHEREAS, on December 6, 2010, this Commission certified and adopted the project's Initial Study/Mitigated Negative Declaration including the Mitigation Monitoring Program and approved CUP No. 10-05; and

WHEREAS, on November 29, 2012, GWF Solar LLC submitted a request in writing requesting a three (3) year time extension for CUP No. 10-05; and

WHEREAS, on January 7, 2013, this Commission held a duly noticed public hearing to receive testimony from any interested person concerning the time extension for CUP No. 10-05; and

WHEREAS, on January 7, 2013, this Commission adopted Resolution No. 13-02 granting a three (3) year time extension for CUP No. 10-05; and

WHEREAS, on November 26, 2013, the Board of Supervisors adopted Resolution No. 13-058 amending Section "I" of that part of the Implementation Program entitled "County of Kings Implementation Procedures for the California Land Conservation 'Williamson' Act of 1965 Including Farmland Security Zones" and determined that it is reasonably foreseeable that certain parcels located south of State Highway 198 and west of State Highway 41 that currently are used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing; and

WHEREAS, on November 26, 2013, the Board of Supervisors determined that a solar generation facility maintaining a concomitant agricultural use such as dry farm seasonal grazing or a similar agricultural activity may be deemed a compatible use within this region of the County if the applicant provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, and taking into account surface water availability, ground water quality and availability, and soil conditions, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land; and

WHEREAS, on January 30, 2015, American Kings Solar, LLC, which acquired the project from GWF Solar LLC, submitted a request in writing for modifications to CUP No. 10-05; and

WHEREAS, the application sought to provide substantial evidence that surface water availability, soil conditions, and groundwater availability make dry farm seasonal grazing a reasonably foreseeable agricultural use of the land such that the project could meet the principles of compatibility with an FSZ contract pursuant to Government Code Section 51238.1 with the implementation of dry farm seasonal sheep grazing; to modify Planning Division Condition Number 1; to delete Planning Division Conditions 17, 18, 21, 22, and 23; to modify Building Division Condition Number 3; to modify Fire Department Condition Numbers 1, 3, and 7; to add and modify Project Design Features; to clarify the project description and environmental analysis; and to request a three-year extension of CUP No. 10-05; and

WHEREAS, modifications to the findings and conditions of approval of Planning Commission Resolution No. 10-08 are included in this resolution with deletions shown in ~~strikethrough~~ and additions shown with <u>underline</u> format; and

WHEREAS, an Addendum to the Initial Study/Mitigated Negative Declaration for the project is attached to this resolution as Exhibit "A"; and

WHEREAS, a modified Mitigation Monitoring and Reporting Program is attached to this resolution as Exhibit "B"; and

WHEREAS, Appendix A to the Addendum to the Initial Study/Mitigated Negative Declaration includes modifications to the Initial Study/Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, with deletions shown in ~~strikethrough~~ and additions shown with <u>underline</u> format; and

WHEREAS, California Environmental Quality Act (CEQA) Guidelines Section 15164, found in Title 14 of the California Code of Regulations, allows for an addendum to an approved negative declaration to be prepared when minor technical changes or additions are necessary or the project does not meet any of the requirements stated in Section 15162; and

WHEREAS, the County has determined that none of the conditions described in CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred; and

WHEREAS, CEQA Guidelines section 15164(c) states that an addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration; and

WHEREAS, the Planning Commission has reviewed the Addendum in its entirety, and determined that the document reflects the independent judgment of the Commission; and

WHEREAS, on January 12, 2016, the Kings County Board of Supervisors adopted Ordinance No. 668-1-16, which affected Section 1112.B.2.f of the *Kings County Development Code* pertaining to commercial solar electrical generating systems in agricultural zoning districts, by removing the maximum distance of 300 feet between internal access driveways since continuing changes in available fire fighting technologies makes a set maximum distance between internal access driveways no longer necessary; and

WHEREAS, Section 1112.B.2.f of the Kings County Development Code now requires that commercial solar electrical generating systems in agricultural zoning districts space internal access driveways per Kings County Fire Department standards; and

WHEREAS, on February 26, 2016, the Kings County Community Development Agency recommended that the Addendum to the Mitigated Negative Declaration be approved for the proposal; and

WHEREAS, on March 7, 2016, Adams Broadwell Joseph and Cardozo ("ABJ&C") submitted written comments on the Amendment to Conditional Use Permit No. 10-05 (American Kings Solar, LLC), on behalf of Kings County Citizens for Responsible Development, prior to the public hearing; and

WHEREAS, on March 7, 2016, this Commission received the staff report from staff; received written comments from ABJ&C; held a duly noticed public hearing to receive testimony from any interested person; received written comments from NAS Lemoore; closed the public hearing; directed staff to review the comments received from ABJ&C and NAS Lemoore; and adjourned their deliberations to the April 4, 2016, meeting of the Commission; and

WHEREAS, due to the large amount of information contained in the ABJ&C comments, which consisted of a 33 page comment letter and 671 pages contained in exhibits A through F, it was necessary to cancel the April 4, 2016 and May 2, 2016 meetings of the Kings County Planning Commission to allow staff adequate time to review all of the comments submitted and prepare responses to comments.

NOW, THEREFORE, BE IT RESOLVED, that this Commission finds that:

I. SECTION 1: Recitals

1. The above recitals are true and correct, and the Planning Commission hereby so finds.

II. SECTION 2: Findings Related to Prior Proceedings

1. An Initial Study/Mitigated Negative Declaration (IS/MND) was duly prepared, properly circulated, and completed in accordance with California Environmental Quality Act of 1970 (California Public Resources Code Section 21000 et seq.), as amended, and the State Guidelines thereto (14 California Code of Regulations Section 15000 et seq.), and approved by the Kings County Planning Commission for the proposed Project by the Lead Agency on December 6, 2010.

2. The IS/MND was presented to this Commission, and it was independently reviewed and considered by this Commission prior to acting on the proposed Project as was originally presented on December 6, 2010.

3. The IS/MND for the Project was properly completed and identified all significant environmental effects of the Project, and there were no known potential environmental effects that were not addressed in the IS/MND.

4. The Project incorporated project design features and mitigation measures to eliminate significant impacts or to reduce such impacts to a level of insignificance in all instances.

5. The Planning Commission used its own independent judgment in adopting Resolution Number 10-08 in approving the Project, in adopting and certifying the Initial Study/Mitigated Negative Declaration, and in adopting the Mitigation Monitoring and Reporting Plan.

III. SECTION 3: Findings Relating to the Addendum to the Initial Study/Mitigated Negative Declaration

All adopted findings in Planning Commission Resolution No. 10-08 concerning CUP No. 10-05 remain in full force and effect, except as modified herein, with deletions shown in ~~strikethrough~~ and additions shown with <u>underline</u>:

1. An ~~Initial Study of the project has been conducted by the Lead Agency to evaluate the potential for any adverse environmental impact~~ <u>Addendum to the IS/MND for the project has been prepared in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15164, found in Title 14 of the California Code of Regulations, which allows for an Addendum to an approved IS/MND be prepared when minor technical changes or additions are necessary and if the project does not meet any of the requirements stated in Section 15162</u>.

2. There is evidence in the record that indicates that the project has potential for adverse effect on agricultural resources, wildlife, or habitat for wildlife.

3. Mitigation measures were developed to mitigate all potential adverse effects on agricultural resources, wildlife, or habitat for wildlife.

4. The presumption that the project will have a potential for adverse effect on fish and wildlife resources or the habitat upon which wildlife depends is mitigated based on evidence in the record that:

   A. The project does not involve any riparian land, rivers, streams, watercourses, or wetlands under State and Federal jurisdiction.

B. The project disturbs plant life required to sustain habitat for Swainson's hawk. Therefore, Project Design Feature (PDF) Bio-1 was incorporated into the project thereby mitigating the loss of up to ~~978~~ 966 acres of agricultural land (Swainson's hawk foraging habitat) by ~~providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat~~ conducting a Swainson's hawk census survey to determine if the Project would result in a significant reduction in available Swainson's hawk agricultural foraging habitat, and in the event the project does result in a significant reduction provide mitigation by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.

C. The project does not disturb any rare or unique plant life or ecological communities dependent on plant life.

D. The project has the possibility to negatively impact the environment and threaten listed or endangered plant or animals or the habitat in which they are believed to reside. Therefore the following mitigation measures (MM) and project design features (PDF) have been incorporated into the project as described in the project's IS/MND to reduce the possible impacts to less than significant:

~~PDF AES-1: Plant a row of screening vegetation along the north boundary of the project site (along the south side of SR 198) to screen views of the project from SR 198 and the residences on the north side of SR 198.~~

PDF AG-1: Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by the County.

Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil.

The Plan shall provide that all driveways and other areas compacted during original construction or by equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding has occurred. Additional seedlings and applications of weed free

mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project.

The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. Waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of decommissioning, the Plan shall be revised to provide that another equivalent facility will be utilized.

Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights.

The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months.)

PDF AG-2: Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated cost estimate.

PDF AG-3: The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies the use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be required to be submitted and approved prior to the issuance of a building permit.

PDF AQ-1: ~~ISR (District Rule 9510) to determine the potential mitigation for NO_x emissions~~ Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD.

PDF AQ-2: Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.

PDF AQ-3: Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.

PDF BIO-1: ~~Mitigate the loss of up to 978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX).~~

~~Conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact CDFG to determine the appropriate actions to undertake.~~ The project applicant shall retain a qualified biologist to conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFW) to determine appropriate actions to undertake.

The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat.

To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted.

If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines.

If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.

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PDF BIO-2: Conduct a preconstruction survey for burrowing owls no more than 30 days prior to the start of construction to determine if owls are occupying areas on or within 250 feet of the project site. The survey shall be performed during the burrowing owl breeding season (February 1 through August 31) to determine whether nearby ground squirrel or other appropriate sized burrows or cavities are occupied by burrowing owls.

Implement mitigation measures to protect burrowing owls by restricting construction activities within 150 feet of occupied burrows during the non breeding season or 250 feet of active burrowing owl nest sites during the breeding season (February 1 through August 31).

Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by ~~CDFG~~ CDFW verifies through noninvasive methods that either (1) the birds have not begun egg laying and incubation, or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

When destruction of occupied burrows is unavoidable, existing unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 on the protected land site.

If owls must be moved away from the disturbance area, passive relocation techniques (as described below) shall be used rather than trapping. Passive relocation shall begin at least 1 or more weeks prior to the start of construction activities to allow the owls to acclimate to alternate burrows.

If avoidance is possible, no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the non-breeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31)

Owls in non-active nests shall be excluded from burrows in the immediate impact zone and within a 50-meter (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) shall be left in place 48 hours to insure owls have left the burrow before excavation. Two natural or artificial burrows shall be provided for each burrow in the project site that would be rendered biologically unsuitable. The project site shall be monitored daily for 1 week to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow

PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and ~~CDFG~~ CDFW prior to the start of project construction.

~~Incorporate openings in fencing design to facilitate passage of San Joaquin kit fox through the project site.~~ The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). Implement and maintain a weed control program around the perimeter fence.

PDF BIO-4: A qualified biologist will c~~C~~onduct a preconstruction survey for nesting bird species that are protected by the MBTA ~~before initiating ground disturbance~~ not more than 30 days prior to commencement of construction.

PDF CUL-1: ~~If any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any project development activities, work shall be suspended and the Kings County Community Development Agency shall be immediately notified. At that time, Kings County shall coordinate any necessary investigations of the site with appropriate specialists, as needed. The applicant shall be required to implement any mitigation deemed necessary for the protection of cultural resources~~ The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.

The project proponent shall retain a professional archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources and Kings County Community Development Agency shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.

PDF CUL-2: ~~If Native American archaeological, ethnographic, or spiritual resources are unearthed during excavation activities, all identification and treatment shall be conducted by qualified archaeologists who meet the federal standards as stated in the CFR (36 CFR 61), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted.~~ If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County Community Development Agency. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department, as applicable. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

PDF PALEO-1: If paleontological resources ~~(fossils) are uncovered during project construction, work in the vicinity of the find shall stop, and a paleontologist shall be contacted. The paleontologist shall examine the find and assess its significance in accordance with the CEQA resource significance criteria for archaeological sites, with appropriate modifications. If the resource is determined to be significant, impacts that cannot be avoided shall be mitigated through data recovery or other means, in consultation with Kings County. The applicant shall ensure the preparation of a Paleontological Resources Report by the paleontologist if significant fossils are fund and recovered during project construction activity.~~ are discovered during excavation activities at the project site, work in the vicinity of the find (a 50-foot radius) shall cease, and a qualified professional paleontologist shall be retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any significant paleontological resources shall be undertaken with the approval of the Kings County CDA.

PDF CUL-3: Pursuant to ~~Section 5097.98 of the California PRC and Section 7050.5 of the California~~ State Health and Safety Code Section 7070.5(e) and Public Resources Code Section 5097.98, if human remains or ~~bone~~ remains of unknown origin ~~is~~ are found at any time during on-or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the NAHC who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that "…the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center. ~~Treatment of the remains shall be conducted in accordance with the direction of the County Coroner or the NAHC, as appropriate. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.~~

PDF GEO-1: Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), designed to reduce potential impacts related to erosion and surface water quality during project construction activities and through the life of the project. The SWPPP shall include measures to address erosion, such as a construction period monitoring program to be implemented by the construction supervisor, and shall include BMPs to address erosion, such as watering for dust control and the construction of perimeter silt fences, as needed. The SWPPP shall be submitted to ~~Kings County for review and approval~~ the Central Valley Regional Water Quality Control Board for review prior to issuance of any building or grading permits. Implementation of the SWPPP shall comply with state and federal water quality regulations.

PDF GEO-2: ~~If expansive~~ Expansive soils ~~are~~ have been determined to be present onsite and pose a structural issue~~, treat the soil according to the site~~ ; therefore a geotechnical report ~~recommendations~~ is required prior to issuance of a building permit.

PDF GEO-3: Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.

~~PDF GEO-1: Implement a SWPPP~~

PDF HAZ-1: ~~The applicant shall implement the following measures to address potential fire hazards in the project area:~~

~~Fire Prevention Training. The applicant shall coordinate with the California Office of the State Fire Marshall to provide PV training to County fire responders, construction, operational, maintenance staff. The intent of this training shall be to familiarize both responders and workers of the codes, regulations, associated hazards, and mitigation processes related to solar electricity. This training shall include techniques for proper system shutdown and fire suppression procedures for PV systems. The training shall include procedures for coordination with local fire department, sheriff department, and emergency medical services~~ The applicant shall implement the following measures during project construction and operation:

The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e., fire engines) to the main entrance, to the Control Building, and the substation. Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site.

The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards.

Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire.

Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

Smoking shall be prohibited at the project site except in designated areas.

PDF NOI-1: Limit noise-generating construction activities to between the hours of 6:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday and Sunday if additional hours are needed to make up schedule deficiencies or to complete critical construction activities.

Prohibit construction activities on major federal- and state-recognized holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day).

Equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and maintain it in good working order.

Locate stationary construction equipment (i.e., portable power generators and compressors) the furthest distance possible from nearby residences. Park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible.

Notify nearby residents whenever extremely noisy work would be occurring.

Shut off idling equipment.

Include these noise PDFs in construction bid documents.

PDF PUB-1: If sheriff and/or fire protection services are required at the proposed project site during project construction or operation, the applicant shall pay to the County the cost of those services.

E. The project does not disturb any marine species which are subject to the jurisdiction of the Department of Fish and Game and ecological communities in which they reside.

F. The project is mitigated so as not to degrade any air or water resources which will individually or cumulatively result in a loss of biological diversity among plants and animals residing in the air or water.

5. The proposed project may have significant adverse impacts on the environment. However, those impacts can be mitigated to an insignificant level by implementing the mitigation monitoring program attached to ~~this resolution~~ Resolution No. 16-05 as Exhibit "~~A~~B." The Mitigated Negative Declaration reflects the Planning Commission's independent judgment and analysis.

6. The proposed project will not have a significant impact on the environment and the Mitigated Negative Declaration reflects the Planning Commission's independent judgment and analysis.

7. The project site is located within an established Agricultural Preserve and is consistent with the California Land Conservation Act of 1965 (Williamson Act) and the Kings County Uniform Rules for Agricultural Preserves pursuant to the following findings of consistency:

   A. The parcels belonging to the project site, with the exception of APN 024-210-002, are currently under Farmland Security Zone contracts as described below.

Williamson Act and Farmland Security Zone Status of Parcels Affected by the Project

Assessor's Parcel #	Acreage	Contract No.	Effective Date
024-190-023	78.89	FSZ00221	11/20/2001
024-190-044	53.60	FSZ00221	11/20/2001
024-190-059	11.68	FSZ00221	11/20/2001
024-190-063	17.26	FSZ00221	11/20/2001
024-190-066	362.12	FSZ00221	11/20/2001

024-190-068	60.0	FSZ00221	11/20/2001
024-190-071	245.51	FSZ00221	11/20/2001
024-210-003	10.0	FSZ00221	11/20/2001
024-210-016	13.65	FSZ00221	11/20/2001
024-210-017	34.49	FSZ00221	11/20/2001
024-231-008	6.8	FSZ00221	11/20/2001
024-232-004	7.68	FSZ00221	11/20/2001
024-241-001	8.05	FSZ00221	11/20/2001
024-242-001	8.04	FSZ00221	11/20/2001
026-020-015	44.06	FSZ00221	11/20/2001
024-250-001	4.55	FSZ00221	11/20/2001
024-250-013	0.93	FSZ00221	11/20/2001
024-250-014	2.79	FSZ00221	11/20/2001

B. Section 51238 of the *California Government Code* states in (a)(1) that electric ~~facility's~~ facilities "…are hereby determined to be compatible uses within any agricultural preserve", unless the Board after notice and hearing makes a finding to the contrary. ~~The Kings County Board of Supervisors has not made a finding to the contrary. Therefore, as stated in the Government Code Section 51238, electric facilities remain a compatible use in Kings County:~~

~~(1) Section 51238(a)(2) goes on to state that "No land occupied by gas, electric, water, communication or agricultural laborer housing facilities shall be excluded from an agricultural preserve by reason of that use."~~

~~(2) Solar electric facilities are "electric facilities" within the meaning of Section 51238.~~ On March 27, 2012, the Kings County Board of Supervisors adopted Resolution No. 12-016 amending the County's Implementation Procedures for the California Land Conservation "Williamson" Act of 1965 by adding the following language to Section I under Uniform Rules for Agricultural Preserves: "Commercial solar photovoltaic system facilities that are designed primarily for the production of electrical energy for third party consumption are not compatible under the provisions of Government Code Section 51238(a)(1). For purposes of determining compatibility, a project must be determined consistent with the principles of compatibility under Section 51238.1(a)."

C. Section 51238.1(a) of the *California Government Code* establishes additional compatible land uses which were not identified and "deemed compatible uses" in Section 51238:

~~(1) Section 51238.1 does not apply to uses that have already been determined by the Legislature to be compatible.~~

~~(a) Section 51201(e) reinforces this by defining three types of compatible uses:~~
~~1. Uses determined to be compatible by the County under Section 51238; or~~

~~2. Uses determined to be compatible by the County under Section 51238.1; or~~

~~3. Uses determined to by compatible "by this act."~~

~~(b) "Electric facilities" are facilities deemed compatible "by this act" and therefore are deemed compatible by operation of law.~~

1) The use will not significantly compromise the long-term productive agricultural capability of the subject contracted parcel or parcels or on other contracted lands in agricultural preserves.

2) The use will not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels or on other contracted lands in agricultural preserves. Uses that significantly displace agricultural operations on the subject contracted parcel or parcels may be deemed compatible if they relate directly to the production of commercial agricultural products on the subject contracted parcel or parcels or neighboring lands, including activities such as harvesting, processing, or shipping.

3) The use will not result in the significant removal of adjacent contracted land from agricultural or open-space use.

D. Section I of the *Uniform Rules for Agricultural Preserves in Kings County* provides that ordinarily, a solar project will be found compatible if the applicant provides a soil reclamation plan and financial assurances, and if the economic output of agricultural operations on the contracted parcel or parcels on which the project is located will be 90-percent of pre-project output. However, on November 26, 2013, the Board of Supervisors adopted Resolution No. 13-058, recognizing that due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions. and regulatory burdens, circumstances exist on agricultural preserves located within that portion of Kings County south of State Route 198, west of State Route 41, and northeast of Interstate 5 that limit the use of much of the land within that territory for agricultural activities, such that it is reasonably foreseeable that certain parcels located there that currently are used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing. Notwithstanding the present agricultural use of the land, solar farming as a concomitant use with dry farm seasonal grazing or a similar commercial agricultural activity may be deemed a compatible use within this region of the County if the applicant provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, and taking into account surface water availability, ground water quality and availability, and soil conditions, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land. The project site falls within the boundaries subject to Board of Supervisors Resolution No. 13-058.

E. The applicant has provided substantial evidence that dry farm seasonal grazing is a reasonably foreseeable agricultural use of the project site. A technical report titled "Soil and Water Analysis Report for American Kings Solar Project" was prepared in September 2014 to provide analysis of soil and water conditions at the proposed Project site (Dellavalle, et. al. 2014 – attached as Appendix B in the Addendum to the Initial Study/Mitigated Negative Declaration). The report included review of publicly available information and in-field soil samples collected and analyzed from the project site to determine the existing and reasonably foreseeable quality of the site for sustaining agricultural production. The report concluded the following regarding soil conditions, water availability and future agricultural uses on the proposed project site:

1) The project site is not suitable for sustaining long-term agricultural crop production due to saline-sodic soils that would cause agricultural crop damage located on the site;
2) Poor groundwater quality, insufficient availability of groundwater, and curtailments of surface water allocations would not support sustained agricultural activities on the Project site;
3) Based on poor soil conditions and insufficient future supply of water for irrigation a reasonably foreseeable agricultural use of the project site would be dry land farming with seasonal grazing;
4) Since the proposed project is compatible with dry-farm seasonal grazing or a similar agricultural activity, the project is a compatible use with a Farmland Security Zone contract pursuant to Government Code Section 51238.1(a) and County of Kings implementation Procedures for the California Land Conservation "Williamson" Act of 1965.

F. The applicant proposes the development of a solar facility and would allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously on-site for the duration of operational activities, with the incorporation of Project Design Features AG-1, AG-2, and AG-3.

G. The proposed project, with incorporation of PDF AG-1, AG-2, and AG-3, is consistent with the *Uniform Rules for Agricultural Preserves in Kings County*. The following findings address how the proposed solar site satisfies the principles of compatibility of Government Code section 51238.1(a):

~~1. The *Uniform Rules for Agricultural Preserves in Kings County* does not address the construction of electrical facilities since Government Code Section 51238 has already deemed the use "compatible." Any use that is determined to be compatible by the Williamson Act is presumed consistent with Kings County's Uniform Rules for Agricultural Preserves.~~

~~2. To the extent that consistency with the *Uniform Rules for Agricultural Preserves in Kings County* is required beyond the above finding of compatibility by operation of law, the Uniform Rules state that during the term of a contract, the only uses permitted upon the land shall be Commercial Agricultural Uses and Compatible Uses.~~

~~(a) The project will remove 970 acres of farmland of statewide importance from agricultural production. If the CUP is not extended by the permit holder, the electrical facility will be removed from the site following the 30 year life of the project allowing the entire site to return to agricultural uses.~~

(1) The use will not significantly compromise the long-term productive agricultural capability of the subject contracted parcel or parcels or on other contracted lands in agricultural preserves.

The use of the site for solar generation would not prevent the productive concomitant agricultural use of the site during project operation. The very light footprint of the solar generating facility upon the site would allow for the preservation of native soil cover in place and allow for low impact removal of solar arrays and electrical equipment at the end of the facility's productive life. The long-term productive agricultural capability of the project site after decommissioning of the solar generating facility would be ensured through implementation of PDF AG-1, AG-2, and AG-3 which require implementation of an Agricultural Management Plan and a Soil Reclamation Plan and contains detailed provisions on decommissioning, soil conditioning, revegetation, waste disposal, monitoring, and follow-up measures to ensure that the site has been effectively restored to pre-project conditions. The project site is self-contained so as to not compromise long-term agricultural activity on adjacent lands.

(2) The use will not significantly displace or impair current or reasonably foreseeable agricultural operations on the subject contracted parcel or parcels or on other contracted lands in agricultural preserves. Uses that significantly displace agricultural operations on the subject contracted parcel or parcels may be deemed compatible if they relate directly to the production of commercial agricultural products on the subject contracted parcel or parcels or neighboring lands, including activities such as harvesting, processing, or shipping.

A soil and water analysis report was prepared for the proposed project indicated that saline-sodic soils found at the project site are not appropriate for most agricultural crops and would cause damage to many of the crops grown on site and in the region. Groundwater at the site is of poor quality and was found to have salinity, boron, chloride, and sodium concentration that are not recommended for most tolerant crops. Groundwater availability in the existing aquifer is insufficient to accommodate continued agricultural production on the site and surface water availability is insufficient due to limited surface water allocations from Westlands Water District. Based on the conditions of the soils onsite and existing and future water availability for the site, and in accordance with Resolution No.13-058, a reasonably foreseeable agricultural use of the site would be dry-farm seasonal grazing.

The proposed project would include the development of a solar facility and would allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously on-site for the duration of operational activities, in accordance with an Agricultural

Management Plan as specified in PDF AG-3. The project site would continue to operate with a less intensive agricultural use and would not significantly displace or impair current or reasonably foreseeable agricultural operations on the site or on other contracted lands.

(3) The use will not result in the significant removal of adjacent contracted land from agricultural or open-space use.

The proposed project would not result in the removal of adjacent contracted land from an agricultural use. The project would connect to existing electrical infrastructure and the proposed use will not induce additional solar generation facilities to site on adjacent parcels. In addition, solar generation facilities do not generate the development of new urban land uses adjacent to the site since a solar facility would not provide services or products that would draw urban uses to be sited nearby.

8. ~~The State Department of Conservation (DOC) provided comment letter's to the County on November 12, 2010 and December 2, 2010 concerning the proposed project. Both letters stated that DOC's interpretation of the Government Code is that solar facilities do not qualify as a compatible use under the "principles of compatibility" found in Section 51238.1. The County's interpretation of Section 51238.1 is clearly stated in bullet 7 above.~~

~~(a) The applicant has proposed to cancel the portions of Farmland Security Zone #0090 and Farmland Security Zone Contract #221 contained on the project site. The parcel numbers proposed for cancellation includes APN's 024-190-023, 44, 59, 63, 66, 68, 71, 024-210-003, 16, 17, 024-231-008, 024-232-004, 024-241-001, 024-242-001, and 026-020-015.~~

~~(b)~~ The property owner filed a Notice of Non-Renewal with the County for APN's 024-190-023, 44, 59, 63, 66, 68, 71, 024-210-003, 16, 17, 024-231-008, 024-232-004, 024-241-001, 024-242-001, and 026-020-015 contained in Farmland Security Zone #0090 and Farmland Security Zone Contract #221 on December 2, 2010. The Kings County Board of Supervisors approved the Non-Renewal on November 22, 2011.

~~(c) The applicant has proposed to finalize cancellation proceedings for APN's 024-190-023, 44, 59, 63, 66, 68, 71, 024-210-003, 16, 17, 024-231-008, 024-232-004, 024-241-001, 024-242-001, and 026-020-015 contained in Farmland Security Zone #0090 and Farmland Security Zone Contract #221 prior to the issuance of building permits by the County.~~

9. This proposal conforms with the objectives of the ordinance and policies of the Kings County General Plan, specifically:

A. The proposed project, as recommended for approval, is consistent with the policies of the Kings County General Plan, specifically: The applicable general plan policies are found in the *2035 Kings County General Plan*.

1. Figure LU-11, of the Land Use Element, designates this site as ~~General~~ Exclusive Agriculture ~~(AG-40)~~.

2. Page LU-27, Section B, of the Land Use Element states that the physical development of agricultural properties is regulated and implemented by the zoning ordinance.

3. Page RC-50, Section G, Objective G1.2 of the "Resource Conservation Element" states that the County will promote the development of sustainable and renewable alternative energy sources, including wind, solar, hydroelectric and biomass energy.

4. Page RC-50, Section G, Policy G1.2.2 of the "Resource Conservation Element" states the County will encourage and support efforts to develop commercial alternative energy sources in lower priority agricultural lands within Kings County, when appropriately sited.

5. Page RC-51, Section G, Policy G1.2.7 of the "Resource Conservation Element" states the County will require commercial solar and wind energy systems to be reviewed as a conditional use permit pursuant to the procedures of the Kings County Zoning Ordinance.

10. The use complies with the applicable provisions of the ordinance, specifically: The proposed photovoltaic solar farm, as recommended for approval, is consistent with the *Kings County ~~Zoning Ordinance~~ Development Code*.

    a. Article 4, Section ~~405.D.20~~ 407, Table 4-1, of the ~~General Agricultural (AG-40)~~ Exclusive Agricultural (AX) Zone District lists wind and solar PV electrical generating facilities that commercially produce power for sale, and comply with all local, regional, state, and federal regulations as a conditional use subject to Kings County Planning Commission approval.

11. It is hereby determined that none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

12. It is hereby determined that the CEQA Addendum has been completed in compliance with CEQA and is adequate.

13. It is hereby determined that the CEQA Addendum has been presented to the Planning Commission, which has reviewed and considered the information and analysis contained therein.

14. It is hereby determined that the CEQA Addendum reflects the independent judgment of the Planning Commission of the County of Kings.

15. The Planning Commission hereby attaches the CEQA Addendum to the previously adopted IS/MND for CUP 10-05.

16. The Planning Commission authorizes and directs County staff to make the CEQA Addendum available to the public and have it retained, along with the original IS/MND, at the office of the Kings County Community Development Agency.

BE IT FURTHER RESOLVED, that based on the above findings, this Commission approves the Addendum to the Initial Study/Mitigated Negative Declaration for Conditional Use Permit No. 10-05, and approves Conditional Use Permit No. 10-05, as ~~proposed~~ modified herein, subject to the conditions and exceptions as follows:

IV. SECTION 4: Conditions of Approval.

All adopted conditions of approval in Planning Commission Resolution No. 10-08 concerning CUP No. 10-05 remain in full force and effect, except as modified herein, with deletions shown in ~~strikethrough~~ and additions shown with underline:

1. All proposals of the applicant, as modified by the CUP Addendum, shall be conditions of approval if not mentioned herein.

2. No expansion of use, regardless of size, which would increase the projected scale of operations beyond the scope and nature described in this Conditional Use Permit application, will be allowed. Any expansion that is a substantial change from the conceptually approved site plan will require either an amendment to the approved Conditional Use Permit or a new zoning permit.

3. The development shall comply with all regulations of ~~*Zoning Ordinance No. 269*~~the Kings County Development Code, with particular reference to the AX Zone District standards contained in Article 4.

4. Pursuant to Section 418.H of the Kings County Development Code, ~~S~~signs shall be ~~permitted only as follows:~~ allowed in compliance with the regulations contained in Article 14, and as prescribed in Table 4-3 of the Kings County Development Code. All signs shall be located outside of the public right-of-way and shall not be located within a Traffic Safety Visibility Area if over three feet in height. Unless a different setback is specified for a particular zoning district, the minimum setback distance for all signs over three feet in height shall be ten feet from property lines.
   ~~a. Any sign(s) pertaining to the use and location on the site shall not exceed the total copy area of forty (40) square feet. The location of any such sign shall be submitted to the Zoning Administrator for approval prior to installation.~~
   ~~b. Signs exceeding forty (40) square feet in structural area and up to one hundred fifty (150) square feet in structural area which are incidental and pertain to a permitted or conditional use may be permitted subject to a site plan review. Such signs may be located on the same parcel or an adjacent parcel used in conjunction with the permitted or conditional use. Signs exceeding forty (40) square feet in structural area may be illuminated and shall be thirty (30) feet from property lines adjacent to a road.~~
   ~~c. One non-illuminated on-site sign real estate sign or subdivision not exceeding thirty-two (32) square feet in structural area with copy on both sides pertaining to the sale, lease, rental or display of a structure or land per Section 1606.B.2.a.~~

~~d. Directional or information (other than advertising) signs not exceeding two hundred and forty (240) square feet in area located adjacent to a State Highway or a county road within an area limited by points not closer than one-fourth (¼) mile or further than three-fourths (¾) mile from a frontage road turnoff, listing commercial establishments accessible via the frontage road, and further provided that not more than four (4) such signs shall be permitted on each side of the highway or county road.~~

~~e. Signs not exceeding two hundred forty (240) square feet in area located adjacent to a State Highway or county road that is classified as an arterial or collector road (including such designations as urban or rural, major or minor) giving direction to or information about Kings County cities, communities, or rural service centers which are accessible by such state highways or county roads or direct routes consisting of combinations thereof, provided that such signs shall be limited to four (4) per city, community or rural service center regardless of the sign's location in this district, and further provided that such signs shall not contain information pertaining to a subdivision of land or private development, commercial establishments or quasi-public developments.~~

~~f. Non-illuminated temporary construction signs in accordance with Section 1606.B.2.c.~~

~~g. Political and campaign signs in accordance with Section 1606.B.3.~~

~~h. Public safety or hazard signs in accordance with Section 1606.B.4.~~

~~i. Placing a sign on property which is restricted by contract under the *California Land Conservation "Williamson" Act* shall be prohibited, except for temporary signs (pursuant to Section 1606.B.2.a, c, and d), political and campaign signs (pursuant to Section 1606.B.4), and must be consistent with the *Uniform Rules for Agricultural Preserves in Kings County*.~~

5. Exterior lighting shall be hooded so as to be directed only on site.

6. A minimum of six (6) off-street parking spaces shall be provided and that such parking shall be installed and maintained in accordance with *Kings County Improvement Standards*. (Note: Handicapped parking requirements are listed under Other Standards and Regulatory Requirements, Building Division Condition No. 8 and is required in addition to the parking spaces required by this section.)

7. Each parking space shall be not less than twenty (20) feet in length and nine (9) feet in width, exclusive of aisles and access drives. Except that compact car parking spaces, not less than seventeen (17) feet in length and eight (8) feet in width marked for compact cars, maybe provided for 25 percent of all parking spaces required for any use.

8. Parking spaces for the physically handicapped shall be located so as to minimize the travel distance to the use's primary entrances for handicapped access. Required off street parking spaces for the physically handicapped, and standards for those spaces, shall meet state standards.

9. All drive approaches and durable dustless surfaces shall be installed at the time of initial occupation of the site.

10. All parking areas, aisles, and driveways shall be surfaced and maintained so as to provide a durable, dustless surface. (Note: Handicapped parking requirements are listed under Other Standards and Regulatory Requirements, Building Division Condition No. 6 and is required to comply with all applicable *Americans with ~~Disability's~~ Disabilities Act* (*ADA*) requirements.)

11. All open and unlandscaped portions of the lot shall be maintained in good condition, free from weeds, dust, trash and debris.

12. The applicant shall comply with all adopted rules and regulations of the Kings County Public Works Department, Fire Department, and Department of Environmental ~~Heath~~ Health Services, and all other local and state regulatory agencies.

13. Pursuant to Section 14-38(d) of the *Kings County Code of Ordinances*, a "Notice of Disclosure and Acknowledgment of Agricultural Land Use Protection and Right to Farm Policies of the County of Kings" shall be signed, notarized, and recorded.

14. Pursuant to Section 66020(d)(1) of the *California Government Code*, the owner is hereby notified that the 90-day approval period in which the applicant may protest the imposition of fees, dedications, reservations, or other exactions, begins on the date that this resolution is adopted.

15. Sales, ~~or~~ use, or transactions tax may apply to business activities on the site. The applicant may seek written advice regarding the application of tax to your particular business by writing to the nearest State Board of Equalization office. For general information, please call the Board of Equalization at 1-800-400-7115.

16. Within eight (8) days following the date of the decision of the Kings County Planning Commission, the decision may be appealed to the Kings County Board of Supervisors. The appeal shall be filed with the Clerk of the Board of Supervisors.

17. Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan for review and approval by Community Development Agency staff, in accordance with PDF AG-1. ~~The plan shall contain an analysis of pre-project baseline soil conditions, and shall contain specific measures to restore the soil to its pre-project condition, including removal of all fixtures, equipment, non-agricultural roads, and restoration of compacted soil. Reclamation shall be completed within six months of the expiration of the use permit.~~

18. The applicant shall post a performance bond or similar instrument to ensure completion of the activities under the Reclamation Plan, in accordance with PDF AG-2. ~~Financial assurances for the Reclamation Plan will be reviewed every 5 years by the Kings County Community Development Agency to determine if finances are sufficient to perform reclamation of the project. The assurance must be adjusted if, during the five year review, finances are determined to be insufficient to perform reclamation of the project.~~

19. Prior to any ground-disturbing activities occurring within the project area, the applicant shall adopt and include the following applicable "Standardized recommendation for protection of the San Joaquin kit fox prior to or during ground disturbance" (USFWS 1999) into the project construction plan:

    a. Project-related vehicles shall observe a 20-mph speed limit in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. To the extent possible, night-time construction shall be minimized. Off road traffic outside of designated project areas shall be prohibited.

b. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of the project, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the procedures under number 13 of this section must be followed.

c. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipe becoming trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods shall be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped.

d. All food-related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers and removed at least once a week from the construction/project site.

e. No firearms shall be allowed on the project site; excluding law enforcement personnel.

f. To prevent harassment, mortality of kit foxes or destruction of dens by dogs or cats, no pets shall be permitted on project sites.

g. Use of rodenticides and herbicides in project areas shall be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide shall be used because of proven lower risk to kit fox.

h. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped individual. The representative will be identified during the employee education program. The representative's name and telephone number shall be provided to the USFWS.

i. An employee education program shall be conducted for the project. The program shall consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and agency personnel involved in the project. The program shall include the following: a description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its

protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information shall be prepared for distribution to the above-mentioned people and anyone else who may enter the project site.

j. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. shall be recontoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but that after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas shall be determined on a site-specific basis in consultation with the USFWS, California Department of Fish and ~~Game (CDFG)~~ Wildlife (CDFW), and revegetation experts.

k. In the case of trapped animals, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS shall be contacted for advice.

l. Any contractor, employee, or military or agency personnel who inadvertently kills or injures a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the ~~CDFG~~ CDFW immediately in the case of a dead, injured or entrapped kit fox. The ~~CDFG~~ CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or biologist.

m. The Sacramento Fish and Wildlife Office and ~~CDFG~~ CDFW will be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Assistant Regional Director of Ecological Services, Mr. Mike Fris, at 2800 Cottage Way, Suite W2606, Sacramento, California 95825, (916) 414-6464. The ~~CDFG~~ CDFW contact is Mr. the Program Supervisor, Craig Bailey at 1234 E. Shaw Avenue, Fresno, California 93710, (559) 243-4014 x227.

20. Additional annual service impact fees affecting the Kings County Fire and Sheriff departments will not be billed to the applicant. Instead, the applicant will be responsible to pay for services rendered by the two departments during times of emergency when services are provided.

21. ~~The applicant shall mitigate the loss of up to 978 acres of farmland of statewide importance by providing funding to place farmland of equal or greater status into an agricultural conservation easement within Kings County. The easement shall be in effect and enforced for the life of the project. Preserved farmland shall be protected at a ratio of one (1) acre farmland removed from agricultural production to one (1) acre preserved farmland (1/1 ratio). If the applicant places the preserved farmland within the Exclusive Agricultural (AX) Zone District or within the Farmland Security Zone Expansion area identified on page RC-23 of the 2035 Kings County General Plan's Resource Conservation Element, then the preserved farmland ratio may be 0.5/1 acres. This agricultural conservation easement may be co-located with the Swainson's hawk habitat conservation easement required by the California Department of Fish and Game.~~

22. ~~A total of 966 acres was evaluated under CEQA in the proposed project's Initial Study/Mitigated Negative Declaration. Figure 3.2-1 of the Initial Study/Mitigated Negative Declaration shows the 978-acre study area, including 21 acres of land that is not included in the 957-acre project site since the applicant does not currently have control of the 21 acres of land. In addition, there currently are public rights-of-way that cross the project site. The uncontrolled parcels and public rights-of-way are identified as the Boatright Tract in Licensed Surveyor Plat volume 2 page 95. Block's "A", "B", and "C" of the Boatright Tract comprise the uncontrolled parcels.~~

    ~~The projects Initial Study/Mitigated Negative Declaration included an environmental analysis of the continued development of the solar facility including the land located within the Boatright Tract. On July 5, 1928 the Boatright Tract was approved by the Kings County Board of Supervisors containing 40 and 60 foot public Rights of Way. If a new parcel map extinguishing the Boatright Tract is approved by the County, thereby removing the Public Right of Way, then this CUP allows the applicant to develop land which is obtained and or controlled by the applicant lying within that area covered by the Boatright Tract map.~~

23. ~~Cancellation proceedings for APN's 024-190-023, 44, 59, 63, 66, 68, 71, 024-210-003, 16, 17, 024-231-008, 024-232-004, 024-241-001, 024-242-001, and 026-020-015 contained in Farmland Security Zone #0090 and Farmland Security Zone Contract #221 shall be completed prior to the issuance of building permits by the County.~~

24. CUP No. 10-05 shall lapse and become null and void three (3) years following the date that Resolution No. 16-05 is adopted, unless prior to the expiration of three (3) years a building permit is issued by the Building Official and construction is commenced and diligently pursued toward completion on the site that was subject of the CUP application. The CUP may be renewed for additional periods of time, if an application (by letter) for renewal of the CUP is filed with the Planning Commission prior to the CUP's expiration date.

OTHER STANDARDS AND REGULATIONS:

In addition to the above ~~Zoning Ordinance~~ Development Code requirements, other standards and regulations affecting this project are listed below. These requirements are not part of this zoning approval. However, compliance is required by the departments and agencies listed below. Appeals for relief of these standards and regulations must be made through that department's or agency's procedures, not through the ~~Zoning Ordinance~~ Development Code procedures.

KINGS COUNTY COMMUNITY DEVELOPMENT AGENCY - BUILDING DIVISION (Contact Darren Verdegaal at the Kings County Community Development Agency - Building Division at (559) ~~582-3211, Extension 2683~~852-2683, regarding the following requirements.)

1. Building permits must be obtained from the Building Division of the Kings County Community Development Agency for any structures, plumbing, electrical, or mechanical work.

2. Failure to obtain a building permit for any structure, prior to commencing construction, which requires a building permit, will result in the payment of a double fee. Payment of such double fee shall not relieve any person from fully complying with the requirements of Kings County Code of Ordinances, Chapter 5 in the execution of the work or from any other penalties prescribed therein.

3. Provide structural calculations and drawings for the proposed ~~8~~ 6-feet high chain link fence with one foot of barbed wire.

4. A minimum of (2) sets of plans and calculations signed by an architect or engineer licensed to practice in the State of California shall be required for all structures.

5. The applicant is responsible for contacting the Building Division to request a final inspection of the structures prior to occupying the structures and prior to startup of the operation. No building or structure shall be used or occupied until the Building Division has issued a Certificate of Occupancy.

6. All drive approaches and durable dustless surfaces shall be installed prior to the final inspection and maintained as per County Standards.

7. If the facility will have employees on-site for maintenance of the system an accessible restroom shall be provided and shall comply with Section 1115B of the *California Building Code*. This may be accomplished by either construction of a permanent structure or use of a chemical toilet with a regular maintenance schedule.

8. Pursuant to Section 1129B of the *California Building Code* one (1) van accessible parking space, allowing room for individuals in wheelchairs, on braces or crutches to get in and out of an automobile onto a level surface, suitable for wheeling and walking shall be provided. The parking space shall be 9' x 20' with an 8' wide loading and unloading aisle placed on the side opposite the driver's side.

9. The development shall comply with all applicable *Americans with ~~Disability's~~ Disabilities Act* (*ADA*) requirements, especially Section 1127B of the *California Building Code*, which states that site development and grading shall be designed to provide access to all entrances and exterior ground-floor exits, and access to normal paths of travel. The accessible route of travel shall be the most practical direct route between accessible building entrances, accessible site facilities and the accessible entrance to the site, including but not limited to access from the accessible parking space to accessible building entrances.

10. A soils report, prepared by a qualified soils engineer, shall be provided to the Building Division prior to issuance of building permits.

11. All construction shall conform to the current adopted editions of the California Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, and California Energy Code.

KINGS COUNTY PUBLIC WORKS DEPARTMENT: (Contact Mike Hawkins of the Kings County Public Works Department at (559) ~~582-3211, Extension 2708~~852-2708 regarding the following requirements.)

1. All requirements required hereafter shall conform to the Kings County Improvement Standards.

2. All other alternatives to Public Works requirements must be approved by the Kings County Public Works Department.

3. That access to the site from a public road must be provided, and must be approved by the Kings County Public Works Department.

4. The applicant shall obtain an encroachment permit from the Kings County Public Works Department.

5. The applicant shall provide an asphalt concrete drive approach(es).

6. Durable and dustless surfacing shall be constructed for all roads constructed on site.

7. The fence shall be placed outside of the County right-of-way.

KINGS COUNTY FIRE DEPARTMENT: (Contact ~~Mike Virden~~ Rick Smith of the Kings County Fire Department at (559) ~~582-3211, Extension 2884~~ 852-2885 for the following requirements.)

1. ~~Rows of solar panels shall not exceed 400 feet in length.~~ Access driveways shall be provided within the solar array and spaced in accordance with Section 1112.B.2.f of the Kings County Development Code.

2. There shall be a minimum of 4 feet of separation between rows to allow access for fire suppression personnel.

3. There shall be access roads of an all-weather surface capable of supporting 50,000 lb. fire apparatus between the ~~400 foot~~ sections of solar panels in accordance with Section 1112.B.2.f of the Kings County Development Code to allow fire apparatus access to the panels ~~so that no portion of any panel is greater than 200 feet from fire suppression access.~~ The access roads shall be maintained and completely surround the solar panels to allow access from any side or end.

4. The solar field shall be kept clear of combustible weeds and debris.

5. The solar fields shall be protected to prevent public access.

6. Fire Department requires a Knox box or other approved system to store and secure keys for any fence or buildings within the property.

7. Subject to Fire Marshal approval, Applicant shall provide training for fire personnel to be able to interrupt electrical power safely for emergency incidents requiring fire suppression or rescue activities.

8. Architects, engineers and designers shall provide detailed plans for review of the project and shall meet with the Fire Marshal in a timely manner upon his request for clarification of any issues.

9. Any fire suppression systems or fire flow requirements will be dependent upon project facilities and review of the project specifications.

10. Fire Department reserves the right to add additional comments or requirements depending upon the hazards involved with the project.

KINGS COUNTY DIVISION OF ENVIRONMENTAL HEALTH SERVICES: (Contact ~~Lee Johnson~~ Troy Hommerding of the Kings County Division of Environmental Health Services at (559) ~~582-3211, Extension 2631~~852-2627 for the following requirements.)

1. Plumbing fixtures used by employees for personal use (at least the handwash sinks, and shower, if applicable) must have bacteriologically safe water. This could be accomplished using a booster pump with chlorine injection to feed a pressure tank to feed the control/maintenance building. Sinks should be limited for handwashing only and should be posted with signage indicating that the water is suitable for washing and general cleaning, but not recommended for drinking. Bottled water must be provided for drinking.

2. If hazardous materials will remain on site in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of a gas, then the facility will be required to file and maintain an Hazardous Materials Business Plan with our office. Applicable forms are available at our website at www.countyofkings.com/health/ehs. Any hazardous wastes generated on site must be managed appropriately.

3. Any septic system plans (3 copies required) submitted to our office for review must be approved by our office prior to construction of the system.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (Contact Debbie Johnson at SJVAPCD at (559) 230-5800, regarding the following requirements.)

1. Based on information provided in the initial study, project specific emissions of criteria pollutants are not expected to exceed District significance thresholds of 10 tons per year NOx, 10 tons per year ROG, and 15 tons per year PM10. Therefore, project specific criteria pollutant emissions would have a less than significant impact on air quality.

2. Based on the information provided in the initial study, the proposed project would equal or exceed 9,000 square feet of space. Therefore, the District concludes that the proposed project is subject to District Rule 9510 (Indirect Source review).

   District Rule 9510 is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site mitigation fees. Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than applying for final discretionary approval, and to pay any applicable off-site mitigation fees before issuance of the first building permit. Demonstration of compliance including payment of all applicable fees must be be provided to the County prior the issuance of the building permit. Information on how to comply with District Rule 9510 can be found online at: www.valleyair.org/ISR/ISRHOME.htm

3. The proposed project may be subject to District rules and regulations including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this project or to obtain information about District rules or regulations that apply to this project or to obtain information about district permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm.

4. The District recommends that a copy of the District's comments be provided to the project proponent.

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (Contact Lee Higgins at the Chevron Environmental Management Company (CEMC) at (925) 543-2365, regarding the following requirements.)

1. A portion of the former Old Valley Pipeline existed in the vicinity of the proposed GWF Henrietta Solar Photovoltaic Plant Project. The former pipeline is located within portions of Assessor's Parcel Numbers 024-210-003, 024-190-059, and 024-190-066. The pipeline was originally installed at depths ranging from 18 inches to 10 feet below ground surface. Contact CEMC prior to project construction.

WESTLANDS WATER DISTRICT (Contact Tom Glover at the Westlands Water District at (559) 224-1523, regarding the following requirements.)

1. The District has several underground facilities located on the subject parcels. Please do not disturb these facilities or locate project features over underground facilities. Please contact Underground Service Alert prior to construction.

NAVAL AIR STATION (NAS) LEMOORE (Contact Marlana Brown at NAS Lemoore at (559) 998-4093 or Marlana.Brown@navy.mil

1. The Applicant shall provide FAA notification and evaluation of the location and associated structures in accordance with Code of Federal Regulations (CFR) Title 14 Part 77.9 "Safe, Efficient Use, and Preservation of the Navigable Airspace."

The foregoing Resolution was adopted on a motion by Commissioner _____, and seconded by Commissioner _____, at a regular meeting held on _____, by the following vote:

AYES: COMMISSIONERS:
NOES: COMMISSIONERS:
ABSTAIN: COMMISSIONERS:
ABSENT: COMMISSIONERS:

KINGS COUNTY PLANNING COMMISSION

_____
Riley Jones, Chairperson

WITNESS, my hand this ___ day of _____

_____
Gregory R. Gatzka
Secretary to the Commission

cc: Kings County Board of Supervisors
Kings County Counsel
Kings County Code Compliance
Kings County Building Division
American Kings Solar, LLC
Adams Broadwell Joseph & Cardozo, 601 Gateway Blvd., Suite 1000, South San Francisco, CA 94080-7037
Naval Air Station Lemoore, 700 Avenger Avenue, Lemoore, CA 93246-5001

Exhibit "A" Addendum to Initial Study/Mitigated Negative Declaration
Exhibit "B" Mitigation Monitoring and Reporting Plan

PLANNING COMMISSION RESOLUTION NO. 16-05

EXHIBIT A:
ADDENDUM

AMERICAN KINGS SOLAR PROJECT (FORMERLY GWF HENRIETTA SOLAR PHOTOVOLTAIC PLANT PROJECT) ADDENDUM TO MITIGATED NEGATIVE DECLARATION

AMERICAN KINGS SOLAR PROJECT

KINGS COUNTY, CALIFORNIA

KINGS COUNTY COMMUNITY DEVELOPMENT AGENCY

LSA

February 2016

AMERICAN KINGS SOLAR PROJECT (FORMERLY GWF HENRIETTA SOLAR PHOTOVOLTAIC PLANT PROJECT) ADDENDUM TO MITIGATED NEGATIVE DECLARATION

AMERICAN KINGS SOLAR PROJECT

KINGS COUNTY, CALIFORNIA

KINGS COUNTY COMMUNITY DEVELOPMENT AGENCY

Submitted to:

Kings County Community Development Agency
Planning Division
1400 W. Lacey Boulevard, Building # 6
Hanford, California 93230

Prepared by:

LSA Associates, Inc.
4200 Rocklin Road, Suite 11B
Rocklin, California 95677
916.630.4600

Project No. FTS1407

LSA

February 2016

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AMERICAN KINGS SOLAR PROJECT
(Formerly GWF Henrietta Solar Photovoltaic Plant Project)
Mitigated Negative Declaration Addendum

State Clearinghouse Number:	2010101042
CUP Number:	CUP 10-05
Assessor Parcel Numbers (acres):	In the approved CUP (957 total acres): 024-190-023; 024-190-044; 024-190-059; 024-190-063; 024-190-066; 024-190-068; 024-190-071; 024-210-003; 024-210-016; 024-210-017; 024-231-008; 024-232-004; 024-241-001; 024-242-001; 026-020-015 Additional parcels (9 total acres): 024-250-001; 024-250-013; 024-250-014; 024-210-002 Size of Project Site: 966 acres
Lead Agency Name and Address:	Kings County Community Development Agency 1400 W. Lacey Boulevard, Building # 6 Hanford, California 93230
Lead Agency Contact Person and Phone Number:	Sandy Roper, Principal Planner 559-852-2685
Project Sponsor's Name and Address:	American Kings Solar, LLC c/o First Solar Roy Skinner, Director, Project Execution 135 Main Street, 6th Floor San Francisco, California 94105

I. INTRODUCTION

This Addendum assesses the environmental impacts of the proposed revisions to a Conditional Use Permit to develop a solar photovoltaic plant, a new nominal generating capacity facility of up to 125-megawatt, alternating current (MWAC), as required by the California Environmental Quality Act (CEQA) (California Public Resources Code 21000 et seq.) and in compliance with the State CEQA Guidelines (14 California Code of Regulations 15000 et seq.).

The original Conditional Use Permit (CUP), No. 10-05, was approved by the Kings County (County) Planning Commission on December 6, 2010 (Resolution No. 10-08) and extended on January 7, 2013 (Resolution No. 13-02). The GWF Henrietta Solar Photovoltaic Plant Project and the Initial Study/Mitigated Negative Declaration (IS/MND) originally approved in December 2010 will be referred to as "Original Project" and "Original IS/MND," respectively, through the remainder of this document.

The applicant seeks modifications to the CUP in order to add certain parcels of land to the project site, accommodate an updated project layout, modify certain Project Design Features and conditions of approval in response to proposed project revisions, extend the CUP for three years, and make other technical changes to the project authorized by the CUP. The revised American Kings Solar Project will be referred to as the "Modified Project" throughout the remainder of this document. The Modified Project is described in detail in Section III of this Addendum and changes from the Original Project are summarized in Table 2.

The County, as the lead agency under CEQA, will consider the potential environmental impacts of the American Kings Solar Project when it considers whether or not to approve the Modified Project. This Addendum is an informational document, intended to be used in the planning and decision making process as provided for under Section 15164 of the CEQA Guidelines.

The conclusion of this Addendum is that the Modified Project would not result in new significant impacts nor substantially increase the severity of previously disclosed impacts beyond those already identified in the Original IS/MND.

II. STATUTORY BACKGROUND

This Addendum demonstrates that the environmental analysis, impacts, and mitigation requirements identified in the Original IS/MND for the Original Project remains substantively unchanged, and supports the finding that the revisions to the Modified Project do not constitute substantial changes or provide new information of substantial importance with regard to new or more significant impacts than those identified in the Original IS/MND. There have been no changes in circumstances or disclosures of new information, as defined by CEQA Guidelines Section 15162 or any other factors that would require the preparation of a Subsequent or Supplemental IS/MND or the preparation of an Environmental Impact Report (EIR) for the Modified Project.

The County has determined that an Addendum is the appropriate environmental document pursuant to CEQA Guidelines Section 15164, which provides that:

A. The lead agency or a responsible agency shall prepare an addendum to a previously certified Environmental Impact Report (EIR) if some changes or additions are necessary, but none of

the conditions described in Section 15162 calling for the preparation of a subsequent EIR have occurred.

B. An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary and none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

C. An addendum need not be circulated for public review, but can be included in or attached to the final EIR or adopted negative declaration.

D. The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision about the Project. A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's required findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

This Addendum considers the modifications to the Original Project. If the County declined to approve these modifications, there would be no effect on the already approved Original Project.

III. ORIGINAL PROJECT DESCRIPTION

An IS/MND was prepared for the Original Project to analyze the potential environmental impacts of the proposed development of a 125 Megawatt (MW) solar energy facility located on the east side of 25th Avenue, south of State Route 198, and west of the Avenal Cutoff Road, in Lemoore, California. The project would provide renewable generation capacity that would be dispatched to the growing California electricity market.

The Original Project would be constructed on 957-acres of land that are bounded by SR 198 to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. Adjacent to the project site is the existing PG&E Henrietta Substation and the existing Henrietta 95-MW Peaker Power Plant. The Mustang, Orion, and Kent South Solar Projects are located on the west side of 25th Avenue and the Westside Solar Project is located at the southwest corner of 25th Avenue and Avenal Cutoff Road.

Major components and features of the Original Project include:

- 978 acres of disturbed land[1]
- Polycrystalline or thin-film PV solar collection field; single-axis tracking mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access road; water treatment systems and storage for service water, de-mineralized water, and potable water; and septic system

[1] A total of 978 acres (study area) was evaluated in the IS/MND which included 21 acres of land within the study area that are not included in the 957-acre project site. The proposed project was approved as a 957-acre project site.

- Control and maintenance building to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance
- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the PG&E grid
- Approximately 800 feet of new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation

Approval of the Original Project

The Original Project CUP was approved by the County Planning Commission on December 6, 2010 (CUP No. 10-5; Resolution No. 10-08) and extended for a period of three years on January 7, 2013 (Resolution No. 13-02).

IV. MODIFIED PROJECT DESCRIPTION

The project description of the Original Project has been revised to describe modifications of the Original Project. The following subsections show portions of the project description where revisions are proposed. Revisions to the project description of the Original Project are shown in red-line tracking in the Revised IS/MND provided in Appendix A. Furthermore, the figures that were presented in the Original IS/MND have been revised, removed, or left as is in the Revised IS/MND to reflect the Modified Project. **Table 1**, below, presents a list of the figures that were included in the Original IS/MND and a description of how they have been revised, modified, removed or left as is in the Revised IS/MND.

Table 1: Figure Revisions

Original IS/MND Figure Name and Number	Revised IS/MND Figure Name and Number	Notes
Figure 1-1 Vicinity Map	Same Figure Number/Name	This figure has been revised to show the boundary of the Modified Project.
Figure 1-2 Project Location Map	Same Figure Number/Name	This figure has been revised to show the boundary of the Modified Project
Figure 1-3 Project General Arrangement	Same Figure Number/Name	This figure has been revised to show the site plan of the Modified Project.
Figure 1-4 Typical Solar PV Tracker	Figure 1-4: Typical Tracker Structure	This figure has been revised to show the typical detail horizontal-tracker structure that would be installed by the Project applicant for the Modified Project.
N/A (New Figure)	Figure 1-5: Typical Fixed-Tilt Structure	New figure to show a typical fixed-tilt structure that would be installed by the Project applicant for the Modified Project.

Table 1: Figure Revisions

Original IS/MND Figure Name and Number	Revised IS/MND Figure Name and Number	Notes
Figure 1-5 Typical PV Array Layout	Figure 1-6: Typical Tracker Array Layout	This figure has been revised to show typical Horizontal-tracker array that would be installed by the Project applicant for the Modified Project.
N/A (New Figure)	Figure 1-7: Typical Fixed-Tilt Array Layout	New figure to show a typical fixed-tilt array that would be installed by the Project applicant for the Modified Project.
Figure 1-6 Water Flow Diagram	Figure 1-8: Water Flow Diagram	This figure has been revised to include groundwater as a water source for construction/operation of the Modified Project.
Figure 1-7 Elevation View of Control/Maintenance Building and Water Treatment System	Figure 1-9: Elevation View of Operation and Maintenance Building (Control Building)	This figure has been revised to show the elevations of the Control Building and Water Tank that would be developed under the Modified Project.
Figure 1-8 Control Building Area	Figure 1-10 Substation O&M Building Area (Control Building)	The name of this figure has been changed. This figure has been revised to show the layout of the Substation Control Building Area that will be developed as part of the Modified Project.
Figure 1-9 Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Portal	Figure 1-11: Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Gap	The figure has been revised to show the gap that would be implemented as part of the Modified Project.
N/A (New Figure)	Figure 1-12: Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Portal	New figure to show the access portal that would be implemented as part of the Modified Project.
Figure 1-10 Preliminary Project Construction Schedule	Not included in Revised IS/MND	
Figure 3.1-1 Key Observation Points	Same Figure Number/Name	This figure has been revised to show the Modified Project boundary.
Figure 3.1-2 Landscape Character Photos from KOP 1	No Change	
Figure 3.1-3 Landscape Character Photos from KOP 2	No Change	
Figure 3.1-4 Landscape Character Photos from KOP 3	No Change	
Figure 3.1-5 Landscape Character Photos from KOP 4	No Change	
Figure 3.1-6 Landscape Character Photos from KOP 4	No Change	

Table 1: Figure Revisions

Original IS/MND Figure Name and Number	Revised IS/MND Figure Name and Number	Notes
N/A (New Figure)	Figure 3.1-7: Camera Locations	New figure to show the location of the camera vantage points the visual simulations were prepared on.
N/A (New Figure)	Figure 3.1-8: Camera Location #1	New figure to show the view from camera location #1.
N/A (New Figure)	Figure 3.1-9: Camera Location #1 with Project	New figure to show the view from camera location #1 with the addition of the project.
N/A (New Figure)	Figure 3.1-10: Camera Location #2	New figure to show the view from camera location #2.
N/A (New Figure)	Figure 3.1-11: Camera Location #2 with Project	New figure to show the view from camera location #2 with the addition of the project.
N/A (New Figure)	Figure 3.1-12: Camera Location #3	New figure to show the view from camera location #3.
N/A (New Figure)	Figure 3.1-13: Camera Location #3 with Project	New figure to show the view from camera location #3 with the addition of the project.
N/A (New Figure)	Figure 3.1-14: Camera Location #4	New figure to show the view from camera location #4.
N/A (New Figure)	Figure 3.1-15: Camera Location #4 with Project	New figure to show the view from camera location #4 with the addition of the project.
Figure 3.2-1 Study Area APNs	Not included in Revised IS/MND	

The figures that have been revised are provided at the end of this section of this Addendum.

American Kings Solar, LLC (the applicant) proposes to build the Modified Project, a new nominal generating capacity facility up to 125-megawatt, alternating current (MW_{AC}). The Modified Project would provide renewable generation capacity that would be dispatched to the growing California electricity market.

The electrical energy generated by the Modified Project would be delivered to the CAISO electrical transmission/distribution grid. The plant would be connected to the electrical grid at the existing PG&E substation located adjacent to the Modified Project site. The Modified Project would generate electricity for its own auxiliary loads, including control systems, and general facility loads such as lighting, heating, and air conditioning during the daytime hours. At night, the Modified Project would draw electricity from the PG&E grid for these loads. Some power would also be re-converted from alternating current (AC) to direct current (DC) for use as backup power for control systems and other uses.

The Modified Project would be constructed on 966-acres of land that is bounded by SR 198 to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. In addition, there

currently are public rights-of-way that cross the Modified Project site and that are included in the 966 acres of land. The applicant will initiate the right-of-way abandonment process with Kings County to eliminate those public rights-of-way. Adjacent to the Modified Project site is the existing PG&E Henrietta Substation and the existing Henrietta 95-MW Peaker Power Plant.

Major components and features of the Modified Project include:

- 966 acres of disturbed land;[1]
- Polycrystalline or thin-film PV solar collection field; single-axis tracking or fixed-tilt mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access driveways; water treatment systems and storage for service water, de-mineralized water, and potable and non-potable water; septic system; and meteorological stations;
- Control Building to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance;
- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the electrical grid; and
- A new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation.

The Modified Project would be comprised of PV technology, and would consist of an array of solar PV panels supported on a metal-framed mounting system, junction boxes to connect the panels, inverters, and intermediate step-up transformers to convert sunlight into electricity. The Modified Project's general arrangement is shown in Figure 1-3. Descriptions of the Modified Project facilities are provided below.

Photovoltaic Panels

The PV panels would be made of polycrystalline silicon or thin-film. The panels would be mounted on a galvanized steel rack. The dimensions of the panels will depend on the technology and selected manufacturer, but would generally measure approximately 2 to 3.5 feet wide, 4 to 5 feet long, and 0.5 inch to 2 inches thick, and the maximum height of the panels would be approximately 13 feet above the ground and the bottom of the panels would be a minimum of 18 inches above the ground.

The panels would be aligned from north to south if tracker technology is used, and would track the path of the sun (from east to west) throughout the day. If fixed-tilt is utilized, the rows would be oriented east to west. A typical tracker structure is shown in Figure 1-4 and a typical fixed-tilt structure is shown in Figure 1-5. A typical tracker PV array layout is depicted in Figure 1-6 and a typical fixed-tilt array layout is shown in Figure 1-7. The access driveways would be spaced in accordance with Section 1112.B.2.f of the Kings County Development Code.

[1] Development of the proposed project would occur over the individual parcel lines within the project boundary.

Panel Interconnections, Inverters, Distributed Transformers, Combiner Boxes, and Switch Gear

Each PV array would be connected in panel strings by wiring firmly attached to the panel racks. Each panel string would be connected to its combiner box using underground wiring. Wire depths would conform to local, state, and federal codes, as required, and are expected to be approximately 3 feet deep. The individual panel strings would connect to a combiner box; the combiner boxes would interconnect to a single inverter using underground wiring. The inverters would feed into 360 to 550-volt/34.5-kV step-up transformers, which would feed electricity from the transformers into a 34.5-kV underground cable collector system, which in turn, would feed into a new 34.5-kV/70-kV substation for interconnection at a the PG&E Henrietta Substation to the PG&E transmission grid.

The PV panels would generate DC electricity at a voltage up to 1500 V_{DC} set by the amount of panels in a string and the amount of strings combined into an inverter. The DC current produced by the panels is converted to approximately 360 to 550 V_{AC}. Each inverter may be installed in a weatherized aboveground structure mounted on a level concrete building pad or vault in proximity to its associated PV array. Each pad would contain the inverters, associated switchgear, and step-up transformer. There would be up to 125 inverter and transformer pads approximately 10 by 36 feet in size, and the inverters and transformers would be approximately 12 feet tall. Enclosures, if utilized, would be constructed of either concrete or steel. The transformers located at the inverter enclosures would step-up the inverter voltage from a 360 to 550 V to 34.5 kV. An underground and above ground cable 34.5-kV collector system would transmit the power to the substation.

Transmission Line Interconnection

As with the Original Project, the Modified Project would include an electrical interconnection to the existing PG&E 70-kV transmission system at the PG&E Henrietta Substation. PG&E's 70-kV Henrietta Substation is located adjacent to the Modified Project's substation on the western side of the site. An overhead 70-kV electrical transmission line would connect the Modified Project substation to the PG&E Henrietta Substation. The initial portion of the 70-kV transmission line from the Modified Project's substation would be owned by the Applicant and would be supported on utility poles each up to 140 feet in height. Change of ownership to PG&E would occur prior to entering the Henrietta Substation. The PG&E portion of the transmission line would be supported on up to 14 utility poles each up to 140 feet in height. The final number of poles that would be installed would be dependent on the final location of the PG&E interconnection point at the Henrietta Substation. PG&E would also install a 70-kV breaker and other associated equipment at the Henrietta Substation. Approval of the PG&E-owned interconnection facilities is within the sole discretionary permitting jurisdiction of the CPUC. However, because CEQA requires analysis of the entirety of the project, the Modified Project for CEQA purposes includes these PG&E interconnection facilities. The CPUC can and should utilize and incorporate this Initial Study, including applicable Project Design Features and Mitigation Measures, by reference, in authorizing the PG&E interconnection facilities.

Telecommunications

The Modified Project would connect with the existing local telecommunication system on 25th Avenue or a microwave/satellite communications tower, approximately 50 feet tall.

Meteorological Data Collection System

The Modified Project would include up to six meteorological data collection systems within the solar fields and up to 12 meteorological towers approximately 20 feet high on the perimeter. Each system would include the following instrumentation:

- Global horizontal irradiance;
- Global irradiance/plane of array;
- Ambient temperature;
- PV back-panel temperature;
- Wind speed;
- Wind direction;
- Relative humidity;
- Precipitation;
- Barometric pressure; and,
- Visibility.

Water Treatment

The Modified Project would obtain water from an onsite well and/or Westlands Water District (WWD) and/or other offsite sources. The Modified Project would annually require approximately 2.3 acre-feet (AF) of water to satisfy the requirements for panel washing; panel washing would occur up to 4 times per year. Figure 1-8 is the representative water flow diagram for the project. No chemicals or other additives would be added to the PV panel wash water. Non-potable water for domestic use would be provided by an onsite water treatment and storage system. Drinking water for onsite staff would be provided by bottled water service. Construction water requirements totaling approximately 250 acre-feet during the 15 to 18 month construction period would be required.

Raw water may be pumped into a raw water storage tank. It then may be treated as necessary and stored in a treated water storage tank for use in panel washing. If a water storage tank is installed, raw water would be available for panel washing and other non-potable uses.

A water treatment system would draw water from the treated water tank and treat it for non-potable water use in the Control Building and safety showers. A septic system would treat sanitary waste (gray and black water) generated from the Control Building. Figure 1-9 illustrates the elevation view of the Control Building and water storage system.

Signage

Signage would be installed at the main entrance on 25th Avenue pursuant to the Kings County Development Code standards to identify the facility owner and operator and provide emergency contact information. For security purposes, small-scale signs would be posted at emergency entrances

and along the fenced perimeter indicating "No Trespassing" and "Private Property." Safety signs may also be included along the perimeter fence.

Access/Circulation/Parking

External access to the site would be from 2 locations. The main entrance would be an automatic gate on the east side of 25th Avenue (west side of the project site). A second entrance would be an emergency manual locked gate located on the east side of 25th Avenue south of the proposed main entrance.

Internal private roads would be 20 feet wide, located along the perimeter of the property, with four roads traversing the site from east to west constructed to typical access driveway standards as shown in Figure 1-3: Project General Arrangement. In addition to the perimeter circulation roadways, there would be north to south (if tracker installation), or east to west (if fixed tilt installation) roadways spaced in accordance with Section 1112.B.2.f of the Kings County Development Code between the PV array rows that would be constructed to typical access driveway standards as shown in Figure 1-3. The main entrance to the Control Building and substation shall be constructed to Kings County's Improvement Standards to meet the applicable fire protection requirements.

Approximately six parking spaces are proposed near the Control Building as part of the project for project operation. The parking lot is shown on Figure 1-10.

Project Security

Project security would be comprised of a 6-foot-tall chain link fence topped with one foot barbed wire around the perimeter of the property. The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12) in accordance with PDF BIO-3. Security cameras and motion detectors may be placed along the perimeter of the site, allowing 24/7 live monitoring of the facility. A security patrol may be utilized to provide security services during those periods when operation and maintenance personnel are not present onsite. If a breach occurs when the applicant is onsite, it would contact the County Sheriff, if determined necessary. If a breach occurs when the security company is onsite, it would contact the applicant, and then the County Sheriff, if determined necessary.

Fire Suppression and Safety

All fire protection requirements shall be in conformance with California Fire Code and Kings County Ordinances.

All designs, plans, and practice will be in accordance with California Fire Code, and local code requirements. Handheld fire extinguishers of the appropriate size and rating would be located in accordance with California Fire Code throughout the project site. When the design is finalized, the Fire Department will review construction plans and make recommendations if necessary. Project-specific fire suppression training would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities.

Vegetation control (including weeds) will be implemented in accordance with the Project's Agricultural Management Plan. If necessary, to supplement sheep grazing, mechanical means will be employed to adequately control vegetation.

Operation/Maintenance and Site Reclamation

PV panel washing would occur up to four times a year as determined necessary based on operational performance of the panels. Panel washing water would be supplied by an onsite well and/or WWD and/or other offsite sources, be treated onsite, and would not contain any chemical additives. The amount of water required for one panel washing would be approximately 180,000 gallons. All water used from panel washing would be contained onsite and absorbed into the ground or evaporated.

Operating and maintaining the equipment would require up to 3 staff on a daily basis to perform visual inspections and minor repairs. Larger crews of up to 10 workers would be required on occasion to perform tasks such as equipment replacement or washing of the PV panels. Due to the nature of the equipment, major maintenance and equipment replacement is anticipated to be infrequent.

The life of the Modified Project is proposed to be at least 30 years. At the end of the Modified Project life, the applicant would remove all facilities from the site (unless a proposed ongoing use of any project component or structure, e.g., O&M building, is authorized by the County). This would include removing all solar panels, demolishing, and removing all buildings, and removal of all infrastructure (driveways, pipelines, poles). Underground cables and other equipment would also be removed. Portions of the Modified Project site may be re-leveled as necessary.

Construction Activities

Modified Project construction activities would include the following:

- Civil infrastructure
  - Survey and establish the project layout including driveway, panel, substation and support buildings
  - Grade storm water retention ponds
  - Install the perimeter chain link security fence and gates
  - Construct driveways (except for driveways, there would be minimal or no site grading)
  - Control dust and compact soil
  - Construction substation, inverter, and control room pads to elevations as engineered during detailed design
  - Excavate, form, and pour foundations for the substation, control house and water storage tanks
- Racking system installation and panel assembly
  - Install I-beam or tubular steel foundations through the use of a vibrating pile driver system similar to what is used for the installation of highway guardrails

- Place galvanized steel racking system on top of the steel foundations
- Place PV solar modules on the racking system
- Install DC collection system
- Install wire harness, fuses, and wire grounding
- Trench for buried wires and cables
- Install buried wires and cables
- Install combiner boxes
- Install inverter/transformer building supports and structures
- Trench for buried AC and interconnection cable
- Trench and install the underground and overhead 34.5-kV cable from the 360 to 550-V/34.5-kV transformers to the project's switchgear and substation

- Install Control Building, interconnection, and ancillary systems
  - Construct water tanks and treatment system if necessary, improve existing water wells and/or drill new water well(s)
  - Construct project substation
  - Construct the 70-kV transmission interconnection
  - Connect to the local fiber optic and telephone network and/or construct microwave/satellite tower

The site is relatively flat with a slight grade from west to east. The site would require minimal grading where the PV panels would be installed. Grading would be required for access driveways, inverter pads, the Control Building, water storage tanks, substation, and retention pond(s). A 20-foot-wide perimeter access driveway would be gravel. Retention pond(s) would be constructed to retain storm water flows. The soil would be compacted, as required, for access driveways, inverter pads, substation, Control Building, and racking system supports. Other driveways on the site would be graded, as necessary. There would be approximately 65 acres of access driveways, inverter pads, a Control Building, water storage tanks, and other features affecting approximately 6.7 percent of the site.

Construction of the Modified Project would require temporary staging and storage areas for materials and equipment. The materials staging and storage would be located onsite in areas that would not be used for panels.

All materials for construction would be delivered by truck. The majority of the truck traffic would occur on designated truck routes and major streets. Trucks would use SR 198 and 25th Avenue to access the site. Approximately 16 construction equipment delivery roundtrips, 23 material delivery roundtrips, and a maximum of 1,200 construction worker roundtrips per day are anticipated to occur during Modified Project construction, for a total of up to 2,412 vehicle roundtrips per day during construction.

Modified Project components (such as support piles, PV solar panels, mounting racks, inverter buildings, wire and cable, substation equipment, and other equipment) would be brought to the site and assembled or installed.

Construction Schedule

Construction will commence subsequent to completing the California Environmental Quality Act (CEQA) review, receiving all necessary construction permits, and meeting preconstruction CEQA conditions. Construction of the Modified Project is expected to be approximately 15 to 18 months.

Construction would occur between 6 a.m. and 6 p.m., Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. During the startup phase of the Modified Project, some activities may require 7 days a week.

Construction Personnel Requirements

The peak workforce on the site during construction would be a maximum of 1,200, including construction craft persons and supervisory, support, and construction management personnel.

Table 2 provides a summary of the changes that are proposed between the Original and Modified Project Description, including changes that the applicant has requested to the conditions of approval adopted by the Kings County Planning Commission for the Original Project.

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
Project Overview	Applicant was GWF Energy LLC and name of Project was GWF Henrietta Solar PV Plan Project. Project site was 957 acres (978 acres studied in IS/MND).	American Kings Solar LLC is the new Project Applicant. Project is now named American Kings Solar Project. Added new parcels to the Project site which now totals 966 acres. Removed Table 1-1 Major Project Development Milestones.
Project Purpose and Need	No change.	
Project Objectives	No change.	
Photovoltaic Panels	Panels made of polycrystalline silicon or thin-filmed bonded to a thin protective plate of glass on the skyward side and a metal backing plate on the earth side. Panels positioned 4 to 6 feet from the ground and height of panels is approximately 6 to 10 feet. Polycrystalline panels would be aligned from north to south would track sun on a single axis tracking system. Panel rows would be 147 feet long and spaced 9 feet from each other. Filmed panels aligned from east to west in fixed position.	Dimension of panels would depend on technology and selected manufacturer. Maximum height of panels 13 feet above the ground. Spacing of panels is depicted on the new site plan.

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
	Rows 224 feet long and spacing 8.25 feet.	
Panel Interconnections, Inverters, Distributed Transformers, Combiner Boxes, and Switch Gear	DC current produced by panels converted to 480 V_{AC}. Each inverter would be installed in a weatherized aboveground structure mounted on concrete building pad. Would be up to 125 enclosures on pads. An underground cable 34.5-kV collector system would transmit power to the proposed substation.	DC electricity generated by the panels at a voltage up to 1500 V_{DC}. DC current produced by panels converted to approximately 360 to 550 V_{AC}. Inverters may be installed in enclosures or on pads. An underground and above ground cable 34.5-kV collector system would transmit the power to the proposed project substation.
Electrical Substation	No change.	
Transmission Line Interconnection	Indicated approximately 800-feet of overhead 70-kV electrical transmission line.	Removed length of 800 feet from description. Added that interconnection would be installed on up to 140 foot tall utility poles and a 70 kV breaker and associated equipment would be added at the Henrietta Substation. The number of utility poles would be dependent on the location of the PG&E interconnection point at the Henrietta Substation.
Telecommunications	Connect with existing local system on 25th Avenue.	Connect with existing local system on 25th Avenue or a microwave/satellite communications tower.
Meteorological Data Collection System	Installation of four meteorological data collection systems.	Installation of up to six meteorological data collection systems within the solar fields and up to 12 meteorological towers approximately 20 feet high on perimeter.
Water Treatment	Project would obtain water from the California Aqueduct via a proposed pipeline connecting to Westlands Water District's (WWDs) water main in 25th Avenue. Raw water from WWD would be pumped into 50,000 gallon raw storage tank (23 feet high by 24 feet diameter). Would then be treated and stored in 50,000 gallon water storage tank (22 feet high by 24 feet diameter). Water from WWD would be stored in raw storage tank.	Obtain water from an onsite well and/or WWD and/or other offsite sources. Raw water may be pumped into a raw water storage tank. Water would be treated as necessary and stored in a treated water storage tank for use in panel washing.
Lighting	Editorial changes only. No substantive changes.	
Signage	Signage installed at main entrance on 25th Avenue identifying owner and	Same signage installed in same locations. Additionally safety signs

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
	operator and emergency contact information. "No Trespassing" and "Private Property" signs posted at emergency entrances along fenced perimeter.	may also be included along the perimeter fence (safety signs identifying owner and operator and emergency contact information).
Access/Circulation/Parking	Roadways would be north to south and would be spaced every 400 feet.	Roadways would be north to south (if tracker installation) or east to west (if fixed-tilt installation) and would be constructed and spaced in accordance with the Kings County Development Code.
Project Monitoring	Editorial changes only. No substantive changes	
Project Security	Installation of an 8-foot tall chain link perimeter fence topped with barbed wire. Access portals (sized 4 by 6 inches) to allow San Joaquin Kit fox movement at the site would be spaced at the bottom of the fence every 8 to 10 feet (Figure 1-9). A security patrol would be contacted to provide security during those periods when operation and maintenance personnel are not present onsite.	Installation of a 6-foot tall chain link perimeter fence topped with one foot of barbed wire. The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). A security patrol may be utilized to provide security services during those periods when operation and maintenance personnel are not present onsite.
Fire Suppression and Safety	Fire protection system design to protect personnel and limit property loss. Include sprinkler fire suppression in maintenance Control Building. Water supplied from raw water storage tank. Handheld fire extinguishers in various locations onsite.	All fire protection requirements will conform with California Fire Code and Kings County Fire Ordinances. PV fire suppression training coordinated with California Office of the State Fire Marshall and the Kings County Fire Department would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities.
Electrical Grounding	Editorial changes only. No substantive changes.	
Operation/Maintenance and Site Reclamation	Panel washing water would be supplied by WWD. Life of project is proposed to be 30 years. Site would be re-leveled and onsite soil would be reclaimed to a condition that would again support agriculture. CVP surface water entitlements for the project would remain with the site	Panel washing water, non-potable O&M building water supply, and any other water needed for site operations would be supplied by an onsite well and/or WWD and/or other offsite source. Life of project is proposed to be at least 30 years. Added "underground cables and other

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
	after the project is removed from the site and the site reverts to agriculture to ensure a water supply for future agricultural use.	equipment would also be removed." The Modified Project site would be returned to original ground contours. Revised language regarding soil reclamation. Removed sentence indicating retaining CVP surface water entitlements for the project site for agricultural use once project is decommissioned.
Construction Activities	Develop perimeter road berm	Grade storm water retention ponds used rather than perimeter road berm. The Original Project incorporated a perimeter berm in the project design to retain all on-site stormwater. Specifically, the berm was intended to "enable the site to become a retention/percolation basin, thus preventing offsite migration of sediment and pollutants." American Kings has proposed that only a portion of the site be used as retention ponds, instead of the entire site. Retention ponds can be configured into the site layout and avoid the grading that would be necessary for construction of a perimeter berm. In addition, storm water retention of some sort will be required to meet state requirements for storm water control. American Kings does not view the incorporation of retention basins as a new feature of the project since the berm was intended to make the entire site a retention basin, nor is it associated with any change in project impact relative to the previous analysis. Therefore, incorporation of retention basins is not mitigation, simply a modified approach to storm water control. The Modified Project will replace this previously proposed stormwater control with a more conventional stormwater retention basin approach, in accordance with a site-specific hydrology study.
	Construction substation, inverter, and	Construct substation, inverter, and

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
	control room pads to 2 feet above grade.	control room pads to elevations engineered during detailed design.
	Underground 34.5-kV cable from the 480-V/34.5-kV transformers.	Installation of underground and overhead 34.5-kV cable from 360 to 550-V/34.5-kV transformers.
	Construct water tanks and treatment system.	Construct water tanks and treatment system if necessary, improve existing water wells and/or drill new water well(s).
	Connect to the local fiber optic and telephone network.	Connect to the local fiber optic and telephone network and/or construct microwave/satellite tower,
	Grading required for access roads, inverter pads, control/maintenance building, water storage tanks, and substation.	Grading also required for retention ponds.
	20-foot wide perimeter access road would be graded at a level higher than the rest of the site to allow for stormwater retention onsite.	The 20-foot wide perimeter access driveway would be graded and retention pond(s) would be constructed to retain stormwater flows onsite.
	Approximately 12 construction equipment delivery trips and 84 trips for construction workers per day during construction. Total of 96 construction vehicle trips per day.	Approximately 16 construction equipment delivery roundtrips, 23 material delivery roundtrips and a maximum of 1,200 construction worker roundtrips per day during construction. Total of 2,412 construction vehicle roundtrips per day.
	Project components would be brought to the site and assembled.	Project components would be brought to the site and assembled or installed.
Construction Schedule	Construction to occur in three phases: 30 MW_{AC}, 40 MW_{AC}, 55 MW_{AC}.	No construction phases.
	Construction commences in July 2012 and be completed June 2015, for a total duration of 35 months.	Construction commences subsequent to completing CEQA review and receiving permits. Duration 15 to 18 months.
Construction Personnel Requirements	Peak workforce on Project site is during Phase 1 of construction with approximately 105 construction	Peak workforce on site during 15 to 18 month construction period would be a maximum of 1,200 construction

Table 2: Summary of Revisions to Project Description

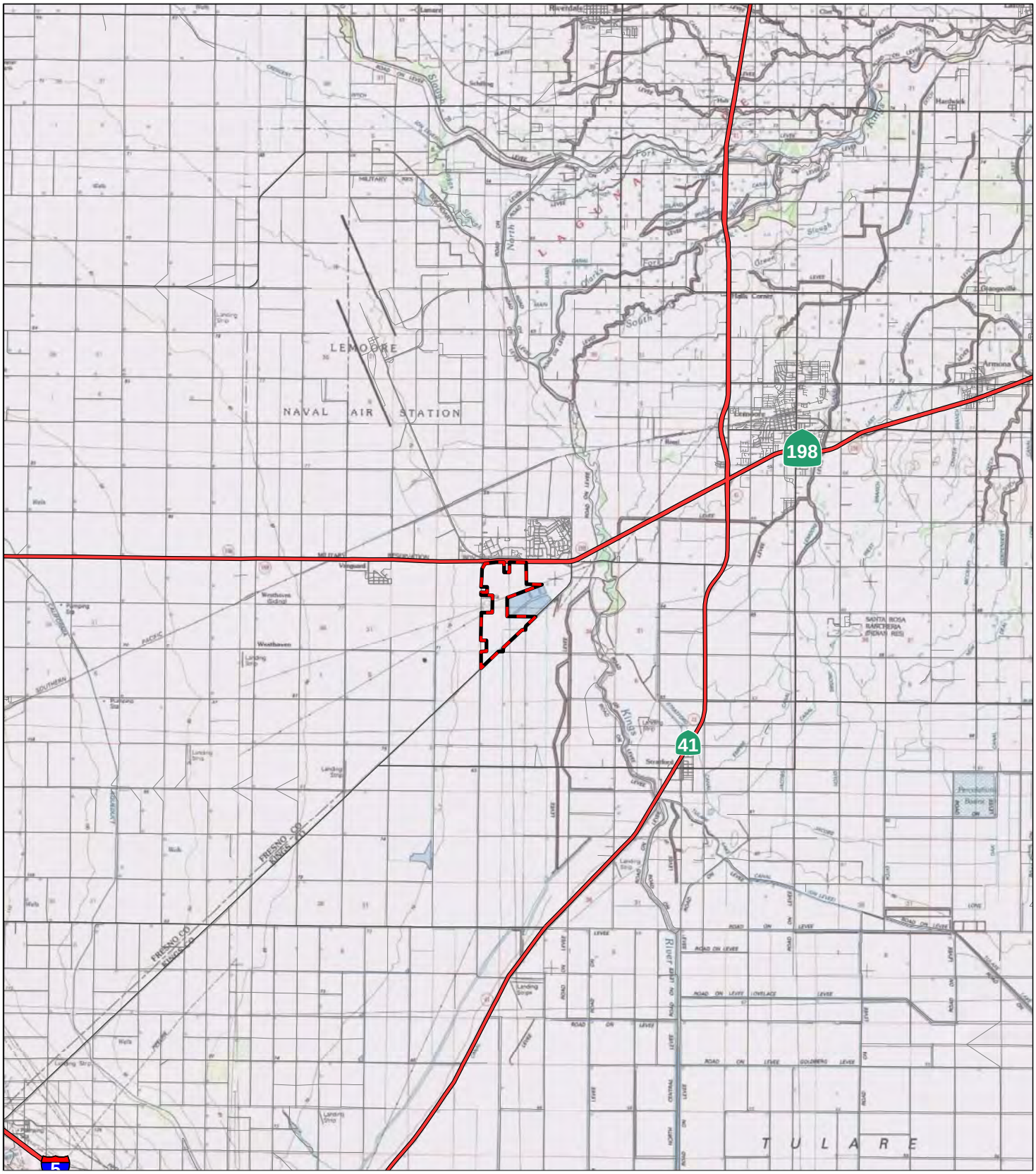
Project Component	Original Project Description	Modified Project Description
	personnel. Average number of construction workers during Phase 1 is 83; during Phase 2 (11.5 months) and 3 (13 months) peak workforce is 90 workers with an average workforce of approximately 81 construction workers.	personnel. Removed the average number and peak force of construction workers as construction Phases are no longer applicable.
Testing and Energizing	No change.	
Project Design Features (PDFs)	Various structural elements and practices incorporated into project to avoid and minimize potential impacts on environmental resources.	See changes to PDF AES-1, AQ-3, BIO-1, CUL-1, GEO-1, GEO-2, GEO-3, HAZ-1, and NOI-1 and addition of AG-1, AG-2, and AG-3discussed below in Table 3. Revisions to the PDFs are shown in Appendix A Revised IS/MND.
Planning Commission Condition of Approval 1	States, "All proposals of the applicant shall be conditions of approval if not mentioned herein."	Revise as follows: "All proposals of the applicant, as modified by the CUP Addendum, shall be conditions of approval if not mentioned herein."
Planning Commission Condition of Approval 17	Prior to issuance of building permits, applicant shall submit a Soil Reclamation Plan for review and approval by Community Development Agency staff.	Requirement has been incorporated into PDF AG-1, AG-2, and AG-3; delete separate condition of approval.
Planning Commission Condition of Approval 18	Applicant shall post a performance bond or similar instrument to ensure completion of the activities under the Reclamation Plan.	Requirement has been incorporated into PDF AG-1, AG-2, and AG-3; delete separate condition of approval.
Planning Commission Condition of Approval 21	Applicant shall mitigate the loss of up to 978 acres of farmland of statewide importance by providing funding to place farmland of equal or greater status into an agricultural conservation easement within Kings County.	Project has been revised to include dryland sheep grazing, to be addressed in an Agricultural Management Plan, a Soil Reclamation Plan and financial assurances, as described in PDF AG-1, AG-2, and AG-3; delete separate condition of approval.
Planning Commission Condition of Approval 22	If a new parcel map extinguishing the 21-acre Boatright Tract is approved by the County, the CUP allows the applicant to develop land within the area covered by the Boatright Tract Map.	Project does not include the 21-acre Boatright Tract (APNs: 024221008000, 024221009000, 024221011000, 024221012000, 024221013000, 024221015000, 024221016000, 024221017000, 024221019000, 024221020000, 024221021000, 024221023000, 024221024000, 024221028000, 024221029000, 024221030000,

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
		024221031000, 024221032000, 024221033000, 024221034000, 024221035000, 024221036000, 024221037000, 024221038000, 024221039000, 024221040000, 024221041000, 024222003000, 024222006000, 024222007000, 024222008000, 024222012000, 024222015000, 024222016000, 024222022000, 024222023000, 024222024000, 024222025000, 024222026000, 024222027000, 024222028000); delete condition of approval.
Planning Commission Condition of Approval 23	Cancellation proceedings for parcels contained in Farmland Security Zone #0090 and Farmland Security Zone Contract #221 shall be completed prior to initiation of construction for each phase of the project or prior to issuance of building permits.	Project has been revised to include dryland sheep grazing, to be addressed in an Agricultural Management Plan, a Soil Reclamation Plan and financial assurances, as described in PDF AG-1, AG-2, and AG-3. Pursuant to County Resolution 13-058, cancellation is not required (see additional discussion in Section IV. Impact Analysis Subsection Environmental Analysis of Key Topics below). Delete condition of approval.
Planning Commission Condition of Approval 24 [New]	N/A	CUP No. 10-05 shall lapse and become null and void three (3) years following the date that the CUP Addendum is adopted, unless prior to the expiration of three (3) years a building permit is issued by the Building Official and construction is commenced and diligently pursued toward completion on the site that was subject of the CUP application. The CUP may be renewed for additional periods of time, if an application (by letter) for renewal of the CUP is filed with the Planning Commission prior to the CUP's expiration date.
Building Division Condition of Approval 3	Refers to proposed 8-foot high chain link fence	Fence will be 6 feet high (with 1-foot barbed wire); no other changes to condition of approval.
Fire Department Condition of	Rows of solar panels shall not exceed	Access driveways would be provided

Table 2: Summary of Revisions to Project Description

Project Component	Original Project Description	Modified Project Description
Approval 1	400 feet in length.	within the solar array and spaced in accordance with Section 1112.B.2.f of the Kings County Development Code . These access driveways would be provided in one direction within the solar array (north-south for tracker system, or east-west for fixed tilt). A row length restriction is not required. Delete condition of approval.
Fire Department Condition of Approval 3	There shall be access roads of an all-weather surface capable of supporting 50,000 lb. fire apparatus between the 400 foot sections of solar panels to allow fire apparatus access to the panels so that no portion of any panel is greater than 200 feet from fire suppression access. The access roads shall be maintained and completely surround the solar panels to allow access from any side or end.	As stated above, access driveways would be provided within the solar array and spaced in accordance with Section 1112.B.2.f of the Kings County Development Code . Driveways and spacing in accordance with the referenced code will be in only one direction. Revise as follows: "There shall be access driveways of an all-weather surface capable of supporting 50,000 lb. fire apparatus between the sections of solar panels in accordance with Section 1112.B.2.f of the Kings County Development Code to allow fire apparatus access to the panels."
Fire Department Condition of Approval 7	Applicant shall provide training for fire personnel to be able to interrupt electrical power safely for emergency incidents requiring fire suppression or rescue activities.	Revise as follows: "Subject to Fire AHJ approval, Applicant shall provide training for fire personnel to be able to interrupt electrical power safely for emergency incidents requiring fire suppression or rescue activities."
Mitigation Monitoring and Reporting Plan	Included as Exhibit A to CUP approval	Replace with MMRP included as Table 4-1 in Revised IS/MND



LEGEND

Project Site

FIGURE 1-1

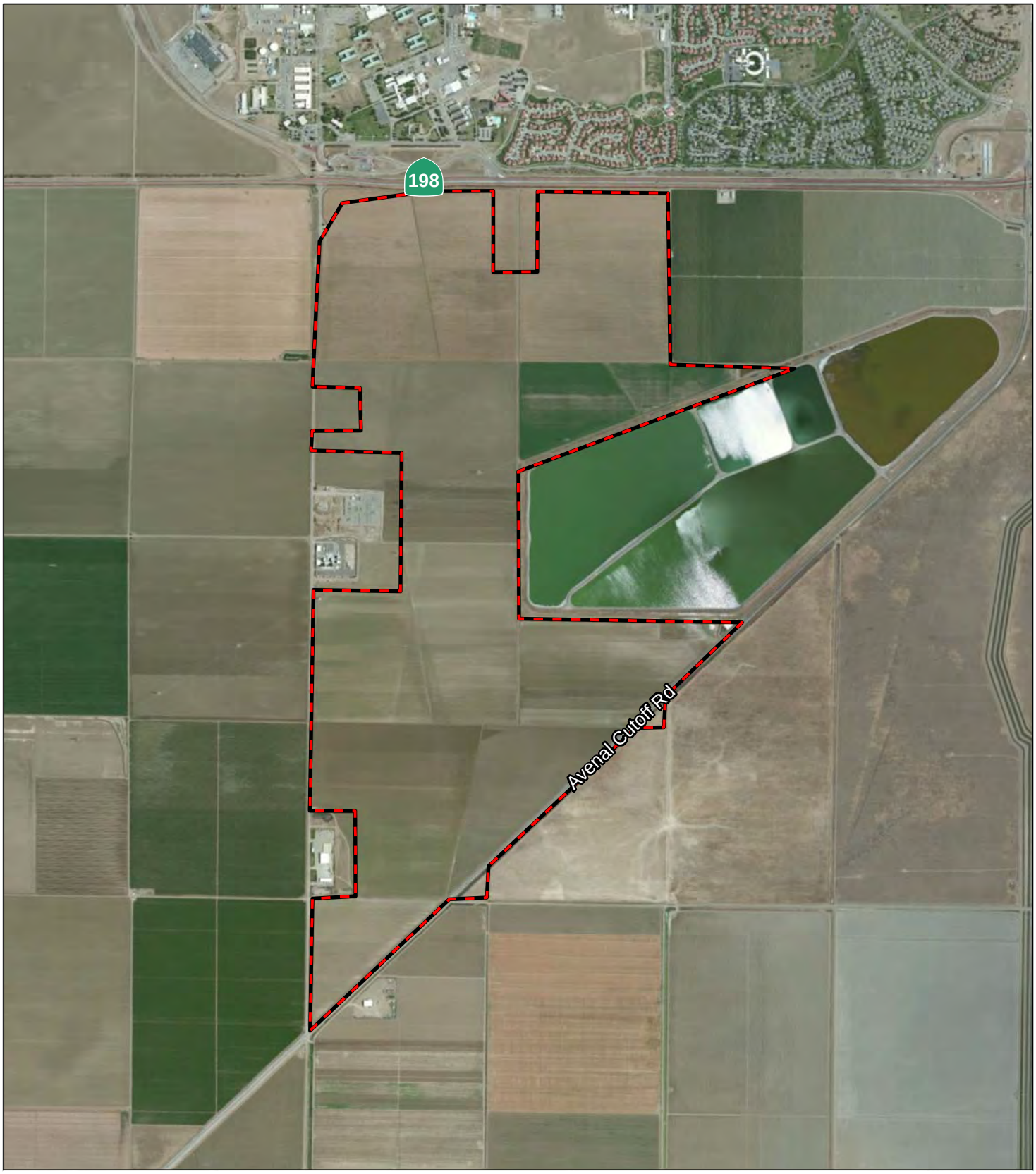
0 1.5 3
MILES

SOURCE: USGS Topographical Map (Kings County)

I:\Fts1407\AI\Revised ISMND\Figure 1-1.ai (6/19/2015)

American Kings Solar Project

Vicinity Map



LEGEND

Project Site

FIGURE 1-2

N

0 1000 2000
FEET

SOURCE: ESRI Aerial Imagery (8/2010)

I:\Fts1407\AI\Revised ISMND\Figure 1-2.ai (6/19/2015)

American Kings Solar Project

Location Map

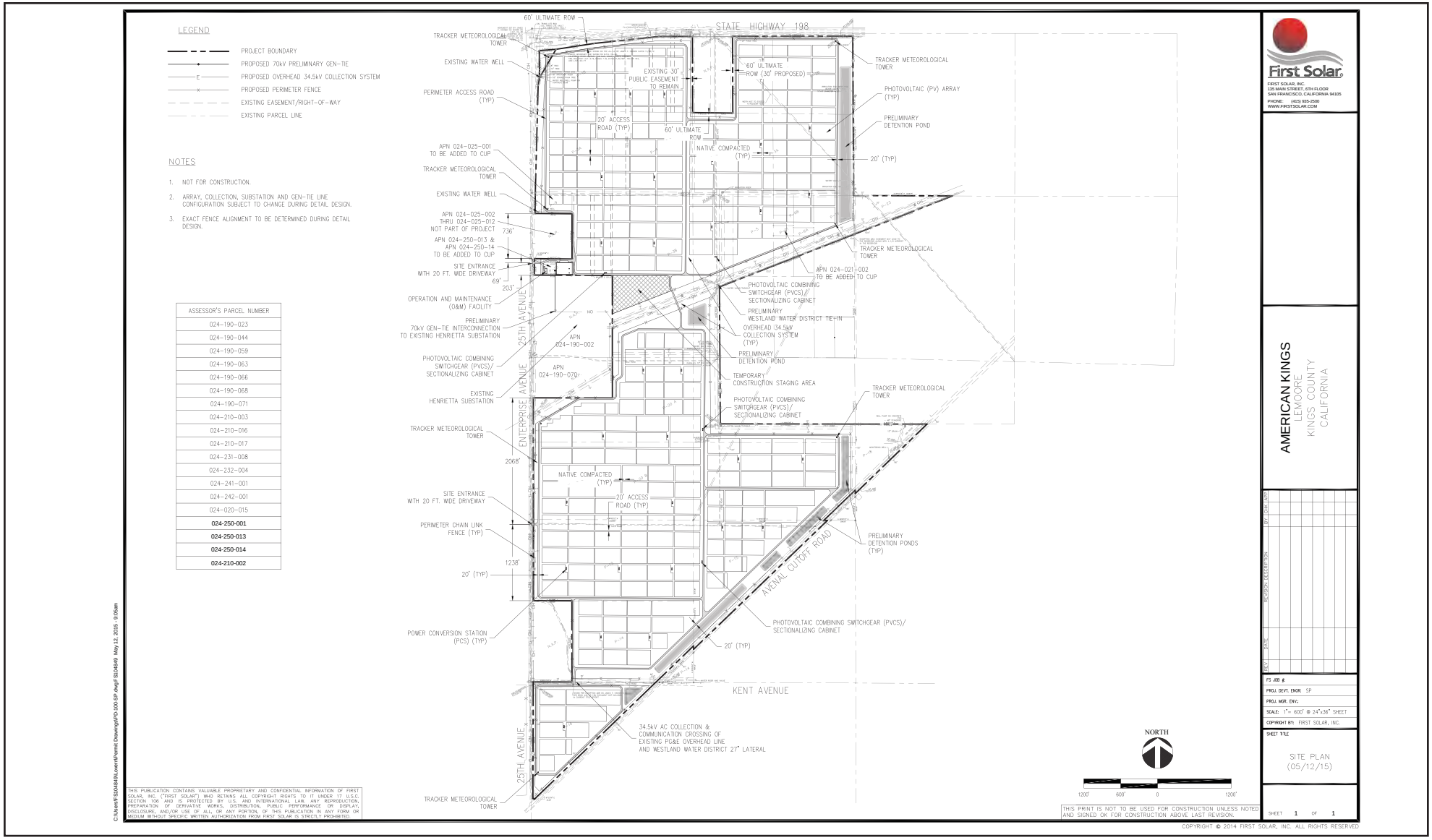


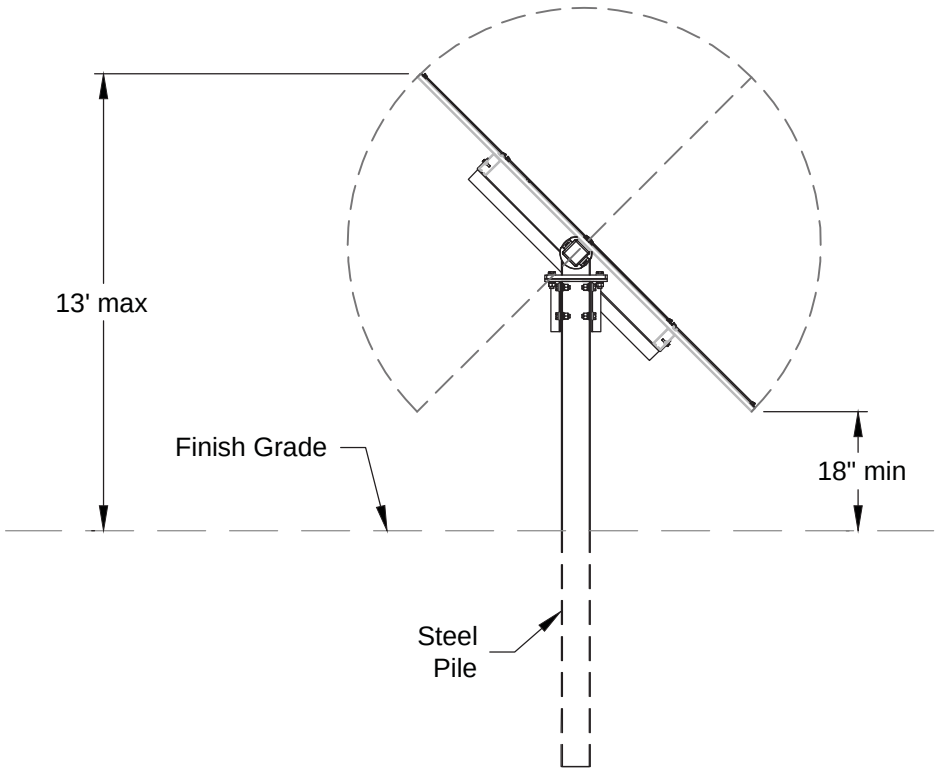
FIGURE 1-3

American Kings Solar Project

Project General Arrangement

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-3.ai (6/19/2015)



Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

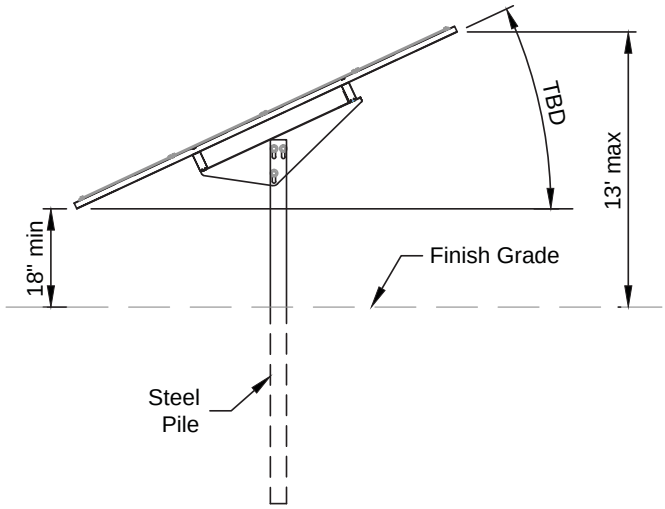
Typical Detail Horizontal-Tracker Structure

FIGURE 1-4

American Kings Solar Project
Typical Tracker Structure

SOURCE: First Solar (2014).

I:\Fts1407\AI\Revised ISMND\Figure 1-4.ai (6/19/15)



Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

Typical Detail Fixed-Tilt Structure

FIGURE 1-5

American Kings Solar Project
Typical Fixed-Tilt Structure

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-5.ai (6/19/2015)

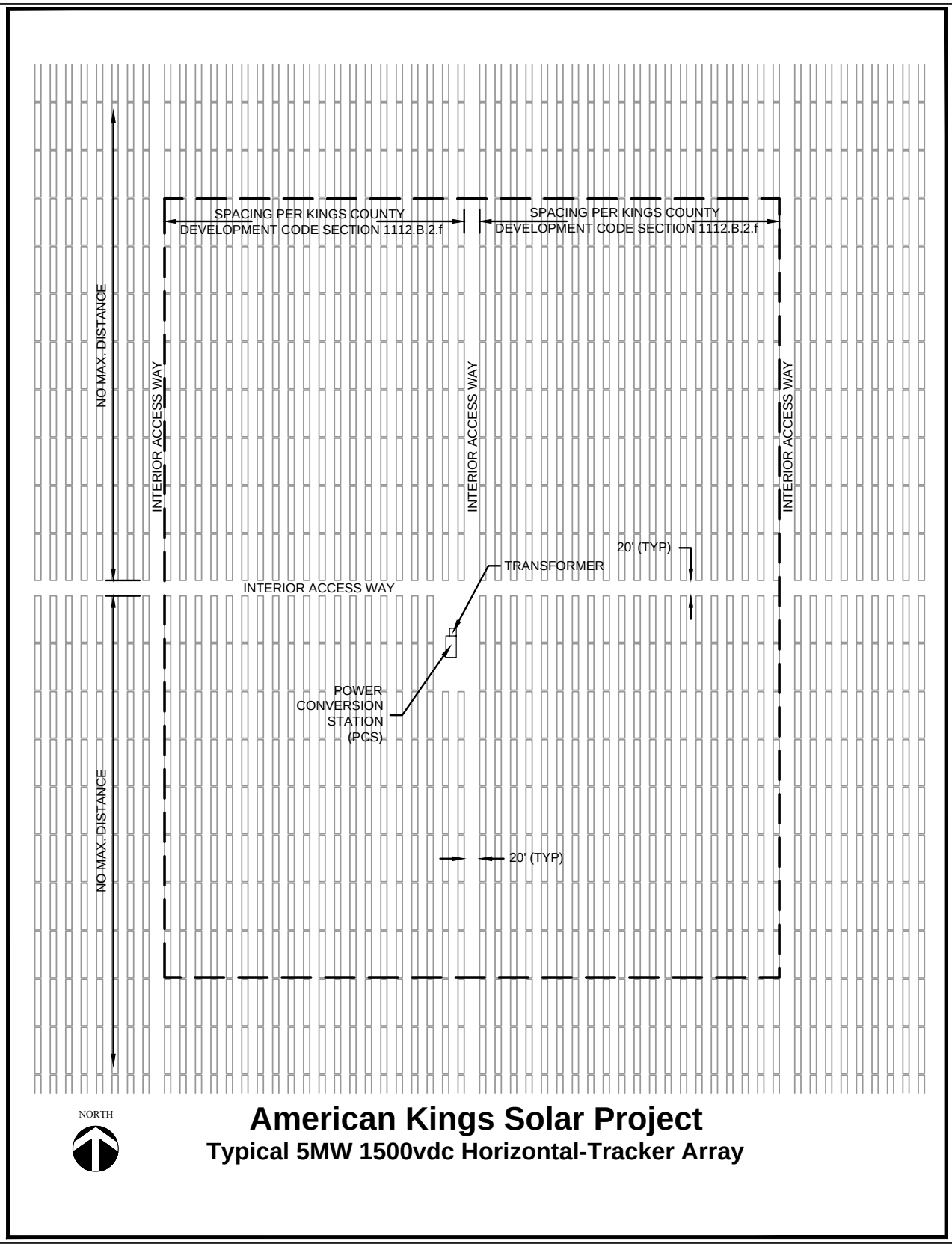


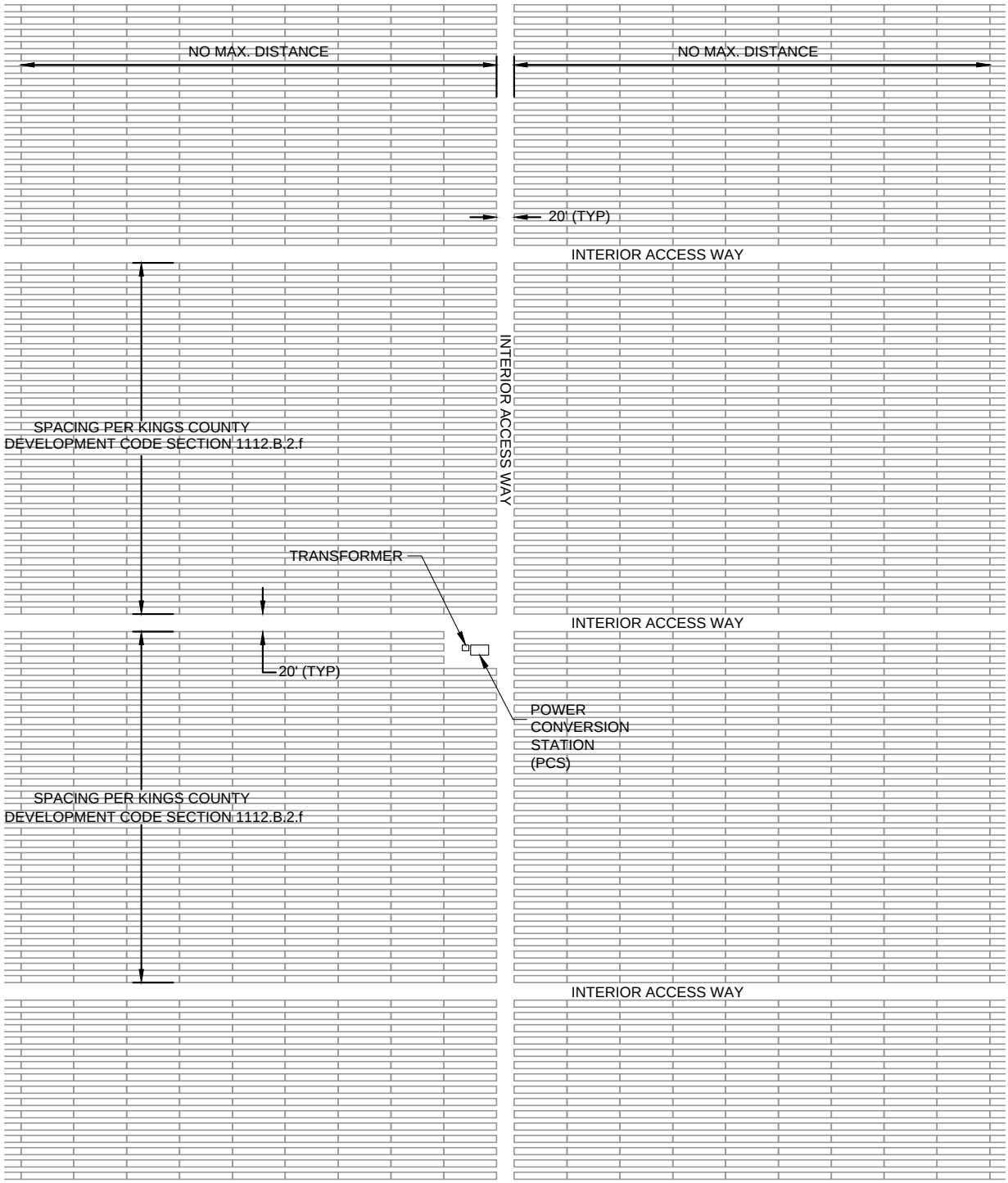
FIGURE 1-6

American Kings Solar Project

Typical Tracker Array Layout

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-6.ai (6/19/15)



NORTH

American Kings Solar Project

Typical 5MW 1500 vdc Fixed-Tilt Array

FIGURE 1-7

American Kings Solar Project

Typical Fixed-Tilt Array Layout

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-7.ai (6/19/2015)

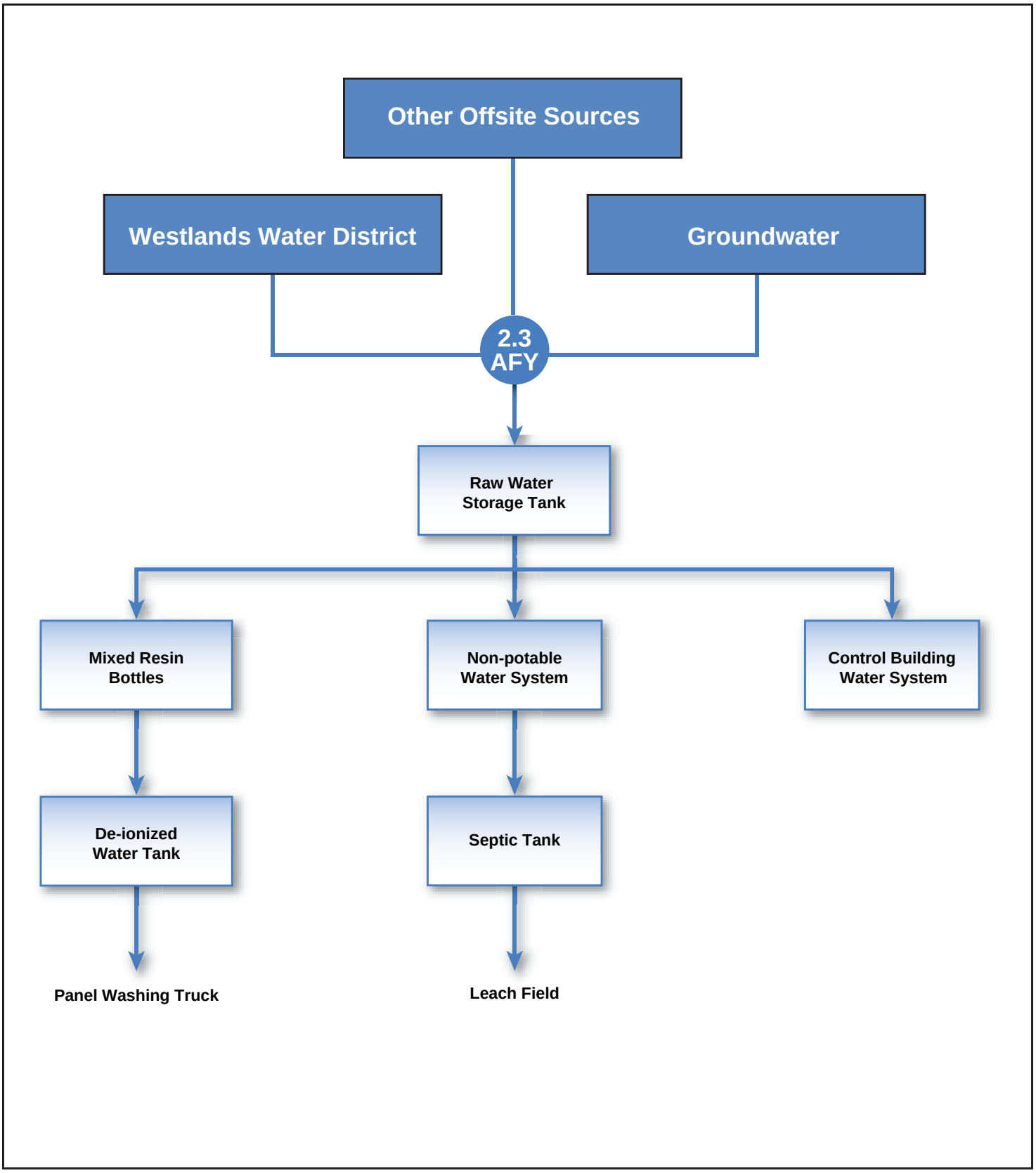


FIGURE 1-8

American Kings Solar Project
Water Flow Diagram

SOURCE: First Solar (2015). NOTES: AFY = acre-feet per year

I:\Fts1407\AI\Revised ISMND\Figure 1-8.ai (6/19/15)

VIEW FROM NORTH
SCALE: 1"=15'

VIEW FROM WEST
SCALE: 1"=15'

American Kings Solar Project

Elevation View of Operation & Maintenance Building (Control Building)

FIGURE 1-9

American Kings Solar Project

Elevation View of Operation and Maintenance Building (Control Building)

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-9.ai (6/19/15)

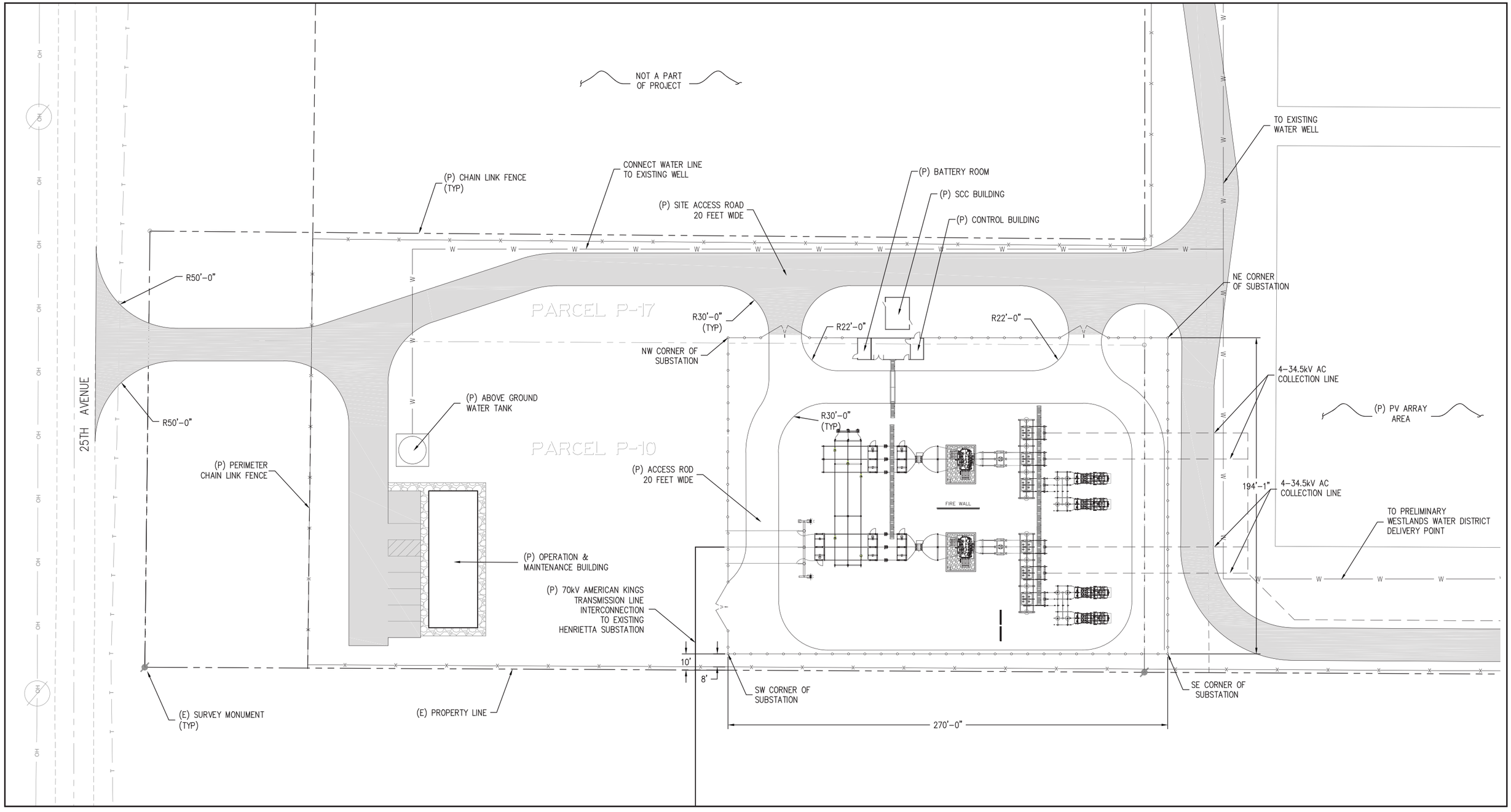
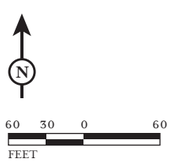


FIGURE 1-10



SOURCE: First Solar (2015).

American Kings Solar Project

Substation O&M Building Area (Control Building)

I:\Fts1407\AI\Revised ISMND\Figure 1-10.ai (6/19/15)

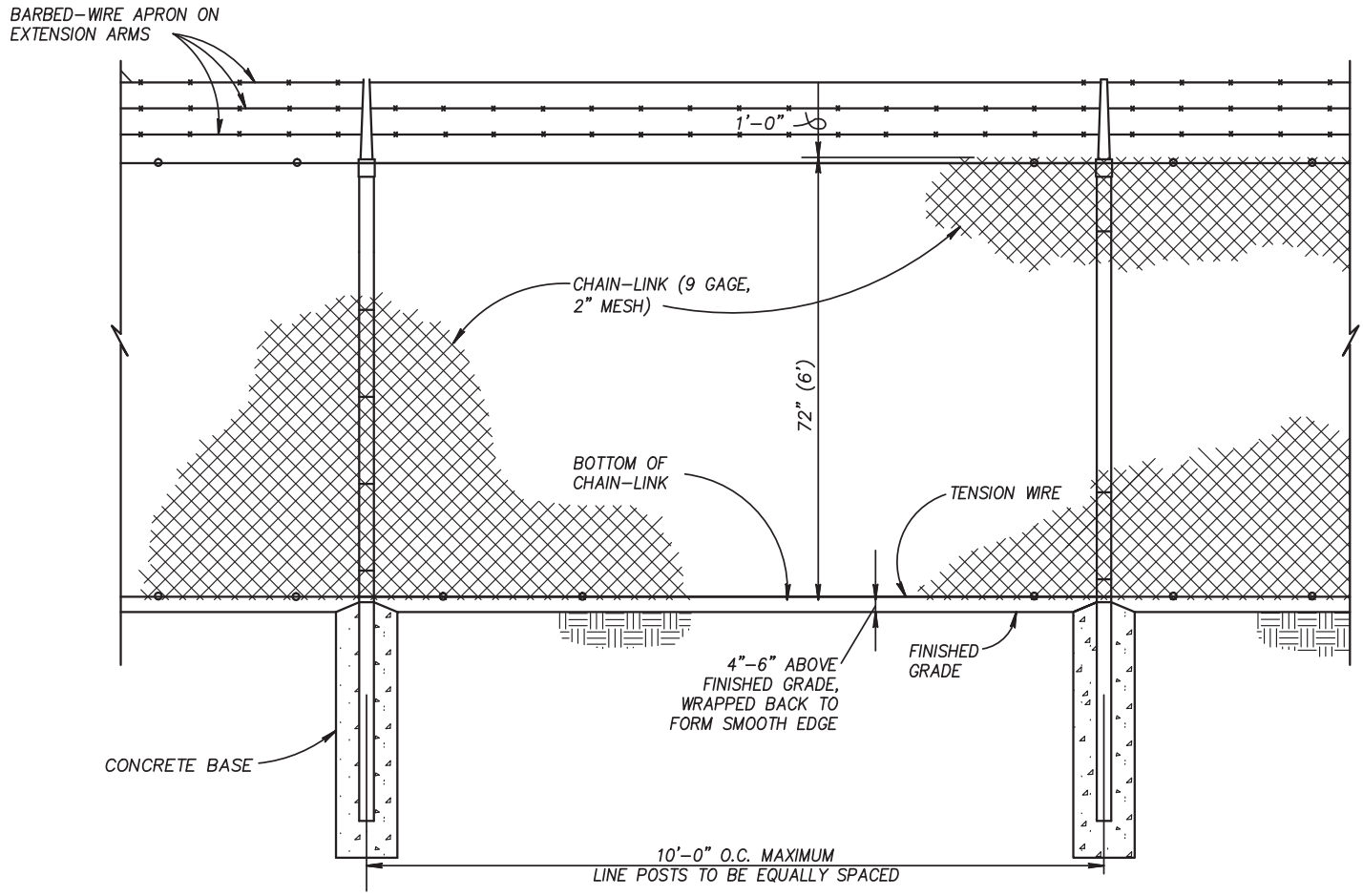


FIGURE 1-11

American Kings Solar Project

Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Gap

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-11.ai (05/14/15)

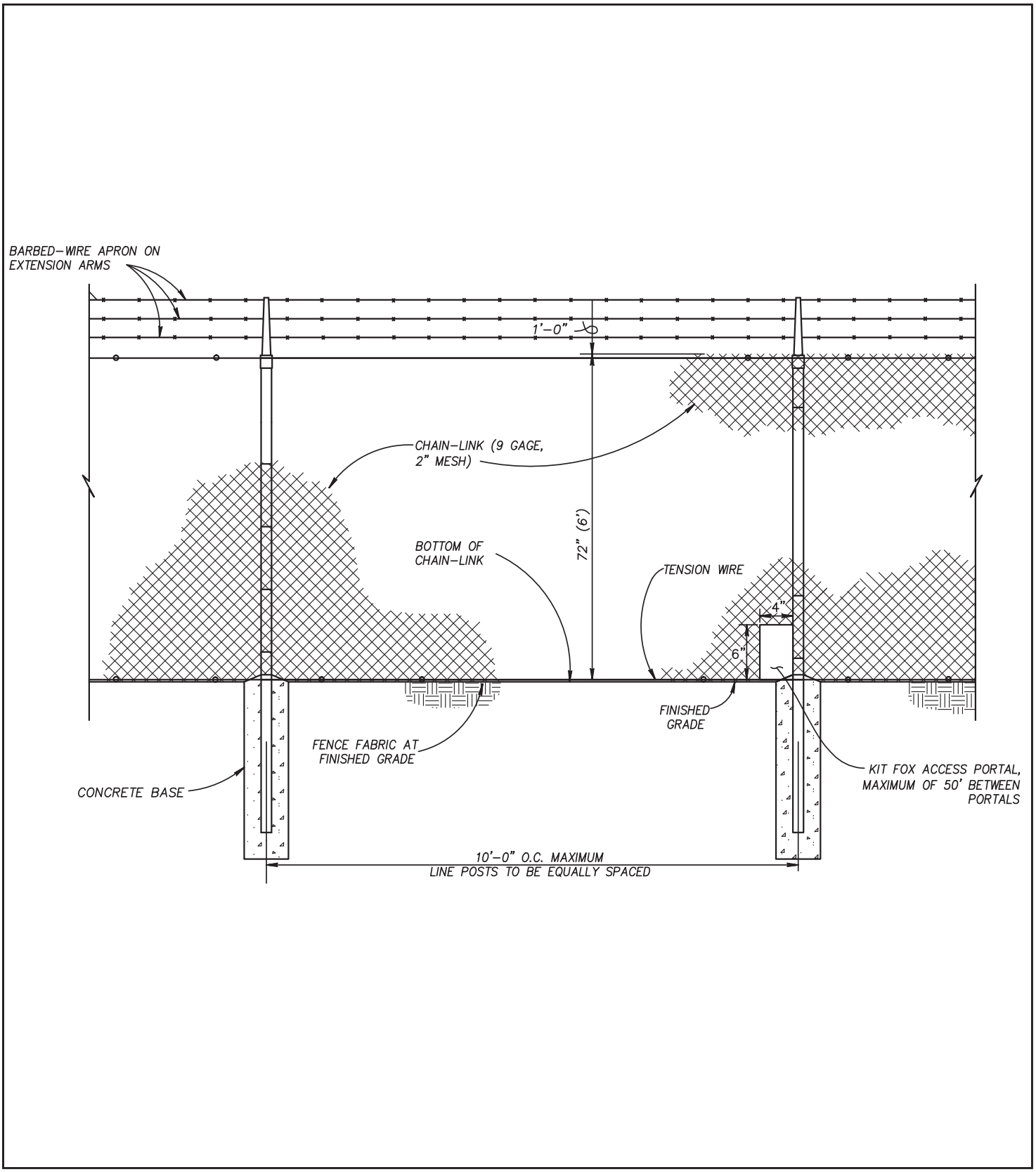


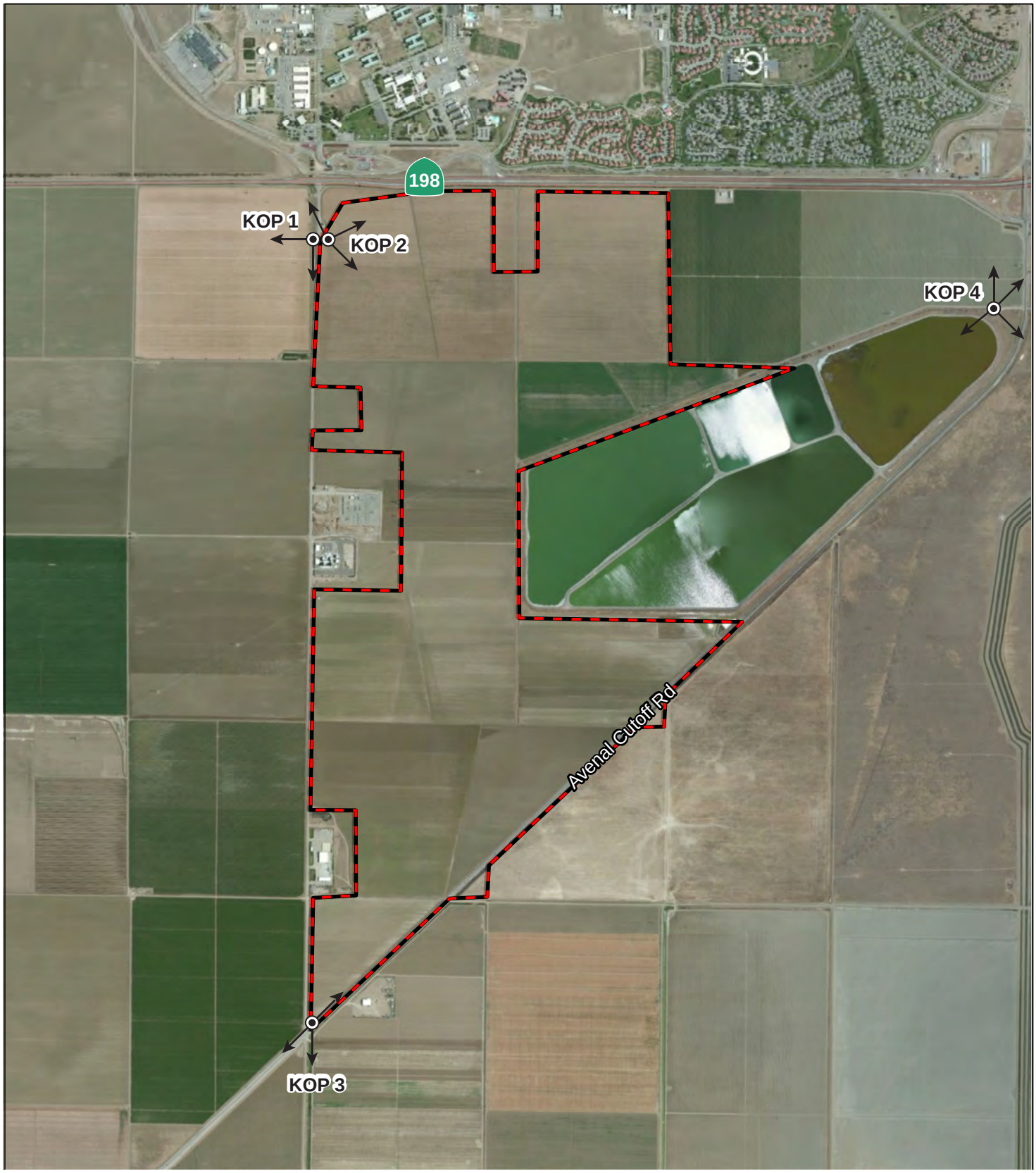
FIGURE 1-12

American Kings Solar Project

Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Portal

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-12.ai (05/14/15)



LEGEND

Project Site

FIGURE 3.1-1

N

0 1000 2000
FEET

SOURCE: ESRI Aerial Imagery (8/2010)

I:\Fts1407\AI\Revised ISMND\Figure 3.1-10.ai (6/19/2015)

American Kings Solar Project

Key Observation Points

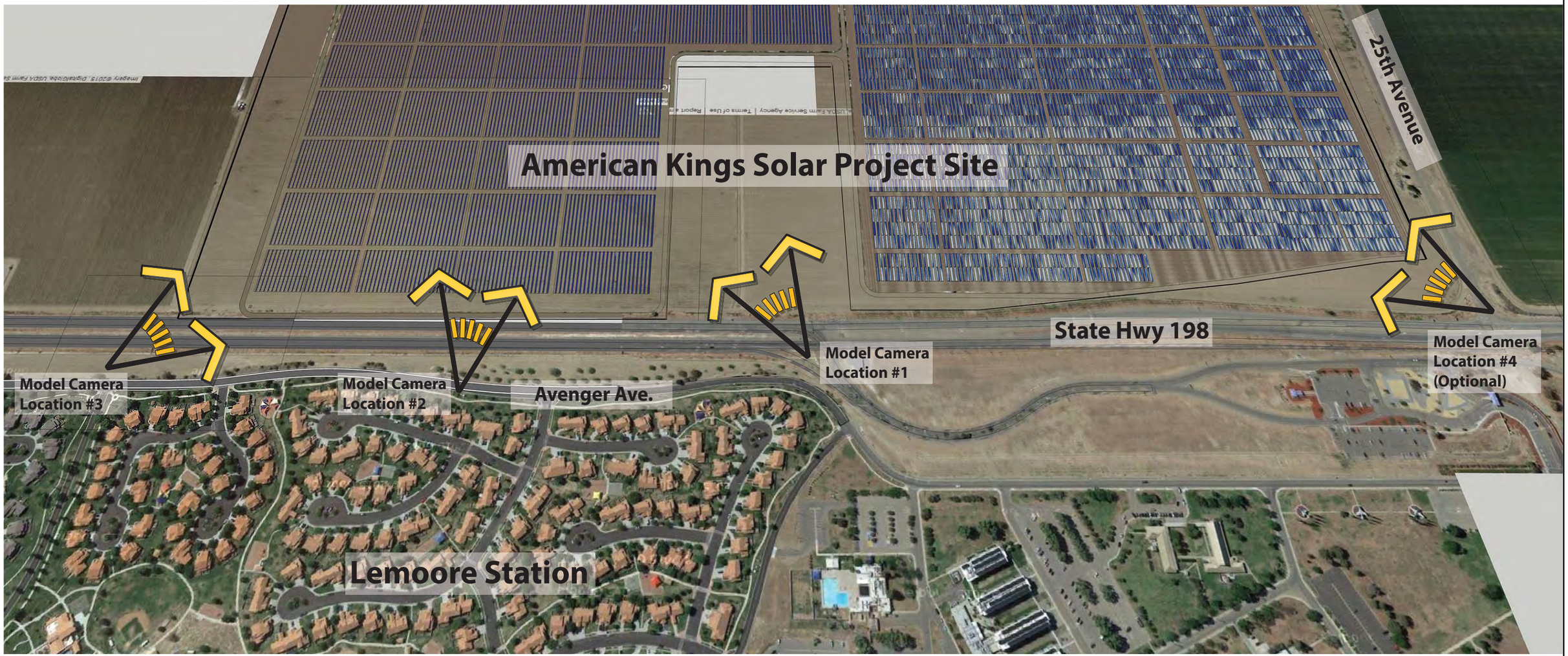


FIGURE 3.1-7

American Kings Solar Project

Camera Locations

SOURCE: Mark Thomas & Company (2015).

I:\Fts1407\AI\Revised ISMND\Linked Files\Vis_sims (10/12/2015)

FIGURE 3.1-8

American Kings Solar Project

Camera Location #1

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-9

American Kings Solar Project

Camera Location #1 With Project

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-10

American Kings Solar Project

Camera Location #2

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-11

American Kings Solar Project

Camera Location #2 with Project

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-12

American Kings Solar Project

Camera Location #3

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-13

American Kings Solar Project

Camera Location #3 with Project

SOURCE: Mark Thomas & Company (2015).

I:\Fts1407\AI\Revised ISMND\Linked Files\Vis_sims (10/12/2015)

FIGURE 3.1-14

American Kings Solar Project

Camera Location #4

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-15

American Kings Solar Project

Camera Location #4 with Project

SOURCE: Mark Thomas & Company (2015).

I:\Fts1407\AI\Revised ISMND\Linked Files\Vis_sims (10/12/2015)

V. IMPACT ANALYSIS

The initial study has been reviewed in conjunction with the Modified Project and the County has determined that none of the conditions described in the CEQA Guidelines Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred. Instead:

1. No substantial changes are proposed in the Project which will require major revisions of the previous negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. No substantial changes occur with respect to the circumstances under which the Project are undertaken which will require major revisions of the previous negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous negative declaration was adopted, and none of the following apply:

    a. The Project will have one or more significant effects not discussed in the previous negative declaration;

    b. Significant effects previously examined will be substantially more severe than shown in the previous negative declaration;

    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the Projects, but the Projects' proponents decline to adopt the mitigation measure or alternative; or

    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous negative declaration would substantially reduce one or more significant effects on the environment, but the Projects' proponents decline to adopt the mitigation measure or alternative.

As required by CEQA Guidelines Section 15162, the County has evaluated each of these circumstances below.

Comparison of the Original and Modified Project

Table 3 provides a summary of the analysis and impact conclusions for each of the CEQA thresholds topics with the Original Project implementation and Modified Project implementation. Subsection Environmental Analysis of Key topics, below, provides a discussion of resource topics where substantial revisions to analysis of CEQA thresholds analyzed in the Original IS/MND have occurred due to implementation of the Modified Project. Additionally, revisions to the Original IS/MND under each CEQA Threshold Resource Topic are shown in red-line tracking in the Revised IS/MND provided in Appendix A.

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
Aesthetics	The Project would not substantially degrade aesthetic resources in the area since the scenic value and quality of the area is low. PDF AES-1 was implemented to screen views of motorists on SR-198 and residential units on NAS Lemoore north of the site. Impacts would be less than significant.	The Modified Project is in the same location as the Original Project. To assist in evaluation of potential aesthetic impacts, visual simulations of the proposed project were developed (See Appendix A figures 3.1-7 through 3.1-15. The visual assessment prepared concluded that impacts resulting from project development would be less than significant. No PDFs or mitigation measures are warranted or necessary. Please see the revised Appendix A for more information. Impacts would remain less than significant. No further analysis on this resource topic is required.
Agriculture and Forestry Resources	The Project is located in an area of Kings County dominated by agricultural uses. Implementation of the Project would remove up to 957 acres of Farmland of Statewide Importance from the existing inventory of Kings County and California. PDF BIO-1 would be implemented so that the applicant would provide funding toward an agricultural easement. The solar use on the Project site would be consistent with approved uses on land zoned Agricultural (AX) and consistent with Kings County's Williamson Act where contracts do not need to be canceled if solar projects are developed since Section 51238 of the Government Code has determined electrical facilities are compatible within any agricultural preserve. Impacts would be less than significant. No forestland exists on or adjacent to the Project site; therefore, no impacts would occur to forestland or parcels zoned as forestland or timberland.	The entire 966-acre site is designated as Farmland of Statewide Importance according to the California Department of Conservation. The project site would be developed with a solar facility and that would include dry-farm seasonal grazing (sheep grazing) as a co-use. The project site would retain the Farmland of Statewide Importance designation and would not be converted fully to a non-agricultural use as dry-farm seasonal grazing would still occur onsite as the project is operational. Kings County in Resolution No. 13-058 indicated that certain land parcels (including the project site) under Williamson Act contracts are limited in agricultural production due to low water supply, poor quality of water supply, and degraded soil conditions. Such conditions would favor future less intense agricultural activities such as dry-farm seasonal grazing. The resolution also provides that solar uses with dry-farm seasonal grazing may be found compatible with Williamson Act contracts, provided that the applicant provides a soil reclamation plan and financial assurances and specified findings can be made. PDF AG-1, AG-2, and AG-3 have been added to ensure that the project is consistent with Kings County Resolution 13-058 in providing an Agricultural Management Plan, financial

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
		assurances, and Soil Reclamation Plan showing that the proposed concomitant commercial agricultural operation proposed is a reasonably foreseeable use of the land within the site. Additional environmental analysis on agricultural resources is found below. Impacts to agricultural resources would remain less than significant. No impact to forestland and/or timberland resources would occur.
Air Quality	Temporary increases in ambient air pollutant concentrations are anticipated to occur with Project construction activities. PDFs are included in the Project to reduce construction emissions below SJVAPCD CEQA thresholds for determining whether projects have significant adverse air quality impacts. Once operational, the Project would not result in direct emissions and operational emissions would be below CEQA and SJVAPCD thresholds. Impacts would be less than significant.	The Modified Project would have a shorter construction period lasting approximately 15 to 18 months when compared to the Original Project. This abbreviated time period would require the use of more construction equipment and more construction personnel which has the potential to increase construction air emissions when compared to the Original Project although over a shorter period of time. Modeling has been revised according to the shorter construction schedule and emissions results have been updated. Operational emissions are estimated to remain similar to those analyzed under the Original Project. Language has been added to PDF AQ-3 to ensure that the Fugitive Dust Control Plan that is prepared by the applicant incorporates all applicable control measures identified in Regulation VIII. Additional environmental analysis on Air Quality emissions is presented below. Impacts would remain less than significant with implementation of the Modified Project.
Biological Resources	The Project has the potential to impact special-status wildlife species such as Swainson's hawk and burrowing owl. PDFs BIO-1 and BIO-2 would be implemented to reduce such impacts to these special-status wildlife species. The Project, once operational, as the potential to disrupt movement of San Joaquin kit fox in its natural habitat. To reduce such an impact, PDF BIO-3 would be implemented, placing openings at the bottom of perimeter fences to allow movement of this species. PDF BIO-4 would also be implemented to ensure that preconstruction surveys for nesting birds are	The Modified Project has added more parcels (increase in acreage) within its boundary. New field surveys conducted on these parcels concluded that no sensitive species were identified on the parcels. Swainson's hawk mitigation (PDF BIO-1) has been modified based on the results of a technical study that was conducted in March 2012 for the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities regarding Swainson's hawk habitat and nesting areas. Nest reconnaissance surveys and main census surveys would be conducted to determine areas where nesting

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	completed. Impacts would be less than significant.	Swainson's hawk occurs around the Modified Project site. BIO-3 has been revised to specify that the bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). Additional environmental analysis on Biological resources is found below. Impacts would remain less than significant.
Cultural Resources	The Project is not expected to cause a substantial change in the significance of a historical or archaeological resource. Cultural resource sensitivity in the area is considered to be low since no cultural resources were identified in field surveys or during literature review of the site and surrounding parcels. The Project would include excavation and grading activities that have the potential to uncover undiscovered/unrecorded cultural resources. Therefore PDFs CUL-1 through CUL-3 and PDF PALEO-1 would be implemented. Impacts would be less than significant.	No change. An additional 9 acres has been added to the Modified Project site compared to the Original Project site. Field surveys were conducted on the newly added parcels for the presence of cultural resources. Cultural resources were not identified on these additional parcels; therefore, analysis and significance conclusions under this resource topic would be similar to the Original Project. The applicant has proposed revisions to PDF CUL-1 through CUL-3 providing more specificity. Impacts would remain less than significant with implementation of PDFs CUL-1 through CUL-3 and PDF PALEO-1. No further analysis on this resource topic is required.
Geology and Soils	The Project is not located in an Alquist-Priolo Earthquake Fault Zone nor is it susceptible to geologic hazards. A septic system would be used and would comply with County standards and would be located on soil that could support such a system. Impacts would be less than significant.	No change. The Modified Project would occur in the same geological area and would be located on the same type of soils. Impacts would remain less than significant. The applicant has proposed a minor revision to PDF GEO-1 to clarify that although the SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board, no approval of the SWPPP is required. No further analysis on this resource topic is required.
Greenhouse Gas Emissions	Construction activities associated with the Project would generate a total of 2,207 metric tons of CO_2. Such emissions would be generated by on-road vehicles as well as off-road diesel-fueled equipment. Once constructed, operational emissions would be generated by routine maintenance and	The Modified Project would implement a shorter construction period (15 to 18 months) which would utilize more construction equipment and require more construction workers (an increase in construction worker related trips). New GHG construction emissions estimates were calculated using

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	inspection activities. The Project would generate 155 metric tons per year of CO_2 during each operational year. The Project would reduce GHG emissions to the extent that it displaces energy generated from fossil-fuel combustion. The short-term construction GHG emissions would not interfere with the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Impacts would be less than significant.	CalEEMod (Version 2013.2.2) and indicated that 630 metric tons of CO_2 would be generated during year 1 and 1,960 metric tons of CO_2 would be generated during year 2 (total of 2,590 metric tons of CO_2). CO_2 emissions during construction would be substantially less with Modified Project implementation compared to the Original Project. Operational emissions of CO_2 with Modified Project implementation would be the same under both Original Project implementations. Additional environmental analysis on GHG emissions is found below. Impacts would remain less than significant.
Hazards and Hazardous Wastes	The Project is not located on a site that is included on a list of hazardous materials sites compiled by different agencies. Hazardous materials may be used during Project construction; however, precautions would be taken to avoid spills or exposure to sensitive receptors. All hazardous materials handled during construction would be in compliance with local, state, and federal standards for hazardous material handling and disposal. Impacts would be less than significant.	No change. The Modified Project is located in the same area as the Original Project and research indicates that there are no areas on or adjacent to the site listed as a hazardous materials site. Similar hazardous materials may be used during Modified Project construction; however, standards to avoid spills and exposures to sensitive receptors would be taken. The Modified Project would be in compliance with all local, state, and federal standards regarding hazardous material/waste handling and disposal. PDF HAZ-1 has been revised to note that emergency vehicle accessibility would be ensured not only to the main entrance, control building, and substation but also to the interior driveways and the portion regarding coordination of PV fire training for the Kings County Fire Department with California Office of State Fire Marshall has been removed. Fire suppression training would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities. Impacts would remain less than significant and no further analysis on this resource topic is required.
Hydrology and Water Quality	Construction activities associated with the Project would disturb the ground surface, potentially resulting in soil erosion. PDF GEO-1 would be implemented to reduce potential soil erosion. A SWPPP would be prepared and implemented and would describe erosion and sediment control	Impervious surfaces associated with the Modified Project would be similar to that of the Original Project. Over the past seven years, existing uses on the site have received water from WWD allocations and groundwater supplies. In 2014, WWD allocated no water to the site and therefore

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	measures appropriate for the Project. Groundwater would not be used for construction or operation of the Project. Project implementation would increase the total impervious surfaces on the Project site; however, implementation of the SWPPP's BMPs would minimize the potential for the Project to substantially alter the existing drainage patter. Overall impacts would be less than significant.	the site used groundwater as its sole water source. According to 2013 crop data received by the current parcel owners, existing uses on the site include 43 acres of cotton (annual water demand of 3.16 acre feet of water per acre); 342 acres of wheat (annual water demand of 2.0 acre feet per acre); 166 acres of tomatoes (annual water demand of 2.54 acre feet per acre); and, 80 acres of alfalfa (annual water demand of 4.51 acre feet per acre). Based on this information, the project site required approximately 1,600 acre feet of water in 2013 to remain agriculturally productive. The Modified Project would require a total of 250 acre feet of water through the construction period (15 to 18 months) and a total of 2.3 acre-feet of water per year during its lifetime operation. This amount is substantially less than required by the existing agricultural uses on the site. Additional environmental analysis on hydrology and water quality is found below. Impacts would remain less than significant.
Land Use Planning	The Project is located in a rural portion of Kings County south of NAS Lemoore in an area dominated by agricultural uses. The Project would not physically divide an established community. The Project would comply with all land use policies of Kings County. The Project is not located in an area designated with a habitat conservation plan or NCCP. No impacts would occur.	No change. The Modified Project is located in the same area as the Project and thus would not conflict with established Kings County land use policies or physically divide an established community. The Modified Project would not conflict with a habitat conservation plan or NCCP as it is not located within the jurisdiction of such a plan. No impacts would occur and no further analysis on this resource topic is required.
Mineral Resources	The Project is not located in an area that is designated as mineral resource zones. Implementation of the Project would not reduce the amount of mineral production in Kings County or the state. No impacts would occur.	No change. The Modified Project is located within the same area as the Project and mineral resources are not known to exist in the area. No impacts would occur.
Noise	The Project would require construction workers and equipment on the site for 35 months which would potentially lead to temporary noise increases at sensitive receptors north of the Project site. These sensitive receptors were analyzed under the	The Modified Project would include a shorter construction schedule (15 to 18 months) which could intensify construction activities on the site on a daily basis. Such an increase in construction intensity has the potential to increase noise levels at existing sensitive

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	Kings County Noise standards even though they are not located in the jurisdiction of the County (these sensitive receptors are located on NAS Lemoore). Construction noise levels at the sensitive receptors were determined to be below the County standards upon modeling and analysis. The Project would not generate enough trips to increase noise levels on surrounding roadways. Additionally features of the Project are set far enough away from the sensitive receptors so that operation of the Project would not generate noise levels at the receptors that would exceed County standards. PDF NOI-1 would be implemented to reduce construction noise levels. Impacts would be less than significant.	receptors north of the site compared to what was analyzed for the Original Project. It is noted that the closest sensitive receptors to the Modified Project site are located on NAS Lemoore and would not be under the jurisdiction of Kings County Noise standards. As noise standards for sensitive receptors on NAS Lemoore are not readily available the noise impact analysis was completed using Kings County noise standards. PDF NOI-1 would still be implemented to reduce construction noise levels at the sensitive receptors at NAS Lemoore north of the Modified Project site, although it has been revised to specify that there is a prohibition on construction during major state or federal holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). [1]A nominal amount of trips (similar to that of the Original Project) are anticipated to be generated by the Modified Project and would not increase noise levels on surrounding roadways. Impacts would remain less than significant and no further analysis on this resource topic is required.
Population and Housing	The Project would require up to 105 construction workers for approximately 35 months during construction. Operation of the Project would require 1 to 3 staff to visit the site for visual inspections and minor repairs and up to 10 staff to visit the site 4 times per year for panel washing and larger repairs. Construction workers and operational staff would come from the existing population	No change. The Modified Project would require a maximum of 1,200 construction workers for approximately 15 to 18 months during construction. Project construction work would provide short-term employment to the existing local and/or regional population base located in surrounding cities and towns (i.e., Fresno, Hanford, Lemoore, Riverdale, etc.). Operation of the Modified

[1] Of the list of federal and state recognized holidays, a United States Department of Labor, Bureau of Labor Statistics article (and supporting study) identifies the most common six holidays provided to workers are those six holidays listed above, with 95 percent of employers recognizing these holidays. NOI-1 is provided to prohibit construction on those holidays that local residents are most likely to be at home. Because of the high percentage of employers that recognize these holidays, avoiding construction activities on these holidays should reduce construction-related noise impacts to local residents.

Van Giezen, Robert W., Paid Leave in Private Industry Over the Past 20 Years, Beyond the Numbers, August 2013, Vol. 2, No. 18, Bureau of Labor Statistics, US Department of Labor (http://www.bls.gov/opub/btn/volume-2/paid-leave-in-private-industry-over-the-past-20-years.htm)

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	pool around the site and no new housing would be required. Impacts would be less than significant.	Project would require the same amount of personnel as the Original Project (up to 3 staff visual inspections minor repairs and up to 10 staff four times per year for panel washing/large repairs). Similar to the Original Project the construction workers and operational staff would be pulled from the existing population pool in the cities surrounding the site. According to the U.S. Census, the unemployment rate was 16.8 percent in Kings County in April 2010. Based on this unemployment percentage, there are a significant number of people available in the area surrounding the project site to provide construction personnel even at peak need. New housing would not be required to accommodate the construction worker and operational staff. Impacts would remain less than significant and no further analysis is required on this resource topic.
Public Services	The Project is not expected to increase the demand for fire protection services during construction and operation. PDF HAZ-1 has been incorporated into the Project design for fire suppression and prevention purposes. Construction and operation of the Project would not require an increase in police service demand as security measures would be built into the Project as a part of its design. PDF PUB-1 would be implemented to offset any potential increased police protection costs. The proposed Project would not generate an increase in population that would require an increase demand in school, park, or other public facilities. Overall impacts would be less than significant.	No change. The Modified Project is located in the same area as the Original Project and would implement the same PDFs to offset impacts to public services. The Modified Project would also implement similar design features that would help in fire suppression and prevention. The Modified Project would not increase population in the area (as the construction workers would more than likely be drawn from nearby cities and towns) and would therefore not generate a need for new schools, parks, or public facilities to be developed or expanded. Impacts would remain less than significant and no further analysis is required on this resource topic.
Recreation	The Project would not generate a substantial increase in population during construction or operation to warrant the development of new recreational areas. Existing recreational areas in the Project area may be used during by workers during Project construction; however, such use would not require the development of a new recreational area nor would it cause substantial physical deterioration of the facility. Overall impacts would be less than significant.	No change. The Modified Project would require more construction workers during a shorter construction period. Construction workers may temporarily use nearby recreation areas during the construction period; however, such usage would not be enough to warrant development of a new recreation area or result in substantial physical deterioration of nearby recreational facilities. Impacts would remain less than significant and no further analysis would be

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
		required on this resource topic.
Transportation/Traffic	During Original Project construction there would be 105 construction workers commuting to the site daily and there would be 12 daily construction equipment/material deliveries to the Project site. Level of Service (LOS) ratings on surrounding roadway segments would not be degraded with the addition of average daily trips generated by Project construction. Operation of the Project would require very few staff (i.e., 1 to 3 workers would be onsite daily, with crews up to 10 people needed for 2 weeks of panel washing up to 4 times a year, along with 10 water trucks.) and would not degrade the existing LOS on surrounding roadways. Impacts would be less than significant.	The Modified Project would have a shorter construction period (15 to 18 months) and would require more construction workers per work day (a maximum of 1,200) and an increase in daily construction equipment/material deliveries. LOS ratings on surrounding roadways would not be degraded with the increased amount of traffic generated by the Modified Project. Operation of the Modified Project would be similar to the Project in the amount of personnel needed on-site. Operation of the Modified Project would not generate an increase in average daily trips on local roadways; and therefore, would not degrade the existing LOS ratings on the surrounding roadways. Revisions to the Original IS/MND can be viewed in Appendix A. Impacts would remain less than significant and no further analysis is warranted on this resource topic.
Utilities and Service Systems	The Original Project would require water during construction for dust suppression activities. This water would percolate into the ground requiring no wastewater treatment. The Original Project would install a septic system for wastewater generated by the control and operation building which would be permitted by Kings County. Wastewater treatment requirements would not be applicable to the Original Project. Portable toilets would be used during Original Project construction and water used during operation would be captured onsite and allowed to percolate into the soil. New or expanded water treatment facilities would not be required. A SWPPP would be developed as required by SWRCB for new industrial facilities that may generate storm water runoff. The Original Project would obtain water for construction and operational activities through WWD. A minimal amount of water would be needed for construction and 2.3 AFY would be needed during Original Project operation. The applicant would not use groundwater resources for the Original Project. Solid waste generated	No change. The Modified Project would have the same impacts on Utilities and Service Systems as the Original Project. During construction activities water would percolate into the existing onsite soils and would not need to be treated by an outside facility. A septic system would be installed to capture wastewater from the operational activities occurring onsite. The Modified Project would include the development of retention ponds to accommodate stormwater runoff. Water and wastewater treatment facilities would not need to be expanded nor would new facilities have to be built to accommodate the Modified Project. The Modified Project would acquire water for construction and operational activities from an onsite well and/or WWD and/or other offsite sources. Project construction would require 250 acre feet of water over a 15 to 18 month period while operation would require 2.3 acre-feet of water per year. Similar to the Original Project, the Modified Project would require less water for construction and yearly operation than is demanded for the agricultural uses that currently exist onsite.

Table 3: CEQA Threshold Comparison of the Original Project and Modified Project Impacts

Resource Topic	Original Project IS/MND CEQA Threshold Analysis and Conclusion	Modified Project IS/MND CEQA Threshold Analysis and Conclusion
	during construction and operation would be transported to the Kings County Waste and Recycling Authority Materials Recovery Facility for sorting and/or recycling, or transported to the Chemical Waste Management Landfill site. Both of these facilities currently have enough remaining capacity to accommodate Original Project generated solid waste. Overall impacts to Utilities and Service Systems would be less than significant with Original Project implementation.	The Modified Project would be served by the same solid waste facilities as the Original Project. Impacts would remain less than significant.

Environmental Analysis of Key Topics

The Modified Project has been analyzed and compared to the Original Project based on CEQA Guidelines. Analysis of key resource topics that have been revised due to Modified Project implementation are further described below. These modified resource topics include:

- Aesthetics;
- Agricultural Resources;
- Air Quality;
- Biological Resources;
- Greenhouse Gas Emissions, and,
- Hydrology and Water Quality

Revisions to the Original Project IS/MND under each CEQA Threshold Resource Topic are shown in red-line tracking in the Revised IS/MND provided in Appendix A. In many cases, no significant changes have occurred since the Original IS/MND was prepared with respect to the setting or impact analysis for certain resource topics; accordingly, no modifications are proposed in these sections of the Revised IS/MND.

Aesthetics

The Modified Project is located in an area of Kings County that is dominated by agricultural uses with several large structures, such as the Henrietta substation/power plant facility, an agricultural processing plant, the existing Kent South solar facility, and NAS Lemoore; and therefore, lacks distinguishable visual characteristics and quality of features in the landscape. The nearest sensitive receptors are motorists traveling along SR-198 north of the project boundary and the residential units on NAS Lemoore north of SR-198. Motorists on SR-198 and residents occupying the residential units

north of SR-198 would notice the change in visual appearance of the project site during construction and its development from active agricultural land to a solar facility with dryland sheep grazing. The project site does not contain high quality (vivid, intact, and unified) visual resources that are distinguishable from nearby and surrounding parcels and sensitive receptors would not be impacted by the visual changes on the project site.

In the analysis presented in the Original IS/MND the project applicant was to install a perimeter chain link fence that would act as a security feature to prevent trespassers from accessing the project site. Under PDF AES-1 the project applicant had proposed to add a vegetative screen on the portion of the perimeter fence that was on the north side of the project boundary to reduce potential visual impacts to sensitive receptors (motorists on SR-198 and residents on NAS Lemoore) viewing the project site. To assist in assessment of potential aesthetic impacts from project development, visual simulation was performed by Mark Thomas & Company using the computer-aided design (CAD) drawings provided by the applicant. Figure 3.1-7 in Appendix A shows the locations of the four camera vantage points used to photograph the site. Figures 3.1-8, 3.1-10, 3.1-12, and 3.1-14 in Appendix A show that the scenic quality of the project site is low. There are no scenic resources in the Project area nor are there scenic highways in the area. The Project site is not part of a scenic vista nor is it located within the viewshed of a scenic vista. Although the Project setting is predominantly rural and agricultural, there are large structural elements in the immediate vicinity, including NAS Lemoore naval training facility; an agricultural processing plant; and the Henrietta substation/power plant complex to the west along 25th Avenue. In addition, solar arrays and substation associated with the Kent South solar facility represent structural elements in the otherwise agricultural setting. Due to the relatively low height of the Project, the Project (during construction and operation) would not impact views of the Kings River or hills within Kings County. Figures 3.1-9, 3.1-11, 3.1-13, and 3.1-15 in Appendix A show the landscape with the addition of the project. A careful and independent comparison of the proposed project's visual characteristics along with the visual quality of the surrounding area with the Aesthetics thresholds as established by Appendix G of the CEQA Guidelines, as amended, reveal that no potential visual/aesthetic impacts resulting from project's implementation would reach a level of (CEQA) significance; therefore, no means of mitigation either through the application of a PDF or otherwise is warranted or necessary.

In addition to analyzing the visual simulations, the applicant contacted NAS Lemoore in order to coordinate regarding potential aesthetic impacts. NAS Lemoore communications provided in Appendix C did not identify potential aesthetic impacts to the base due to project implementation. Representatives from NAS Lemoore did not recommend mitigation (such as screening on the north side of the project site) be implemented.

The Project complies with all applicable plans and policies. Impacts would be less than significant without mitigation, and implementation of PDF AES-1 would not be required to reduce impacts to a less than significant level. Therefore PDF AES-1 has been removed from the Revised IS/MND and the Modified Project would not need to implement this project design feature. Impacts to visual resources with implementation of the Modified Project would remain less than significant.

Agricultural Resources

The Modified Project is located in the same area as the Original Project; however, the footprint of the site has been expanded to include four additional parcels. The parcels that have been added to the

footprint of the Modified Project include: APNs 024-250-001; 024-250-013; 024-250-014; and 024-210-002. The addition of these parcels has increased the site from 957 acres (Original Project; 978 acres were studied in the Original IS/MND) to 966 acres (Modified Project). As with the Original Project, the additional parcels are all under Farmland Security Zone (Williamson Act) contracts.

Kings County adopted Resolution No. 13-058 on November 26, 2013 amending the County's Implementation Program entitled "County of Kings Implementation Procedures for the California Land Conservation 'Williamson' Act of 1965 Including Farmland Security Zones." Resolution No. 13-058 recognizes "…that due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions, and regulatory burdens, circumstances exist on agricultural preserves located within the portion of Kings County south of State Route 198 and west of State Route 41 that limit the use of much of the land within that territory for agricultural activities, such that it is reasonably foreseeable that certain parcels located there that currently are used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing. Notwithstanding the present agricultural use of the land, solar farming as a concomitant use with dry farm seasonal grazing or a similar commercial agricultural activity may be deemed a compatible use within this region of the County if the applicant provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, and taking into account surface water availability, ground water quality and availability, and soil conditions, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land."

A technical report titled "Soil and Water Analysis Report for American Kings Solar Project" was prepared in September 2014 to provide analysis of soil and water conditions at the proposed Project site (Dellavalle, et. al. 2014 – attached as Appendix B in this Addendum). The report included review of publicly available information and in-field soil samples collected and analyzed from the project site to determine the existing and reasonably foreseeable quality of the site for sustaining agricultural production. The report concluded the following regarding soil conditions, water availability and future agricultural uses on the proposed project site:

- The project site is not suitable for sustaining long-term agricultural crop production due to saline-sodic soils that would cause agricultural crop damage located on the site;
- Poor groundwater quality, insufficient availability of groundwater, and curtailments of surface water allocations would not support sustained agricultural activities on the Project site;
- Based on poor soil conditions and insufficient future supply of water for irrigation a reasonably foreseeable agricultural use of the project site would be dry land farming with seasonal grazing.
- Since the proposed project is compatible for use with dry-farm seasonal grazing or a similar agricultural activity, the project is a compatible use with a Farmland Security Zone contract pursuant to Government Code Section 51238.1(a) and County of Kings implementation Procedures for the California Land Conservation "Williamson" Act of 1965.

As analyzed below, this Addendum concludes that implementation of the Modified Project would not result in new or substantially more adverse significant impacts than what was previously described in the Original IS/MND.

a) Would the proposed project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

LESS THAN SIGNIFICANT IMPACT. The entire 966-acre project site is designated as Farmland of Statewide Importance according to the most current data available from the California Department of Conservation Farmland Mapping and Monitoring Program. As described above, Kings County adopted Resolution No.13-058, recognizing that certain parcels south of State Route 198 and west of State Route 41 (which includes the area of the project site) have insufficient water supplies (both surface and groundwater), poor water quality, and poor soil quality that limit the use of much of the land within that territory for intensive agricultural activities. Based on these conditions, the County has determined it is reasonably foreseeable that certain parcels located in this area currently used for intensive agricultural activities would be used in the near future for less intensive uses, including dry farm seasonal grazing. A soil and water analysis report was prepared for the proposed project concluding that soil conditions, water quality, and surface/groundwater availability make the project site unsuitable for sustaining long-term agricultural crop production. Based on the conditions of the soils onsite and existing and future water availability to the site, and in accordance with Resolution No. 13-058, a reasonably foreseeable agricultural use of the site would be dry-farm seasonal grazing.

The proposed project would include the development of a solar facility and would allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously on-site for the duration of operational activities. Since the project site would continue to operate with a less intensive agricultural use, the land within the project site would not have to be redesignated from Farmland of Statewide Importance to a non-agricultural use. Impacts would be less than significant.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?

LESS THAN SIGNIFICANT IMPACT. The proposed solar use would be consistent with Kings County's AX agricultural zoning designation. Article 4, Table 4-1 of the Development Code lists "wind and solar PV electrical generating facilities that commercially produce power for sale, which comply with all local, regional, state and federal regulations" as being a conditional use subject to Planning Commission approval within the Exclusive Agricultural (AX) zone district.

The solar farm and associated elements proposed for the project site would also be consistent with Kings County's Williamson Act implementation procedures. As described above, on November 26, 2013, Kings County passed Resolution No. 13-058 recognizing that certain land parcels within the County south of State Route 198 and west of State Route 41 that are under Williamson Act (Farmland Security Zone) contracts are limited in agricultural production due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions, and regulatory burdens. The Resolution indicates that these land parcels have such poor soil and water quality and insufficient water supplies (groundwater and surface water) to irrigate, that it is reasonably foreseeable that certain parcels located in this area that are currently used for more intensive agricultural activities would be used in the near future for less intensive uses, including dry farm seasonal grazing. The Resolution provides that solar uses (solar farming) with dry farm seasonal grazing or similar commercial agricultural activity may be compatible uses under the Williamson Act as long as the applicant for such a project provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, that the proposed concomitant

commercial agricultural operation is a reasonably foreseeable use of the land (taking into account surface water availability, groundwater quality and availability, and soil conditions).

The soil and water analysis report that was prepared for the proposed project (and is provided in Appendix B of the Addendum) fulfills the requirements of Resolution No. 13-058 in demonstrating that poor soil and water quality, and insufficient supplies of surface and groundwater currently exist and that the proposed concomitant commercial agricultural operation (solar facility and dry-farm seasonal sheep grazing) would be a reasonably foreseeable use of the land at the project site. The field analysis that was conducted as part of the soil and analysis report indicated that saline-sodic soils found at the project site are not appropriate for most agricultural crops and would cause damage to many of the crops grown on site and in the region. Groundwater at the site is of poor quality and was found to have salinity, boron, chloride, and sodium concentration that are not recommended for most tolerant crops. Groundwater availability in the existing aquifer is insufficient to accommodate continued agricultural production on the site and surface water availability is insufficient due to limited surface water allocations from Westlands Water District. The Project applicant intends to develop the solar facility on the project site and allow for dry farm seasonal grazing (with sheep) to occur for the duration of Project operation which would be a foreseeable use per Resolution No. 13-058 criteria. Per the criteria of Resolution No. 13-058, the project applicant would implement PDF AG-1, AG-2, and AG-3, which would provide an Agricultural Management Plan and Soil Reclamation /Financial Assurances Plan as a condition of approval for project implementation. Based on the results from the soil and water analysis, compliance with Resolution No. 13-058, and implementation of PDF AG-1, AG-2, and AG-3, the proposed project would not conflict with Williamson Act contracts. Impacts would be less than significant with mitigation incorporated.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest land?

LESS THAN SIGNIFICANT IMPACT. As of 2013, the project site was occupied by 43 acres of cotton, 342 acres of wheat, 166 acres of tomatoes, and 80 acres of alfalfa. The soil and water analysis report that was prepared for the proposed project concluded that based on the existing condition of the saline-sodic soils, poor surface and groundwater quality, and insufficient supply of surface- and groundwater for crop irrigation, the project site would not be suitable for sustaining long-term agricultural crop production but would be suitable for dry-farm seasonal grazing. The project applicant intends to develop the solar facility on the proposed project site and allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously for the duration of project operation. Therefore project implementation would not result in the conversion of farmland to non-agricultural uses as dry-farm seasonal grazing would continue to occur on the site through the duration of project operation (at least 30 years). A draft Grazing Management Plan is being prepared for the proposed project site; this plan will be finalized, submitted to the Kings County Community Development Agency for approval prior to commencement of construction; and will be implemented during the operational lifetime of the solar facility onsite.

The proposed project is considered compatible with the adjacent electrical infrastructure, public land (wastewater ponding basins), and surrounding agricultural uses, and is consistent with the Kings County General Plan Exclusive Agriculture land use designation and the AX zoning designation.

Although further solar and other development could take place in Kings County and in the general area of the proposed project, implementation of the proposed project would not directly or indirectly cause the conversion of existing farmland to a non-agricultural use. The soil and water analysis report prepared for the proposed project also concluded that the conversion of the parcels within the project site from irrigated agriculture uses to a solar facility and dry-farm seasonal grazing would require less water supply than is currently demanded onsite which would provide for increased water availability for use on surrounding parcels under agricultural production. Impacts would be less than significant.

Air Quality

The Modified Project would have a shorter construction period as the Original Project thus changing the air quality emissions that may be generated during the construction period. The construction period for the Modified Project is expected to occur over a 15 to 18 month period and is anticipated to use the same type of construction equipment as the Original Project; however, the amount of construction equipment that would be used would be greater than the amount previously analyzed for the Original Project. Since the construction dates are unknown, the air quality impacts were modeled in a worst-case scenario assuming 12 months of construction in a single calendar year.
To evaluate on-road vehicle emissions, the California Emissions Estimator Model was used which incorporates emission factors from the EMFAC2011 Motor Vehicle Emission Factor Model as well as ARB's OFFROAD2011. A summary of the estimated construction exhaust emissions is presented in the table below.

Table 4: Unmitigated Construction Exhaust Emissions Estimates Summary in Tons Per Year

Construction Year	ROG	NO_x	PM_{10}	$PM_{2.5}$
Year 1	0.51	4.7	0.22	0.20
Year 2	1.3	5.6	0.29	0.27
SJVAPCD CEQA Thresholds of Significance	10	10	N/A	N/A
SJVAPCD ISR Threshold	N/A	2	2	N/A

Source: LSA Associates, Inc. (June 2015).
Note: This modeling is based on a maximum of 1,200 construction workers.
Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the California Air Resources Board which created the model determined that the 2007 version included an error that was overestimating emissions of NOx and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Additionally, newer equipment used in the OFFROAD2011 model has lower emission rates. The analysis used updated equipment emission factors more representative for the proposed year for start of construction, as well as the Project commitment to use a "Clean Fleet." Compliance will be documented as required by SJVAPCD Rule 9510 (ISR). According to the SJVAPCD, the Clean Fleet option under Rule 9510 (ISR) would require construction emissions to be reduced by 20 percent for NOX and 45 percent for PM10. When the Clean Fleet option is selected, the District will require a "monitoring and reporting schedule" under the Rule 9510 with detailed record keeping that gets reported back to the district for each phase of construction. Compliance with this rule is required by PDF AQ-2.

N/A = SJVAPCD has not established a threshold for this pollutant.

The results presented in Table 4 show that unmitigated emissions associated with construction of the proposed project would be below the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Thresholds of Significance for each construction year evaluated. Therefore, construction impacts would be less than significant.

The table above shows that the project construction emissions would exceed the Indirect Source Review (ISR) threshold of 2 tons per year for NO_x in both years. As such, the Project applicant would submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD. To comply with Rule 9510 for reducing construction NO_x emissions, the construction equipment used for the project would meet the 20 percent reduction in NO_x emissions compared to the statewide average. The construction fleet information to support this reduction would be submitted to SJVAPCD prior to commencing construction. ISR would not be applicable to the PM_{10} emissions because the exhaust PM_{10} emissions would be below the 2 tons per year ISR threshold for each construction year.

The Modified Project is estimated to generate 0.05 tons per year (tpy) of ROG; 0.7 tpy of NO_x; 0.03 tpy of PM_{10}; and, 0.03 tpy of $PM_{2.5}$ during the lifetime of its operation. Similar to the Original Project, the Modified Project (during its lifetime operation) would not exceed SJVAPCD CEQA Thresholds of Significance for air emissions and therefore impacts due to operation of the Modified Project would be less than significant.

The Modified Project would implement the same PDFs as the Original Project. However, PDF AQ-3 has been modified to ensure that the Modified Project is compliant with Regulation VIII in the Fugitive Dust Control Plan that is prepared. The modified version of PDF AQ-3 is provided below under the subheading titled "Modified Project Design Features."

Biological Resources

The Modified Project is located in the same area as the Original Project; however, the footprint of the site has been expanded to include four new parcels. The parcels that have been added to the footprint of the Modified Project include: APNs 024-250-001; 024-250-013; 024-250-014; and 024-210-002. The addition of these parcels has increased the site from 957 acres (Original Project; 978 acres evaluated in Original IS/MND) to 966 acres (Modified Project). Additional biological surveys were conducted by qualified field biologists on December 5, 2014 to assess the biological resources potentially occurring at the additional parcels added to the Modified Project. The biological survey conducted on December 5, 2014 indicated that no additional special status species were located onsite compared to the survey findings for the Original Project.

In March 2012, a report titled "The Distribution of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities" was prepared for three solar projects (totaling approximately 1,422 acres) adjacent to the western boundary of the proposed project site. This report described the results of breeding season surveys of the state-threatened Swainson's hawk (*Buteo swainsoni*) in the vicinity of these projects in Kings County. The survey data that was gathered for this report assessed the impact of these projects, pursuant to CEQA, on the local and regional Swainson's hawk nesting population. The study area covered in this report for the projects included 254,805 acres of land. The report indicated a relatively sparse Swainson's hawk nesting population within the 254,805 study area, but with a substantially greater nesting density in the eastern half of the study area. The assessment was initially conducted using the entire study area to compare availability and species requirements followed by the same assessment within a smaller subarea that is more representative of the nesting distribution. The subarea was defined by including all of the lands east of the Kings River corridor and including all lands approximately 4 miles west of the Kings River corridor to ensure that the project area is within the assessment subarea. The western boundary was drawn by extending a line 4 miles due west of the

Kings River at the center of the project site, and then using a straight northwest-southwest line that roughly parallels the Kings River. This boundary incorporates all of the proposed project sites and is from 3 to 5 miles west of the Kings River along its length.

A total of 27 nesting territories were confirmed, however, only 5 were located within 5 miles of the solar facilities with the bulk of the nest sites (22) within 5 to 10 miles of the solar facilities, representing a nesting density of 0.07 nests per square mile within the 254,805 square foot study area. The report also indicated that 229,922 acres (90.2 percent of the study area) was considered suitable foraging habitat for Swainson's hawk and the highest value habitat (alfalfa and other hay fields and irrigated pastures) is found primarily east of the Kings River. The survey concluded that the loss or alteration of 1,422 acres of agricultural land would not affect the distribution or abundance of nesting Swainson's hawks in the study area. Since it represented only 0.6 percent of the available foraging habitat within the study area, its conversion was considered negligible relative to availability, and particularly with regard to the relatively small number of Swainson's hawks that nest in the study area. Mitigation measures were not included as part of the report since foraging and nesting habitat was determined not to be significantly impacted by the solar projects.

This report also conducted a cumulative assessment which included 9 proposed solar sites (including the proposed Project site) within the study area, totaling 4,670 acres or approximately 1.8 percent of the study area. In the study area, the cumulative assessment determined that following implementation of all of the proposed projects, approximately 98 percent of the total available foraging habitat and approximately 95.4 percent of the surplus portion would remain as suitable habitat for Swainson's hawk.

In the subarea, the cumulative assessment determined that following implementation of all the proposed projects, approximately 96.3 percent of the available foraging habitat and 70.4 percent of the surplus portion would remain as suitable foraging habitat, which suggested that the cumulative loss of foraging habitat within the assessment subarea would not affect the existing Swainson's hawk population. Overall, the report indicated that cumulative impacts on Swainson's hawk foraging and nesting habitat would be less than significant.

The biological surveys that were conducted for the Original Project (May 26-27, 2010) included observed Swainson's hawk foraging at the site. Swainson's hawk were not observed foraging on the site when the December 5, 2014 survey was conducted; however, suitable Swainson's hawk nesting habitat was determined to be located within 1 mile of the site (Swainson's hawk were not observed nesting on the site).

Analysis and impact conclusions under CEQA thresholds a, b, c, d, e, and f would remain the same as described in the Original IS/MND when the Modified Project is implemented. PDF BIO-1 has been revised to pertain only to Swainson's hawk and biological resources and not to act as dual mitigation for potential impacts to agricultural uses (as there are no significant impacts to agricultural resources as describe above). PDF BIO-1 has been revised to incorporate methodologies used for the Swainson's hawk study discussed in the previous paragraph. The revised PDF BIO-1 is presented below under the subheading Modified Project Design Features.

Greenhouse Gas Emissions

The Modified Project is located in the same area as the Original Project and therefore is under the jurisdiction of San Joaquin Valley Air Pollution Control District and Kings County in regards to Greenhouse Gas (GHG) Emissions. The Modified Project would have a shorter construction period than the Original Project, therefore demanding the use of more construction equipment onsite and more construction workers (leading to an increase in construction worker trips to and from the site).

GHG emissions would be produced as a result of the construction and operation of the proposed project. The majority of GHG emissions would be temporary and occur during the construction phase. Since the construction dates are unknown, the air quality impacts were modeled in a worst-case scenario assuming 12 months of construction in a single calendar year. These emissions would result from the use of on-road and diesel-fueled off-road equipment. GHG emissions for the entire construction phase were estimated and are presented in Table 5. Detailed assumptions and calculations for estimating purposes are included in Appendix A Revised IS/MND.

The GHG construction emissions estimates were calculated using CalEEMod (Version 2013.2.2). CalEEMod stands for "California Emissions Estimator Model," and is an air quality modeling program that estimates air pollution emissions in pounds per day (lbs/day) or tons per year (tpy) for various land uses, area sources, construction projects, and project operations. Mitigation measures can also be specified to analyze the effects of mitigation on project emissions. CalEEMod estimates a project's CO_2, N_2O, and CH_4 emissions from area and mobile sources and as a result of energy and water consumption and waste generation. Additionally, the CalEEMod utilizes ARB EMFAC2011 for its on-road emissions estimates. This model estimates 30 percent less emissions than the EMFAC2007. Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the 2007 version included an error that was overestimating emissions of NOx and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Newer equipment also has lower emission rates. In addition to this, it was assumed that all trips to the site would be on paved roads which contribute to an overall lower estimation of emissions than was projected for the Original Project.

Table 5: Project Construction Greenhouse Emissions

Construction Year	Annual Regional Pollutant Emissions (MT/year)			
	CO_2	CH_4	N_2O	CO_2e
Year 1	630	0.10	0	630
Year 2	1,960	0.21	0	1,960

Source: LSA Associates, Inc. (June 2015).
Note: This modeling is based on a maximum of 1,200 construction workers.
Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the California Air Resources Board which created the model determined that the 2007 version included an error that was overestimating emissions of NOx and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Additionally, newer equipment used in the OFFROAD2011 model has lower emission rates. The analysis used updated equipment emission factors more representative for the proposed year for start of construction, as well as the Project commitment to use a Clean Fleet (compliance to be documented as required by SJVAPCD Rule 9510).
total construction GHG emissions = 2,590MT of CO_2e
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; MT = metric tons; MT/year = metric tons per year; N_2O = nitrous oxide

Implementation of the Modified Project would generate less GHG emissions during construction compared to the amount generated by the Original Project during construction. Analysis under each of the CEQA GHG Thresholds would remain the same and no new Project Design Features would be required nor would modification of previously proposed Project Design Features be required. Impacts would remain less than significant with implementation of the Modified Project.

Hydrology and Water Quality

The proposed project site, as of 2013, was occupied by unplanted cropland with some fields planted with tomatoes, wheat, alfalfa, and cotton. These specific crops demand high amounts of water to remain sustainable and productive. On an annual basis cotton crop demands 3.16 acre-feet of water per acre of crop, alfalfa crop demands 4.51 acre-feet of water per acre of crop, tomato crops demand 2.54 acre-feet of water per acre of crop, and wheat crop demands 2.00 acre-feet of water per acre of crop. In 2013 the project site was occupied by 43 acres of cotton crops, 166 acres of tomato crops, 342 acres of wheat crops, and 80 acres of alfalfa crops totaling 631 acres of the 966 acre project site currently under agricultural production.

The table below shows the amount of water the project site used in 2013 based on the types and amount of crops occupying the site.

Table 6: Water Demand of Crops on Project Site (2013)

Crop Type	Water Demand for Crop Type (acre-feet/acre/year)	Acres Planted in 2013	Water Use in 2013 (acre feet)[1]
Cotton	3.16	43	136
Alfalfa	4.51	80	361
Tomato	2.54	166	422
Wheat	2.00	342	684
Total		**631**	**1,603**

Source: LSA Associates, Inc. (January 2015).
Notes: [1] Water usage has been rounded to the nearest whole number.

The table above shows that the agricultural uses occupying the proposed project site utilized approximately 1,603 acre feet of water in 2013. Approximately 329 acre-feet of water used in 2013 was supplied by Westlands Water District (WWD) allocations and 1,274 acre-feet of water was supplied by groundwater. The average WWD allocation since 2008 has been approximately 40 percent to the project site and in 2014 the project site received no surface water from WWD; therefore, all irrigation water in 2014 was provided from groundwater sources.

As analyzed below, this Addendum concludes that implementation of the Modified Project would require less groundwater than is currently demanded on the site. New PDFs to reduce impacts on groundwater supplies would not be required implementation of the Modified Project would not result in new or substantially more adverse significant impacts than what was previously described in the Original IS/MND.

b.) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

As of 2013 (the most current data available) the proposed project site was occupied by 631 acres of active agricultural land that included: 43 acres of cotton crops, 166 acres of tomato crops, 342 acres of wheat crops and 80 acres of alfalfa crops. In order to stay productive, cotton crops require 3.16 acre-feet of water per acre per year; tomato crops require 2.54 acre-feet of water per acre per year; wheat crops require 2.00 acre-feet of water per acre per year; and, alfalfa crops require 4.51 acre-feet of water per acre per year. The table above shows that agricultural uses occupying the site in 2013 used approximately 1,603 acre-feet of water to maintain agricultural production. Of the 1,603 acre-feet of water used in 2013, approximately 329 acre feet of water was supplied by surface water from WWD allocations and approximately 1,274 acre-feet of water was supplied by groundwater sources. As of 2014, WWD had allocated no water to the project site; therefore, the agricultural uses occupying the site received water solely from groundwater sources.

Implementation of the proposed project would require approximately 250 acre feet of water during the 15 to 18 month construction period and 2.3 acre-feet of water per year during project operation. The project applicant has indicated that water from construction and operation of the proposed project would be received from an onsite well and/or WWD and/or other offsite source. Any groundwater that would be used during project construction and operation would be substantially less than what is currently being supplied by the on-site groundwater wells to the existing agricultural uses. Implementation of the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge any more than what is currently occurring on the project site. Therefore, no impact would result.

VI. MODIFIED PROJECT DESIGN FEATURES

The Original IS/MND identified mitigation measures that would reduce or eliminate potential environmental effects of the Project. The majority of the PDFs implemented as part of the Project would remain the same under the Modified Project; however, the following PDFs would be deleted or revised as follows:

Aesthetics

The Modified Project would not include PDF AES-1 as mitigation in reducing potential impacts to aesthetic resources. The project site does not have unique visual qualities or characteristics that would warrant mitigation measures to be implemented. The nearest sensitive receptors to the project site are motorists travelling along SR-198 and residential units on NAS Lemoore neither of which are considered high quality visual receptors. Impacts would remain less than significant if PDF AES-1 is not included as mitigation.

Agricultural Resources

The Modified Project would not include the portion of PDF BIO-1 that provided for mitigation to reduce potential impacts to agricultural resources. PDF AG-1, AG-2, and AG-3 have been added to ensure the project applicant is consistent with Kings County Resolution 13-058. PDF AG-1, AG-2, and AG-3 are presented below:

PDF AG-1: Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by the County.

Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil.

The Plan shall provide that all driveways and other areas compacted during original construction or by equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding, has occurred. Additional seedlings and applications of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project.

The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. It is anticipated that waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of decommissioning, the Plan shall be revised to provide that another equivalent facility will be utilized.

Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights.

The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months).

PDF AG-2: Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated cost estimate.

PDF AG-3: The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be submitted to the Kings County Community Development Agency for approval prior to the issuance of a building permit.

Air Quality

Implementation of the Modified Project would include the following revised PDF AQ-3 (revisions to this PDF are shown in Appendix A):

PDF AQ-3: Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.

Biological Resources

Implementation of the Modified Project would include the following revised PDF BIO-1 and BIO-3 (revisions to these PDFs are shown in Appendix A):

PDF BIO-1: The project applicant shall retain a qualified biologist to conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine appropriate actions to undertake.

The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat.

To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted.

If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines.

If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.

PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the U.S. Fish and Wildlife Service (USFWS) San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.

The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). Implement and maintain a weed control program around the perimeter fence.

Cultural Resources

Implementation of the Modified Project would include the following revised PDF CUL-1, CUL-2, CUL-3, and PALEO-1 (revisions to these PDFs are shown in Appendix A):

PDF CUL-1: The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.

The project proponent shall retain a professional archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources and Kings County Community Development Agency shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.

PDF CUL-2: If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County Community Development Agency. The archaeologist

shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department, as applicable. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

PDF CUL-3: Pursuant to State Health and Safety Code Section 7070.5(e) and Public Resources Code Section 5097.98, if human remains or remains of unknown origin are found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that "…the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.

PDF PALEO-1: If paleontological resources are discovered during excavation activities at the project site, work in the vicinity of the find (a 50-foot radius) shall cease, and a qualified professional paleontologist shall be retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any significant paleontological resources shall be undertaken with the approval of the Kings County CDA.

Geology and Soils

Implementation of the Modified Project would include the following revised PDF GEO-1, GEO-2, and GEO-3 (revisions to these PDFs are shown in Appendix A

PDF GEO-1: Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), designed to reduce potential impacts related to erosion and surface water quality during project

construction activities and through the life of the project. The SWPPP shall include measures to address erosion, such as a construction period monitoring program to be implemented by the construction supervisor, and shall include Best Management Practices (BMPs) to address erosion, such as watering for dust control and the construction of perimeter silt fences, as needed. The SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board for review. Documentation of the submittal shall be provided to Kings County prior to issuance of any building permits. Implementation of the SWPPP shall comply with state and federal water quality regulations.

PDF GEO-2: Expansive soils have been determined to be present onsite and pose a structural issue; therefore a geotechnical report is required prior to issuance of a building permit.

PDF GEO-3: Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.

Hazards and Hazardous Materials

Implementation of the Modified Project would include the following revised PDF HAZ-1 (revisions to this PDF are shown in Appendix A)[1]:

PDF HAZ-1: The applicant shall implement the following measures during project construction and operation:

The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e., fire engines) to the main entrance, to the Control Building, and the substation. Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site.

The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards.

Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire.

Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms

[1] Note: Fire suppression training identified in the original PDF would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities.

for fire suppression, including spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

Smoking shall be prohibited at the project site except in designated areas.

The Modified Project would not result in any effects to environmental resources that are more severe than those described in the Original IS/MND. All PDFs (as revised by this Addendum) associated with the Project would be applied to the Modified Project. The Modified Project would have a less than significant impact with the implementation of mitigation identified under the following resource topics: air quality; biology; cultural; geology and soils; hazard and hazardous materials; noise; and, public services. Revisions to the above listed PDFs are shown in the Revised IS/MND attached as Appendix A.

VII. KINGS COUNTY PLANNING COMMISSION FINDINGS

It is the finding of the Planning Commission that the previous environmental document as herein amended may be used to fulfill the environmental review requirements of the current (Modified) Project. Because the Modified Project meets the conditions for the application of State CEQA Guidelines Section 15164, preparation of a new EIR or Negative Declaration is not required for the issue areas discussed above. Specifically, the County has determined that:

Finding 1: There are no substantial changes to the Project that would require major revisions of the Original IS/MND due to the new significant environmental effects or a substantial increase in the severity of impacts identified in the Original IS/MND.

Facts in Support of Finding: The Project has not changed substantially from the development assumptions contained in the Original IS/MND. The Project would maintain a use that meets the consistency findings of compatibility per Government Code Section 51238.1 and would be subject to the Project Design Features (PDFs) presented in the Original IS/MND or any PDFs that have been revised or removed based on Modified Project implementation. The additional parcels added to the Project do not represent a significant change in the Project and would not cause new significant environmental effects or substantially increase the severity of identified environmental effects. Accordingly, there have been no substantial changes to the Project or in the circumstances under which the Project will be developed resulting in new or more severe significant impacts.

Finding 2: No substantial changes have occurred in the circumstances under which the Project is being undertaken that will require major revisions of the Original IS/MND to disclose new significant environmental effects or that would result in a substantial increase in the severity of the impacts identified in the Original IS/MND.

Facts in Support of Finding: Implementation of the Modified Project would have the same impact results on CEQA thresholds as analyzed in the Original IS/MND. The following revisions have been made to certain sections of the Original IS/MND resulting in the same impact conclusions with implementation of the Modified Project:

- **Aesthetics:** PDF AES-1 has been removed from the Original IS/MND as revised analysis determined that landscape screening along the northern boundary would not be needed to mitigate any potential visual impacts. To assist in assessment of potential aesthetic impacts from project

development, visual simulation was performed by Mark Thomas & Company using the computer-aided design (CAD) drawings provided by the applicant. A careful and independent comparison of the proposed project's visual characteristics along with the visual quality of the surrounding area with the Aesthetics thresholds as established by Appendix G of the CEQA Guidelines, as amended, reveal that no potential visual/aesthetic impacts resulting from project's implementation would reach a level of (CEQA) significance; therefore, no PDF's or mitigation measures are warranted or necessary. Please see the revised Appendix A for more information.

- **Agricultural Resources:** Kings County adopted Resolution 13-058 indicating that parcels under Williamson Act Contracts in the area containing the project site may not be able to continue viable agricultural production due to poor soil and water quality and reduced water supplies and are more suitable for less intensive agricultural use such as dry farm seasonal grazing. Additionally, similar commercial agricultural activity may be compatible uses under the Williamson Act as long as the applicant for such a project provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land (taking into account surface water availability, groundwater quality and availability, and soil conditions). The applicant of the Modified Project would develop a PV Solar Facility co-occupied with grazing land which would be consistent with Resolution 13-058. Accordingly, the agricultural component of PDF BIO-1 is no longer needed to reduce impacts to agricultural resources and therefore has been removed from the Original IS/MND. However, PDF AG-1, AG-2, and AG-3 have been included in the Revised IS/MND to ensure that the project applicant prepares an Agricultural Management Plan and Soil Reclamation Plan and financial assurances in compliance with Kings County Resolution 13-058.
- **Air Quality and GHG Emissions**: The construction period of the Modified Project would be shorter and would include more construction equipment and construction workers onsite when compared to the Original Project. The IS/MND has been revised to take this into account and modeling for air quality and GHG emissions has been conducted based on this updated construction period. Impact results remain the same with implementation of the Modified Project.
- **Biological Resources:** A comprehensive survey and technical study on Swainson's hawk foraging and nesting habitat was conducted in 2012 for approximately 254,805 acres of land which included the Modified Project site. Based on this survey, PDF BIO-1 of the Original IS/MND was revised, in that implementation of the Modified Project would require pre-construction surveys and will update the census level analysis of the 2012 survey/technical report that was completed. Implementation of the Modified Project would also require nesting reconnaissance surveys during specified survey windows. Portions of PDF BIO-1 of the Original IS/MND were retained for implementation of the Modified Project in that if census level analysis determines that significant reduction of Swainson's hawk foraging habitat would occur the project applicant would mitigate the loss by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at 0.5:1 ratio within 10 miles of a known nest site. Impact conclusions would remain the same with Modified Project implementation.
- **Cultural Resources:** The applicant has proposed revisions to PDF CUL-1 through CUL-3 to provide more specificity. Impact conclusions would remain the same with implementation of the Modified Project.
- **Geology and Soils:** The applicant has proposed a minor revision to PDF GEO-1 to clarify that although the SWPPP shall be submitted to the Central Valley Regional Water Quality Control

Board, no approval of the SWPPP is required. Impact conclusions would remain the same with Modified Project implementation.

- **Hazards and Hazardous Materials:** PDF HAZ-1 has been revised to note that emergency vehicle accessibility would be ensured not only to the main entrance, control building, and substation but also to the interior driveways and the portion regarding coordination of PV fire training for the Kings County Fire Department with California Office of State Fire Marshall has been removed. Fire suppression training would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities. Impacts would remain less than significant with implementation of the Modified Project.
- **Hydrology and Water Quality:** Surface water and groundwater is currently used on the site to maintain productive agricultural uses. The Original IS/MND has been revised to include a quantitative analysis of existing groundwater usage compared to groundwater usage that may occur during construction and operation of the Modified Project. Results indicated that the Modified Project would require substantially less groundwater when compared to the existing uses onsite. Impact conclusions would remain the same with Modified Project implementation.

Accordingly, the revisions to the Original IS/MND have not disclosed new significant environmental effects nor have such revisions resulted in a substantial increase in the severity of the impacts identified in the Original IS/MND.

Finding 3: There is no additional new information of substantial importance, which was not known at the time of the adoption of the Original IS/MND, showing any of the following: 1) The Project will have one or more significant effects not discussed in the Original IS/MND; 2) Significant effects previously examined would be substantially more severe; 3) Mitigation measures or alternatives to the Project previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the Project proponent declines to adopt the mitigation measure; or 4) Mitigation measures or alternatives which are considerably different from those analyzed in the Original IS/MND would substantially reduce one or more significant effects on the environment, but the Project proponent declines to adopt the mitigation measure or alternative.

Facts in Support of Finding: No new information of substantial importance to the conclusions of the Original IS/MND has been identified with the analysis of this Addendum. The impact conclusions are identical to those analyzed in the Original IS/MND. The revision/clarification/removals to PDFs AES-1, BIO-1, AQ-3, and HAZ-1 would not introduce a new or unmitigated significant effect of the Projects. There are no additional mitigation measures or alternatives that could be implemented with the Project in order to substantially reduce one or more significant impacts discussed in the Original IS/MND. No significant impacts are identified pursuant to this Addendum.

Finding 4: The Addendum need not be circulated for public review.

Facts in Support of Finding: Pursuant to CEQA Guidelines Section 15164(c), the Addendum need not be circulated for public review.

SUMMARY

No significant impacts to the environment as a result of the Modified Project have been identified when considering the Project Design Features/Mitigation Measures included as a part of the Modified

Project. Approval of the Modified Project is not expected to have any significant impacts, either long-term or short-term, nor will it cause substantial adverse effect on human beings, either directly or indirectly provided all Project Design Features/Mitigation Measures and normal Proposed Project conditions are followed. As with the Original IS/MND an MMRP would be required to ensure that all PDFs are addressed. In summary, the analysis concludes that none of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent Negative Declaration have occurred and thus an Addendum to the GWF Henrietta Solar Photovoltaic Plant Project Initial Study/Mitigated Negative Declaration is appropriate to satisfy CEQA requirements for the Modified Project. The evidence in the file supports that no circumstances or conditions requiring the preparation of a subsequent Negative Declaration are present in this case.

APPENDIX A
REVISED IS/MND

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ACRONYMS AND ABBREVIATIONS

AADT	annual average daily traffic
AB	Assembly Bill
AC	Alternating Current
ACOE	U.S. Army Corp of Engineers
AFY	acre-feet per year
AIA	Air Impact Assessment
APZ	Accidental Potential Zone
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
AX	Exclusive Agriculture – 40-acre minimum
BMP	Best Management Practice
BPS	Best Performance Standards
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
CBC	California Building Code
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH_4	methane
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO_2	carbon dioxide
CRHR	California Register of Historical Resources
c-Si	crystalline and amorphous silicon
dB	decibel(s)
DC	direct current
DNL	Daytime-Nighttime Noise Level
DoD	Department of Defense
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
GHC	greenhouse gas
GIS	geographic information system
HCP	Habitat Conservation Plan

IES	Illuminating Engineering Society
ISR	Indirect Source Review
KART	Kings Area Rural Transit
KOP	key observation point
kV	kilovolt(s)
LCD	liquid-crystal display
LOS	level of service
LUST	leaking underground storage tank
M	magnitude
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program
MRZ	Mineral Resource Zone
MW_{AC}	megawatt, alternating current
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAS	Naval Air Station
NCCP	Natural Community Conservation Plan
NFPA	National Fire Protection Association
NO_2	nitrogen dioxide
NOI	Notice of Intent
NO_x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NRCS	National Resources Conservation Service
O_3	ozone
ONC	Office of Noise Control
OPR	Office of Planning and Research
PCE	Passenger Car Equivalent
PDF	Project Design Feature
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
PRC	Public Resources Code
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SCS	Supervisory Control System
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur dioxide
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic air contaminant
tpy	ton(s) per year
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
V/C	Volume-to-capacity
VMT	vehicle miles traveled
WWD	Westlands Water District

1.0 BACKGROUND INFORMATION

1.1 PROJECT TITLE

~~GWF Henrietta Solar Photovoltaic (PV) Plant~~ American Kings Solar Project (the proposed project)[1]

1.2 LEAD AGENCY NAME AND ADDRESS

Kings County Community Development Agency
~~Kings County Government Center~~Planning Division
1400 W.~~est~~ Lacey Boulevard, Building #6
Hanford, California 93230

1.3 LEAD AGENCY CONTACT PERSON AND PHONE NUMBER

~~Jeremy Kinney~~Sandy Roper, ~~Senior~~ Principal Planner
559-852-2685~~(559) 582-3211 Ext. 2673~~

1.4 PROJECT LOCATION

The project would be located in an unincorporated area of Kings County, California, south of Naval Air Station (NAS) Lemoore and southwest of the City of Lemoore (Figure 1-1: Vicinity Map[2]). The site is located on the east side of 25th Avenue, south of State Route (SR) 198, and west of Avenal Cutoff Road (Figure 1-2: Location Map).

1.5 PROJECT SPONSOR'S NAME AND ADDRESS

~~GWF Energy LLC~~American Kings Solar LLC, c/o First Solar
~~4300 Railroad Avenue~~ 135 Main Street, 6th Floor
~~Pittsburg~~ San Francisco, California ~~94565~~94105
Contact: ~~Peter Lai~~Roy Skinner
Phone: ~~(925) 431-1461~~(415) 935-2514
Mobile: ~~(925) 766-7735~~(415) 531-6909
~~plai@gwfpower.com~~
roy.skinner@firstsolar.com

1.6 GENERAL PLAN DESIGNATION

The Kings County General Plan land use designation for the project area is Exclusive Agriculture 40-acre.

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[1] The proposed project has been renamed from the GWF Henrietta Solar Photovoltaic (PV) Plant Project to the American Kings Solar Project.
[2] All figures in this document are included at the end of the section that they are mentioned.

1.7 ZONING

The Kings County zoning designation for the project area is Exclusive Agriculture – 40-acre minimum (AX).

1.8 DESCRIPTION OF THE PROJECT

1.8.1 Project Overview

~~GWF Energy~~ American Kings Solar, LLC (the applicant) proposes to build the ~~GWF Henrietta Solar PV Plant~~American Kings Solar Project (proposed project), a new nominal generating capacity facility up to 125-megawatt, alternating current (MW_{AC}). The proposed project would provide renewable generation capacity that would be dispatched to the growing California electricity market.

The electrical energy generated by the proposed project would be delivered to the ~~PG&E~~ CAISO electrical transmission/distribution grid ~~pursuant to terms and conditions of a new Power Purchase Agreement~~. The proposed plant would be connected to the ~~PG&E system~~electrical grid at the existing PG&E substation located adjacent to the Project site. The proposed Project would generate electricity for its own auxiliary loads, including control systems, and general facility loads such as lighting, heating, and air conditioning during the daytime hours. At night, the proposed project would draw electricity from the PG&E grid for these loads. Some power would also be re-converted from alternating current (AC) to direct current (DC) for use as backup power for control systems and other uses.

The proposed project would be constructed on a ~~957~~966-acre ~~parcel~~[3]site that is bounded by SR 198 to the north, 25th Avenue to the west, and the Avenal Cutoff Road to the south and east. The applicant does not currently have control of all of the parcels that comprise the Project site. In addition, there currently are public rights-of-way that cross the project site. The applicant ~~has~~ will initiate~~d~~ the road abandonment process with Kings County to eliminate those public rights-of-way. Adjacent to the project site is the existing PG&E Henrietta Substation and the existing Henrietta 95-MW Peaker Power Plant. The Mustang, Orion, and Kent South Solar Projects are located on the west side of 25th Avenue and the Westside Solar Project is located at the southwest corner of 25th Avenue and Avenal Cutoff Road.

Major components and features of the proposed project include:

- ~~978~~ 966 acres of disturbed ~~area~~ land[4]
- Polycrystalline or thin-film PV solar collection field; single-axis tracking or fixed-tilt mounting; combiner boxes; DC/AC inverters; intermediate step-up transformers; parking lot and access ~~road~~driveways; water treatment systems and storage for service water, de-mineralized water, and potable and non-potable water; ~~and~~ septic system; and ~~-~~ meteorological stations
- Control ~~and maintenance~~ B~~b~~uilding to accommodate supervisory control and monitoring capabilities and to enable safe proposed project operation and maintenance

[3] ~~A total of 978 acres was evaluated for the proposed project. Figure 3.2-1 shows the 978-acre study area, including the 21 acres of land within the study area that are not included in the 957-acre project site.~~

[4] Development of the proposed project would occur over the individual parcel lines within the project boundary.

- An onsite 70-kilovolt (kV) switchyard with a generator step-up transformer and circuit breaker to transmit inverter output from the proposed project to the ~~PG&E~~electrical grid
- A ~~Approximately 800 feet of~~ new overhead 70-kV electrical power line to the existing adjacent PG&E Henrietta Substation

~~Major Project development milestones are listed in Table 1-1~~

~~Table 1-1 Major Project Development Milestones~~

~~Activity~~	~~Date~~
~~Begin Construction~~	~~3rd Quarter 2012~~
~~Begin Phase 1 Commercial Operation~~	~~2nd Quarter 2013~~
~~Begin Phase 2 Commercial Operation~~	~~2nd Quarter 2014~~
~~Begin Phase 3 Commercial Operation~~	~~2nd Quarter 2015~~
~~Project Construction Complete~~	~~2nd Quarter 2015~~

1.8.2 Project Purpose and Need

The project would provide Kings County as well as the State of California with a renewable energy source that would assist the State of California in complying with Executive Order S-21-09, which requires that 33 percent of all electricity sold in the state to be generated from renewable energy sources by the year 2020.

1.8.3 Project Objectives

The applicant is proposing to construct the project to meet the following objectives:

- Stimulate the local economy through job creation
- Support California's efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established by California Assembly Bill (AB) 32, the Global Warning Solutions Act of 2006
- Develop an economically feasible and commercially financeable project
- Provide solar-generated electricity to the California Independent System Operator (CAISO) grid

1.8.4 Project Facilities

The proposed project would be comprised of PV technology, and would consist of an array of solar PV panels supported on a ~~galvanized~~ metal-framed ~~tracking~~ mounting system, junction boxes to connect the panels, inverters, and intermediate step-up transformers to convert sunlight into electricity. The proposed project's general arrangement is shown in ~~and a typical solar PV tracker are shown on~~ Figure~~s~~ 1-3 ~~and 1-4, respectively~~. Descriptions of the project facilities are provided below.

Photovoltaic Panels

The PV panels would be made of polycrystalline silicon or thin-film ~~bonded to a thin protective plate of glass on the skyward side and a metal backing plate on the earth side~~. The panels would be

mounted on a galvanized steel rack. ~~Each~~ The dimensions of the panels will depend on the technology and selected manufacturer, but would generally measure approximately 2 to 3.5 feet wide, 4 to 5 feet long, and 0.5 inch to 2 inches thick, and the maximum height of the panels would be approximately 13 feet and the bottom of the panels would be a minimum of 18 inches above the ground ~~positioned approximately 4 to 6 feet from the ground. The height of the panels is, therefore, approximately 6 to 10 feet~~.

The ~~polycrystalline~~ panels would be aligned from north to south if tracker technology is used, and would track the path of the sun (from east to west) throughout the day ~~by use of a single axis tracking system~~. If fixed-tilt is utilized, the rows would be oriented east to west. A typical tracker structure is shown in Figure 1-4 and a typical fixed-tilt structure is shown in Figure 1-5. ~~The rows would be approximately 147 feet long and spaced 9 feet from each other. The thin-filmed panels would be aligned from east to west and would be in a fixed position. The rows would be approximately 224 feet long and spacing would be approximately 8.25 feet.~~ A typical tracker PV array layout is depicted ~~on~~ in Figure 1-6~~5~~ and a typical fixed-tilt array layout is shown in Figure 1-7. The access ~~road~~ driveways would be spaced ~~every 400 feet~~in accordance with Section 1112.B.2.f of the Kings County Development Code.

Panel Interconnections, Inverters, Distributed Transformers, Combiner Boxes, and Switch Gear

Each PV array would be connected in panel strings by wiring firmly attached to the panel racks. Each panel string would be connected to its combiner box using underground wiring. Wire depths would conform to local, state, and federal codes, as required, and are expected to be approximately 3 feet deep. The individual panel strings would connect to a combiner box; the combiner boxes would interconnect to a single inverter using underground wiring. The inverters would feed into a 360 to ~~480~~550-volt/34.5-kV step-up transformers, which would feed electricity from the transformers into a 34.5-kV underground cable collector system, which in turn, would feed into a new 34.5-kV/70-kV substation for interconnection at the PG&E Henrietta Substation to the PG&E transmission grid.

The PV panels would generate DC electricity at a voltage up to 1500 V_{DC} set by the amount of panels in a string and the amount of strings combined into an inverter. The DC current produced by the panels is converted to approximately 360 to ~~480~~ 550 V_{AC}. Each inverter ~~would~~ may be installed in a weatherized aboveground structure mounted on a level concrete building pad or vault in proximity to its associated PV array. Each ~~inverter enclosure~~pad would contain the inverters, associated switchgear, and step-up transformer. There would be up to 125 inverter and transformer ~~enclosures~~ pads approximately 10 by ~~22~~ 36 feet in size, and the inverters and transformers would be approximately 12 feet tall~~,~~. ~~and~~ Enclosures, if utilized, would be constructed of either concrete or steel. The transformers located at the inverter enclosures would step-up the inverter voltage from a 360 to ~~480~~ 550 V to 34.5 kV. An underground and above ground cable 34.5-kV collector system would transmit the power to the ~~proposed project~~ substation.

Electrical Substation

The 34.5-kV collector system would feed into the proposed project substation, which would use an oil-filled step-up transformer to increase the voltage to 70 kV. Surge arresters would be provided at the high voltage bushings to protect the transformers from surges on the 70-kV system caused by

lightning strikes or other system disturbances. The transformer would be set on a concrete pad within an oil spill containment area designed to contain the transformer oil if a leak or spill occurred.

Transmission Line Interconnection

The project would include an electrical interconnection to the existing PG&E 70-kV transmission system at the PG&E Henrietta Substation. PG&E's 70-kV Henrietta Substation is located adjacent to the proposed project substation on the western side of the project site. An ~~approximately 800 feet of~~ overhead 70-kV electrical transmission line would connect the proposed project substation to the ~~existing~~ PG&E Henrietta Substation The initial portion of the 70-kV transmission line from the Project's substation would be owned by the Applicant and would be supported on utility poles each up to 140 feet in height. Change of ownership to PG&E would occur prior to entering the Henrietta Substation. The PG&E portion of the transmission line would be supported on up to 14 utility poles each up to 140 feet in height. The final number of poles that would be installed would be dependent on the final location of the PG&E interconnection point at the Henrietta Substation. PG&E would also install a 70-kV breaker and other associated equipment at the Henrietta Substation. Approval of the PG&E-owned interconnection facilities is within the sole discretionary permitting jurisdiction of the California Public Utilities Commission (CPUC). However, because CEQA requires analysis of the entirety of the project, the project for CEQA purposes includes these PG&E interconnection facilities. The CPUC can and should utilize and incorporate this Initial Study, including applicable Project Design Features and Mitigation Measures, by reference, in authorizing the PG&E interconnection facilities.

Telecommunications

The project would connect with the existing local telecommunication system on 25th Avenue or a microwave/satellite communications tower, approximately 50 feet tall.

Meteorological Data Collection System

The project would include up to six ~~4~~meteorological data collection systems within the solar fields and up to 12 meteorological towers approximately 20 feet high on the perimeter. Each system would include the following instrumentation:

- Global horizontal irradiance
- Global irradiance/plane of array
- Ambient temperature
- PV back-panel temperature
- Wind speed
- Wind direction
- Relative humidity
- Precipitation
- Barometric pressure
- Visibility

Water Treatment

The proposed project would obtain water from an onsite well and/or ~~the California Aqueduct via a proposed pipeline that would connect to~~ Westlands Water District~~'s~~ (WWD) and/or other offsite sources ~~water main located adjacent to the proposed project site on 25th Avenue~~. The proposed project would annually require approximately 2.3 acre-feet ~~per year~~ (AF~~Y~~) of water to satisfy the requirements for panel washing; panel washing would occur up to 4 times per year. Figure 1-~~6~~ 8 is the representative water flow diagram for the project. No chemicals or other additives would be added to the PV panel wash water. Non-potable water for domestic use would be provided by an onsite water treatment and storage system. Drinking water for onsite staff would be provided by bottled water service. Construction water requirements totaling approximately 250 acre-feet during the 15 to 18 month construction period would be required.

Raw water ~~from the WWD water distribution system would~~ may be pumped into a ~~the project's 50,000 gallon~~ raw water storage tank ~~(that is approximately 22 feet high by 24 feet diameter)~~. It ~~would~~ then may be treated as necessary ~~(filtered and demineralized)~~ and stored in a ~~the project's 50,000 gallon~~ treated water storage tank ~~(that is approximately 22 feet high by 24 feet diameter)~~ for use in panel washing. ~~The treatment would consist of a microfiltration system and demineralization. The water would be treated on an as-needed basis.~~ If a water storage tank is installed, ~~Water stored in the~~ raw water ~~storage tank~~ would be available for panel washing~~, fire suppression,~~ and other non-potable uses. ~~Water from WWD would be stored in the raw storage tank. The tank may not be kept full at all times; it would, however, always contain sufficient water to support the required fire flow requirements for the control building and maintenance building.~~

A water treatment system would draw water from the treated water tank and treat it for non-potable water use in the control building and safety showers. A septic system would treat the sanitary waste (gray and black water) generated from the control building. Figure 1-~~7~~ 9 illustrates the elevation view of the C~~c~~ontrol~~/maintenance~~ B~~b~~uilding and water ~~treatment~~ storage system.

Lighting

The lighting system provides personnel with illumination for operation during normal conditions and for egress under emergency conditions, and includes emergency lighting to perform manual operations during an outage of the normal power source. The system also provides 120-volt AC convenience outlets for portable lamps and tools. Typical areas covered by the lighting system would include:

- Project access gate
- Control~~/Maintenance~~ Building perimeter and parking areas
- Substation
- Inverter building entrances
- Strategic locations along project roads and parking areas

This lighting would be maintained at a level that is necessary to meet security, operation and maintenance, and safety requirements. Security lighting would add to the plant's overall safety. The illumination levels would be set in accordance with the latest edition of the Illuminating Engineering

Society Handbook for power generating stations. Generally, the interior and exterior lighting would incorporate energy efficient technologies that meet lighting and design specifications.

Exterior lighting would use high-pressure sodium fixtures or similar lighting technologies suitable for the application. All fixtures would be rigidly supported from a structure or from aluminum poles. All lighting would be appropriately shielded and directed inward to minimize offsite light and glare.

Lighting for outdoor locations would be controlled from local switches or photoelectric controllers. Indoor locations would be controlled from local switches or photoelectric controllers.

No permanent lighting would be installed in the solar collection field. Portable lighting would be provided by the plant operation and maintenance staff on an as-needed basis.

Signage

Signage would be installed at the main entrance on 25th Avenue pursuant to the Kings County ~~Zoning Ordinance~~Development Code standards to identify the ~~project~~ facility owner and operator and provide emergency contact information. For security purposes, small-scale signs would be posted at emergency entrances and along the fenced perimeter indicating "No Trespassing" and "Private Property." ~~.~~ Safety signs may also be included along the perimeter fence.

Access/Circulation/Parking

External access to the site would be from 2 locations. The main entrance would be an automatic gate on the east side of 25th Avenue (west side of the project site). A second entrance would be an emergency manual locked gate located on the east side of 25th Avenue south of the proposed main entrance.

Internal private roads would be 20 feet wide, located along the perimeter of the property, with four roads traversing the site from east to west constructed to typical access driveway standards as shown in Figure 1-3: Project General Arrangement. In addition to the perimeter circulation roadways, there would be ~~a~~ north to south (if tracker installation), or east to west (if fixed tilt installation) roadways spaced ~~approximately every 400 feet~~ in accordance with Section 1112.B.2.f of the Kings County Development Code between the PV array rows that would be constructed to typical access driveway standards as shown in Figure 1-3. The main entrance to the Control Building and substation shall be constructed to Kings County's Improvement Standards to ~~to allow equipment access. These roads would be designed to~~ meet the applicable fire protection requirements.

Approximately s~~S~~ix parking spaces are proposed near the Control Building as part of the project for project operation. The parking lot is shown on Figure 1-10~~8~~.

Project Monitoring

The facility would be monitored onsite from the proposed C~~c~~ontrol~~/maintenance~~ B~~b~~uilding located on the west side of the property, just north of the existing PG&E substation. The facility would operate 365 days a year and would be designed with local and remote monitoring via a Supervisory Control

System (SCS). The SCS would provide control, monitoring, and indicating functions for the plant systems. The following functions would be provided:

- Controlling the inverters, panel tracking system, and other systems in a coordinated manner
- Controlling the balance-of-plant systems in response to plant demands
- Monitoring plant equipment and performance
- Providing control displays (printed logs, liquid-crystal display (LCD) video monitors)
- Providing consolidated plant process status information
- Providing alarms for out-of-limit parameters or parameter trends and recording an alarm log
- Providing storage and retrieval of historical data

The SCS would be a redundant microprocessor-based system and would consist of the following major components:

- Personal Computer-based operator consoles with LCD video monitors
- Distributed processing units
- I/O cabinets
- Historical data unit
- Printers
- Data links to the inverters

The SCS would have a group of similar redundant processing units linked to a group of operator consoles by redundant data highways. Each processor would be programmed to perform specific dedicated tasks for control information, data acquisition, annunciation, and historical purposes. By being redundant, no single processor failure could cause or prevent a unit trip. The SCS would interface with the control systems furnished by the collectors to provide remote control capabilities, as well as data acquisition, annunciation, and historical storage inverter output operating information. The system would be designed with sufficient redundancy to preclude a single device failure from significantly affecting overall plant control and operation. This also would allow critical control and safety systems to have redundancy of controls, as well as an uninterruptible power source.

Project Security

Project security would be comprised of a~~n~~ ~~8~~6-foot-tall chain link fence topped with one foot barbed wire around the perimeter of the property. ~~Access portals (sized 4 by 6 inches) to allow San Joaquin kit fox movement at the site would be spaced at the bottom of the fence every 8 to 10 feet (Figure 1-9~~ The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12) in accordance with PDF BIO-3. Security cameras and motion detectors may be placed along the perimeter of the site and would allow 24/7 live monitoring of the site. A security patrol ~~would~~ may be ~~contracted~~ utilized to provide security services during those periods when operation and maintenance personnel are not present onsite. If a breach occurs when the applicant is onsite, it would contact the County Sheriff, if determined necessary. If a breach occurs when the security company is onsite, it would contact the applicant, and then the County Sheriff, if determined necessary.

Fire Suppression and Safety

All fire protection requirements shall be in conformance with California Fire Code and Kings County Fire Ordinances.
~~The fire protection system would be designed to protect personnel and limit property loss. The fire protection system would include sprinkler fire suppression at the maintenance control building in conformance with King's County Fire Code requirements. Water would be supplied from the raw water storage tank located onsite.~~

All designs, plans, and practices will be in accordance with ~~Sprinkler systems would also be installed in all structure as required by National Fire Protection Association (NFPA),~~ California Fire Code, and local code requirements. Handheld fire extinguishers of the appropriate size and rating would be located in accordance with NFPA 10 and the California Fire Code throughout the project site. When the design is finalized, the Fire Department will review construction plans and make recommendations if necessary.

~~PV fire suppression training would be coordinated with the California Office of the State Fire Marshall and the Kings County Fire Department for fire responders, construction, and operation and maintenance staff. The training would familiarize both responders and workers of the codes, regulations, associated hazards and mitigation processes related to PV power generation.~~ Project-specific fire suppression training would not be required as Kings County Fire Department is familiar with fire suppression techniques at PV facilities.

~~Combustible vegetation within and around the project boundary would be actively managed to minimize fire risk by annual application of a defoliant, or on an as-needed basis~~. Vegetation control (including weeds) will be implemented within the Project perimeter fence in accordance with the Project's Agricultural Management Plan. If necessary, to supplement sheep grazing, mechanical means will be employed to adequately control vegetation.

Electrical Grounding

Proposed project equipment would be electrically grounded, as required by the applicable codes. The grounding system would provide protection to building steel, equipment, fences, panel frames, and non-energized metallic parts of electrical equipment. Lighting protection would be furnished for buildings and structures in accordance with the California Building Code. Acceptable references would include NFPA 780, California Building Code, and Underwriters Laboratories, Inc. 96 and 96A, as applicable.

Operation/Maintenance and Site Reclamation

PV panel washing would occur up to ~~4~~ four times a year as determined necessary based on operational performance of the panels~~depending on the amount of rainfall in a given year~~. Panel washing water would be supplied by an onsite well and/or WWD and/or other offsite sources, be treated onsite, and would not contain any chemical additives. The amount of water required for one panel washing would be approximately 180,000 gallons. All water used from panel washing would be contained onsite and absorbed into the ground or evaporated.

Operating and maintaining the equipment would require up~~1~~ to 3 staff on a daily basis to perform visual inspections and minor repairs. Larger crews of up to 10 workers would be required on occasion to perform tasks such as equipment replacement or washing of the PV panels. Due to the nature of the equipment, major maintenance and equipment replacement is anticipated to be infrequent.

The life of the project is proposed to be at least 30 years. At the end of the project life, the applicant would remove all ~~project~~ facilities from the site (unless a proposed ongoing use of any project component or structure, e.g., O&M building, is authorized by the County). This would include removing all solar panels, demolishing and removing all buildings, and removal of all infrastructure (~~road~~ driveways, pipelines, poles). Underground cables and other equipment would also be removed. Portions of t~~T~~he project site ~~would~~ may be re-leveled as necessary~~and the onsite soil would be reclaimed to a condition that would again support agriculture~~.~~In addition, the CVP surface water entitlement for the project would remain with the site after the project is removed from the site and the site reverts to agriculture to ensure a water supply for the future agricultural use.~~

1.8.5 Construction

Construction Activities

Project construction activities would include the following:

- Civil infrastructure
  - Survey and establish the project layout including road, panel, substation and support buildings
  - ~~Develop perimeter road berm~~Grade storm water retention ponds
  - Install the perimeter chain link security fence and gates
  - Construct ~~roads~~ private access driveways (except for ~~roads~~private access driveways, there would be minimal or no site grading)
  - Control dust and compact soil
  - Construct substation, inverter, and control room pads to elevations as engineered during detailed design ~~2 feet above grade~~
  - Excavate, form, and pour foundations for the substation, control house and water storage tanks
- Racking system installation and panel assembly
  - Install I-beam or tubular steel foundations through the use of a vibrating pile driver system similar to what is used for the installation of highway guardrails
  - Place galvanized steel racking system on top of the steel foundations
  - Place PV solar modules on the racking system
  - Install DC collection system
  - Install wire harness, fuses, and wire grounding
  - Trench for buried wires and cables
  - Install buried wires and cables
  - Install combiner boxes
  - Install inverter/transformer building supports and structures
  - Trench for buried AC and interconnection cable
  - Trench and install the underground and overhead 34.5-kV cable from the ~~480~~360 to 550-V/34.5-kV transformers to the project's switchgear and substation

- Install ~~control~~ Control ~~building~~Building, interconnection, and ancillary systems
    - Construct water tanks and treatment system if necessary, improve existing water wells and/or drill new water well(s)
    - Construct project substation
    - Construct the 70-kV transmission interconnection
    - Connect to the local fiber optic and telephone network and/or construct microwave/satellite tower

The ~~project~~ site is relatively flat with a slight grade from west to east. The site would require minimal grading where the PV panels would be installed. Grading would be required for access ~~roads~~driveways, inverter pads, the C~~c~~ontrol~~/maintenance~~ B~~b~~uilding, water storage tanks, ~~and~~ substation, and retention pond(s). A 20-foot-wide perimeter access ~~road~~ driveway would be ~~graded~~gravel ~~at a level higher than the rest of the site~~. Retention pond(s) would be constructed to retain ~~existing~~ storm water flows. ~~This would allow for the site to retain storm water onsite.~~ The soil would be compacted, as required, for access ~~roads~~driveways, inverter pads, substation, C~~c~~ontrol~~/maintenance~~ B~~b~~uilding, and racking system supports. Other ~~roads~~ driveways on the ~~project~~ site would be graded, as necessary. There would be approximately 65 acres of access driveways, inverter pads, a Control Building, water storage tanks, and other features affecting approximately 6.7 percent of the site.

Construction of the project would require temporary staging and storage areas for materials and equipment. The materials staging and storage would be located onsite in areas that would not be used for panels.

All materials for ~~project~~ construction would be delivered by truck. The majority of the truck traffic would occur on designated truck routes and major streets. Trucks would use SR 198 and 25th Avenue to access the site~~project area~~. During the peak construction activity on the Project site, a maximum of 1,200 construction workers would commute to the Project site and a maximum of 3 delivery trucks would be required on a daily basis. ~~Approximately 12 construction equipment delivery trips and 84 trips for construction workers per day are anticipated to occur during project construction~~, for a total of up to ~~96~~ 2,412 ~~construction~~ vehicle~~s~~ roundtrips per day[5].

Project components (such as support piles, PV solar panels, mounting racks, inverter buildings, wire and cable, substation equipment, and other equipment) would be brought to the site and assembled or installed.

Construction Schedule

~~Construction of the proposed project is planned to occur in 3 phases: 30 MW_{AC}, 40 MW_{AC}, 55 MW_{AC}.~~ Construction ~~is scheduled to begin in July 2012,~~will commence subsequent to completing the California Environmental Quality Act (CEQA) review, ~~and~~ receiving all necessary construction permits, and meeting preconstruction CEQA conditions. Construction of the project is expected to be

[5] Note that the maximums for construction workers, materials delivery, and equipment delivery all occur at different times. In the beginning of the project when the maximum daily truck deliveries (23 aggregate base deliveries and 16 construction equipment deliveries) will be required, the number of construction workers will be low. However, when the solar panel installation is occurring, 1,200 construction workers will be needed but truck deliveries will be lower. This is the part of construction that will create the most trips.

~~completed by June 2015, for a total duration of~~approximately 15 to 18 ~~35~~ months. ~~A preliminary project construction schedule is shown in Figure 1-10.~~

Construction would ~~be scheduled~~ occur between 6 a.m. and 6 p.m., Monday through Friday. Additional hours may be necessary to make up schedule deficiencies or to complete critical construction activities. During the startup phase of the project, some activities may require 7 days a week.

Construction Personnel Requirements

The peak workforce on the ~~project~~site during ~~the~~ construction ~~Phase 1 (10 months)~~ would be ~~approximately~~ a maximum of ~~105~~1,200, including construction craft persons and supervisory, support, and construction management personnel. ~~The average number of construction workers during Phase 1 would be approximately 83. During Phase 2 (11.5 months) and 3 (13 months), the peak project construction workforce is expected to be approximately 90, with the average workforce being approximately 81.~~

Testing and Energizing

Prior to energizing substation equipment, the solar PV panels would be tested. In addition to the solar system testing, the substation equipment, protective relaying, and communications systems would be tested. Upon successful testing, the equipment and project would be energized and interconnected to the CAISO grid.

1.8.6 Project Design Features

The applicant has incorporated into the project structural elements and practices called project design features (PDFs) to avoid and minimize potential impacts on environmental resources. The~~se~~ PDFs are part of the project and are distinguished from mitigation measure for potentially significant impacts pursuant to CEQA. PDFs have been identified only for the environmental resources that were determined to have the potential to be adversely affected by project construction and/or operation. If the project is approved, the project applicant would implement the PDFs listed in Table 1-2.

Table 1-2 Project Design Features Proposed by Applicant~~GWF~~

Project Design Feature by Resource	Components of Project Design Feature
~~PDF AES-1~~	~~Plant a row of screening vegetation along the north boundary of the project site (along the south side of SR 198) to screen views of the project from SR 198 and the residences on the north side of SR 198.~~
PDF AG-1	Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	the County. Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil. The Plan shall provide that all driveways and other areas compacted during original construction or by equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding, has occurred. Additional seedlings and applications of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project. The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. It is anticipated that waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of decommissioning, the Plan shall be revised to provide that another equivalent facility will be utilized. Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights. The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months).
PDF AG-2	Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	cost estimate.
PDF AG-3	The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be submitted to the Kings County Community Development Agency for approval prior to the issuance of a building permit.
PDF AIRAQ-1	Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD. Indirect Source Review (ISR) (District Rule 9510) to determine the potential mitigation for nitrogen oxide (NO_x) emissions.
PDF AQ-2	Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.
PDF AQ-3	Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.
PDF BIO-1	Mitigate the loss of up The project applicant shall retain a qualified biologist to 978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX). Cconduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake. The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environ mental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat.

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted. If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines. If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.
PDF BIO-2	A pre-construction clearance survey for burrowing owl shall be performed by a qualified biologist, not more than 30 days prior to construction, to ensure avoidance of this species during construction. If burrowing owls are determined to be present, avoidance measures in accordance with the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) shall be implemented. Copies of any survey results and forms shall be submitted to the USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.
PDF BIO-3	Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the U.S. Fish and Wildlife Service (USFWS) San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County. The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). ~~Incorporate openings in fencing design to facilitate passage of San Joaquin kit fox through the project site (Figure 1-9~~Implement and maintain a weed control program around the perimeter fence.
PDF BIO-4	A qualified biologist shall conduct a preconstruction survey for nesting bird species that are protected by the Migratory Bird Treaty Act (MBTA) not more than 30 days prior to commencement of construction.
PDF CUL-1	The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team. The project proponent shall retain a professional archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified If any cultural resources, such as structural features unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any project development activities, be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources shall be suspended and the Kings County Community Development Agency shall be notified immediately notified. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.At that time, Kings County shall coordinate any necessary investigations of the site with appropriate specialists, as needed. The applicant shall be required to implement any mitigation deemed necessary for the protection of cultural resources.
PDF CUL-2	If the professional archaeologist determines that any cultural- Native American archaeological, ethnographic, or spiritual resources are unearthedexposed during excavation activities, all identification and treatment shall be conducted by qualified archaeologists who meet the federal standards as stated in the Code of Federal Regulations (CFR) (36 CFR 61), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/organizations in the locale in which resources could be affected shall be consulted. construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County CDA. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.
PDF CUL-3	Pursuant to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the CaliforniaState Health and Safety Code Section 7070.5(e) and Public

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	Resources Code Section 5097.98, if human remains or bone remains of unknown origin areis found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Ceoroner shall notify the Native American Heritage Commission (NAHC) who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that "…the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance." The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center. Treatment of the remains shall be conducted in accordance with the direction of the County Coroner or the NAHC, as appropriate. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented.
PDF PALEO-1	If paleontological resources (fossils) are uncovered discovered during project construction, excavation activities at the project site, work in the vicinity of the find (a 50-foot radius) shall stopcease, and a qualified professional paleontologist shall be retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any significant paleontological resources shall be undertaken with the approval of the Kings County CDA.contacted. The paleontologist shall examine the find and assess its significance in accordance with the CEQA resource significance criteria for archaeological sites, with appropriate modifications. If the resource is determined to be significant, impacts that cannot be avoided shall be mitigated through data recovery or other means, in a consultation with Kings County. The applicant shall ensure the preparation of a Paleontological Resources Report by the paleontologist if significant fossils are fund and recovered during project construction activity.
PDF GEO-1	Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), designed to reduce potential impacts related to erosion and surface water quality during project construction activities and through the life of the project. The SWPPP shall include measures to address erosion, such as a construction period monitoring program to be implemented by the construction supervisor, and shall include Best Management Practices (BMPs) to address erosion, such as watering for dust control and the construction of perimeter silt fences, as needed. The SWPPP shall be submitted to the

Table 1-2 Project Design Features Proposed by Applicant~~GWF~~

Project Design Feature by Resource	Components of Project Design Feature
	Central Valley Regional Water Quality Control Board for review~~ and approval~~. Documentation of the submittal shall be provided to Kings County prior to issuance of any building permit. Implementation of the SWPPP shall comply with state and federal water quality regulations.
PDF GEO-2	E~~If e~~xpansive soils ~~are~~ have been determined to be present onsite and pose a structural issue~~, treat the soil according to the site~~; therefore a geotechnical report ~~recommendations~~is required prior to issuance of a building permit.
PDF GEO-3	Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.
PDF HAZ-1	~~The applicant shall implement the following measure to address potential fire hazards in the project area:~~ ~~**Fire Prevention Training.** The applicant shall coordinate with the California Office of the State Fire Marshall to provide PV training to County fire responders, construction, operational, and maintenance staff. The intent of this training shall be to familiarize both responders and workers of the codes, regulations, associated hazards, and mitigation processes related to solar electricity. This training shall include techniques for proper system shutdown and fire suppression procedures for PV systems. The training shall include procedures for coordination suppression procedures for PV systems. The training shall include procedures for coordination with local fire department, sheriff department, and emergency medical services.~~ ~~**Fire Prevention Measures.**~~ The applicant shall implement the following measure during project construction and operation: The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e. fire engines). Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site. The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards. Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire. Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers. Smoking shall be prohibited at the project site except in designated areas.
PDF NOI-1	Limit noise-generating construction activities to between the hours of 6:00 a.m. and

Table 1-2 Project Design Features Proposed by ApplicantGWF

Project Design Feature by Resource	Components of Project Design Feature
	6:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday and Sunday if additional hours are needed to make up schedule deficiencies or to complete critical construction activities. Prohibit construction activities on major federal- and state-recognized holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). Equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and maintain it in good working order. Locate stationary construction equipment (i.e., portable power generators and compressors) the furthest distance possible from nearby residences. Park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible. Notify nearby residents whenever extremely noisy work would be occurring. Shut off idling equipment. Include these noise PDFs in construction bid documents.
PDF PUB-1	If sheriff and/or fire protection services are required at the proposed project site during construction or operation, the applicant shall pay to the County the cost of those services.

1.9 PERMITS AND APPROVALS THAT MAY BE REQUIRED

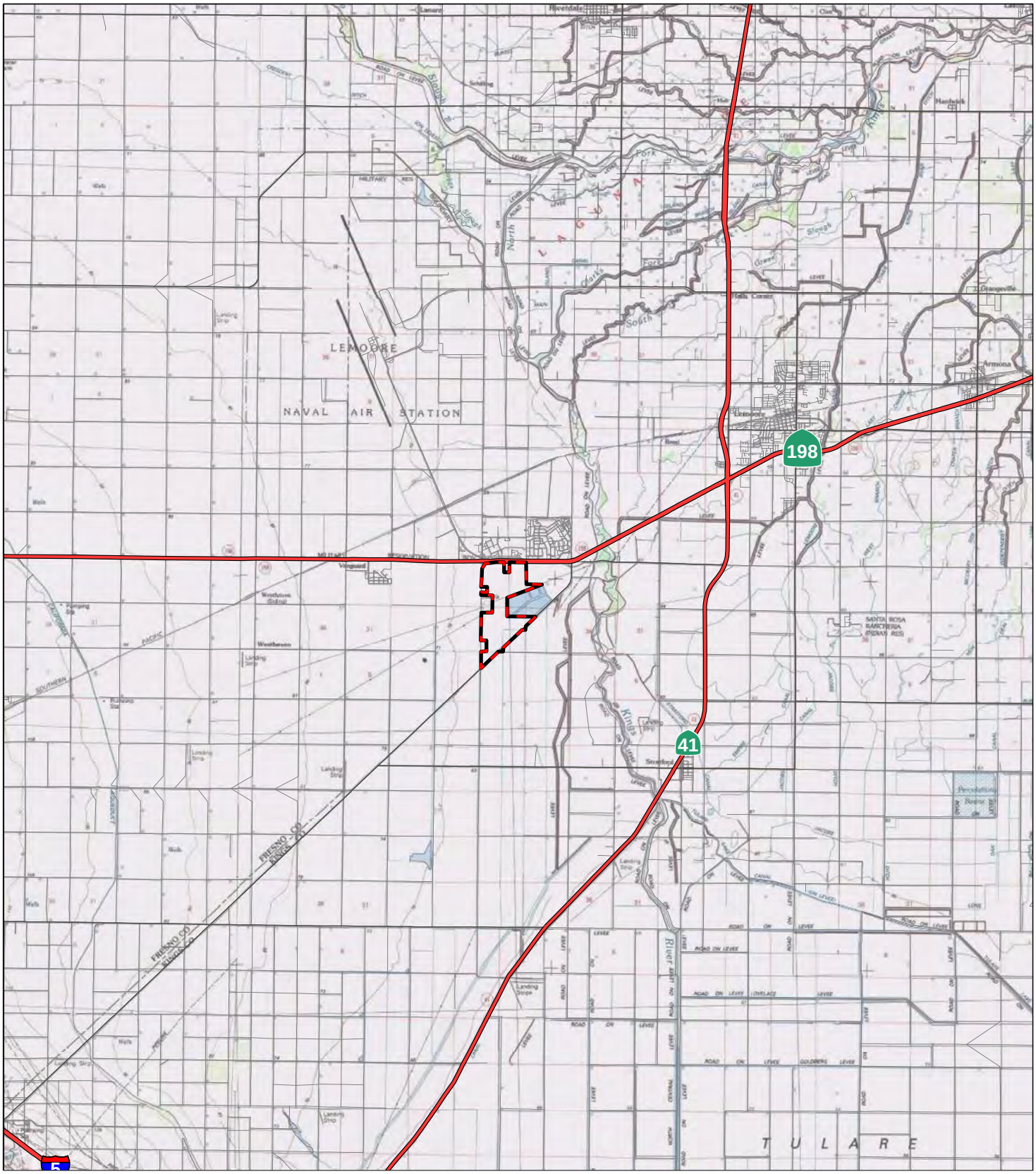
Table 1-3 lists the agencies and approvals that are expected to be needed for the proposed project.

Table 1-3 Required Permits and Approvals

Agency	Permit/Approval
Central Valley Regional Water Quality Control Board (RWQCB)	National Pollutant Discharge Elimination System (NPDES) Construction General Permit for the disturbance of a surface area of greater than 1 acre; as part of this permit, a SWPPP would be prepared.
San Joaquin Valley Air Pollution Control District (SJVAPCD)	ISR (District Rule 9510) to determine the potential mitigation for NO_x emissions
Kings County	Addendum Conditional Use Permit Grading Plan (for all construction activities requiring grading) Building Permit, including plan check and approval of project design (including fence height) Encroachment Permit for site access driveway improvements (adjacent to ROW) and utility trenching for any work that

Table 1-3 Required Permits and Approvals

Agency	Permit/Approval
	would occur within public Rights of Way. Submission of a traffic control plan and drawings may be required at the discretion of the Kings County Department of Public Works. ~~; requires the submission of construction drawings and a traffic control plan for any work that would occur with public streets~~ Septic System Permit



LEGEND

Project Site

FIGURE 1-1

N

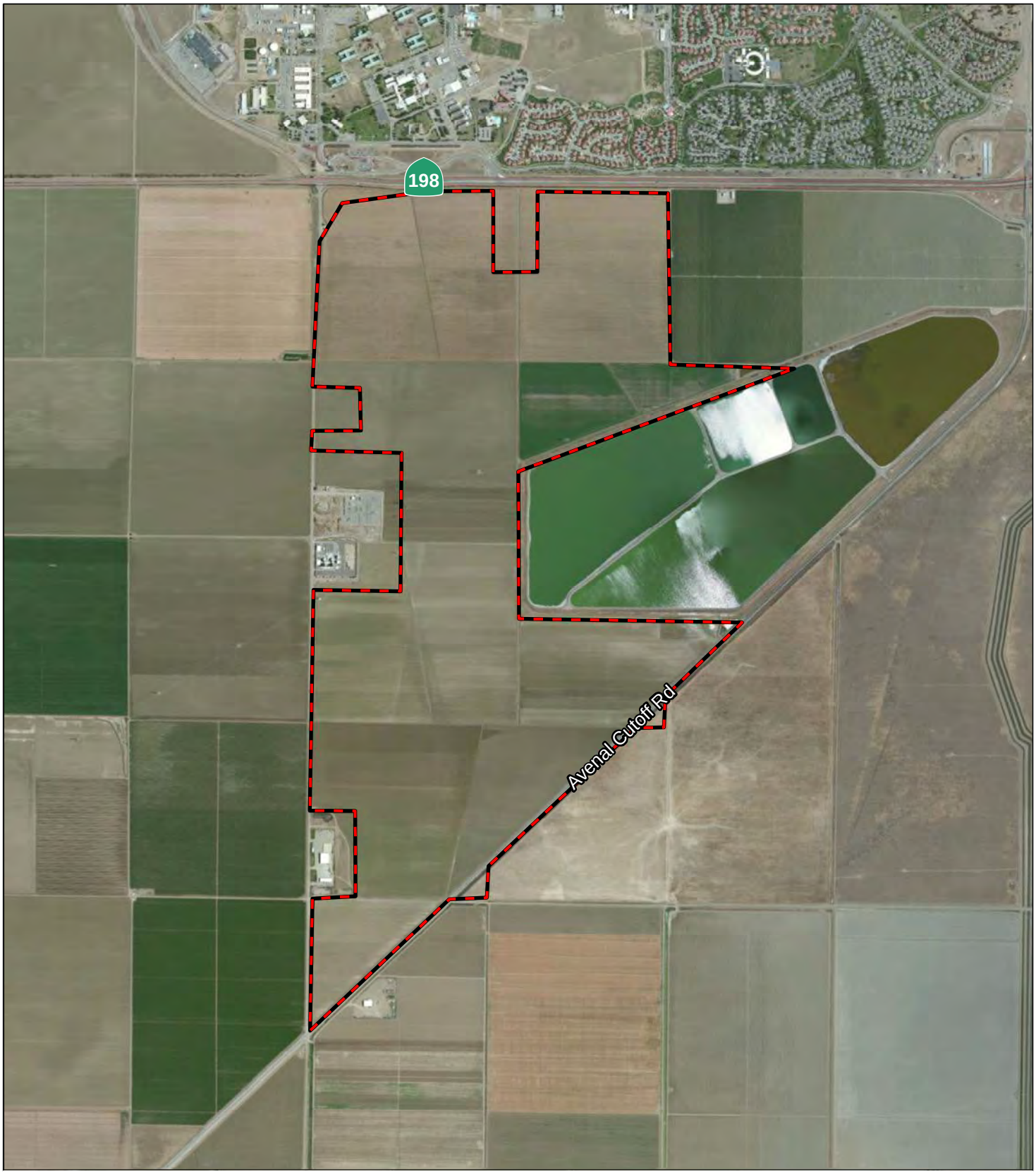
0 1.5 3
MILES

American Kings Solar Project

Vicinity Map

SOURCE: USGS Topographical Map (Kings County)

I:\Fts1407\AI\Revised ISMND\Figure 1-1.ai (6/19/2015)



LEGEND

Project Site

FIGURE 1-2

N

0 1000 2000
FEET

SOURCE: ESRI Aerial Imagery (8/2010)

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American Kings Solar Project

Location Map

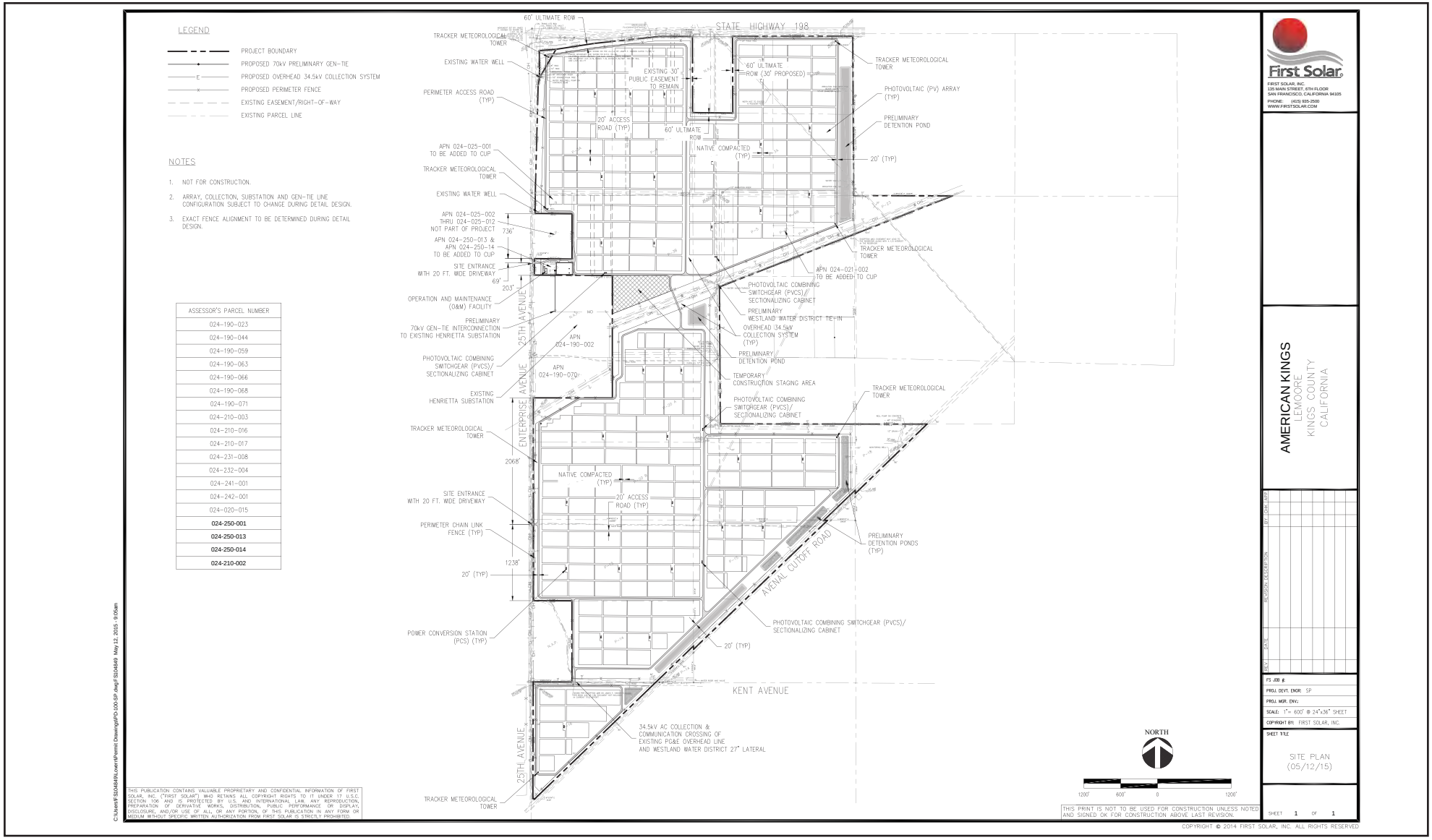

FIGURE 1-3

American Kings Solar Project

Project General Arrangement

SOURCE: First Solar (2015).

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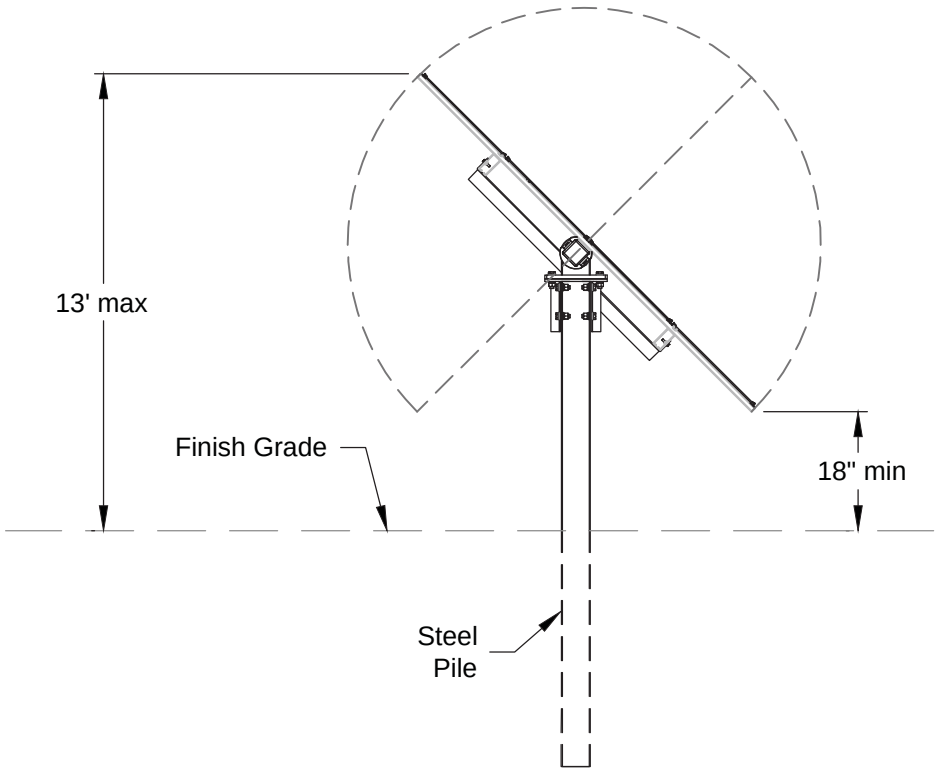

Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

Typical Detail Horizontal-Tracker Structure

FIGURE 1-4

American Kings Solar Project
Typical Tracker Structure

SOURCE: First Solar (2014).

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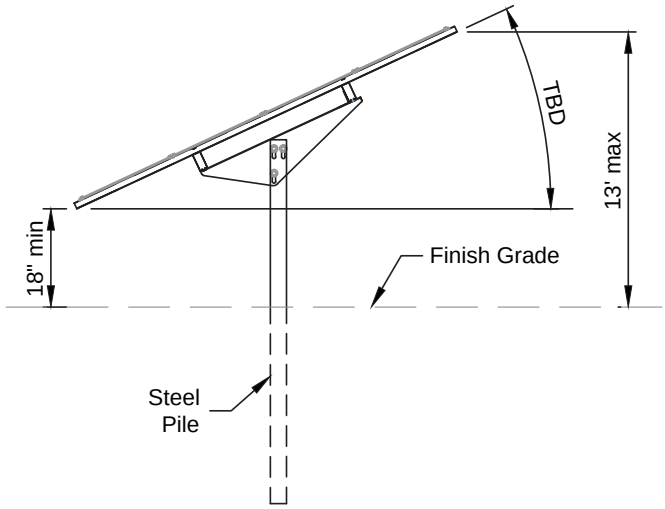

Note:
The distance from the ground to the edges of PV module table may vary depending on the topography.

American Kings Solar Project

Typical Detail Fixed-Tilt Structure

FIGURE 1-5

American Kings Solar Project
Typical Fixed-Tilt Structure

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-5.ai (6/19/2015)

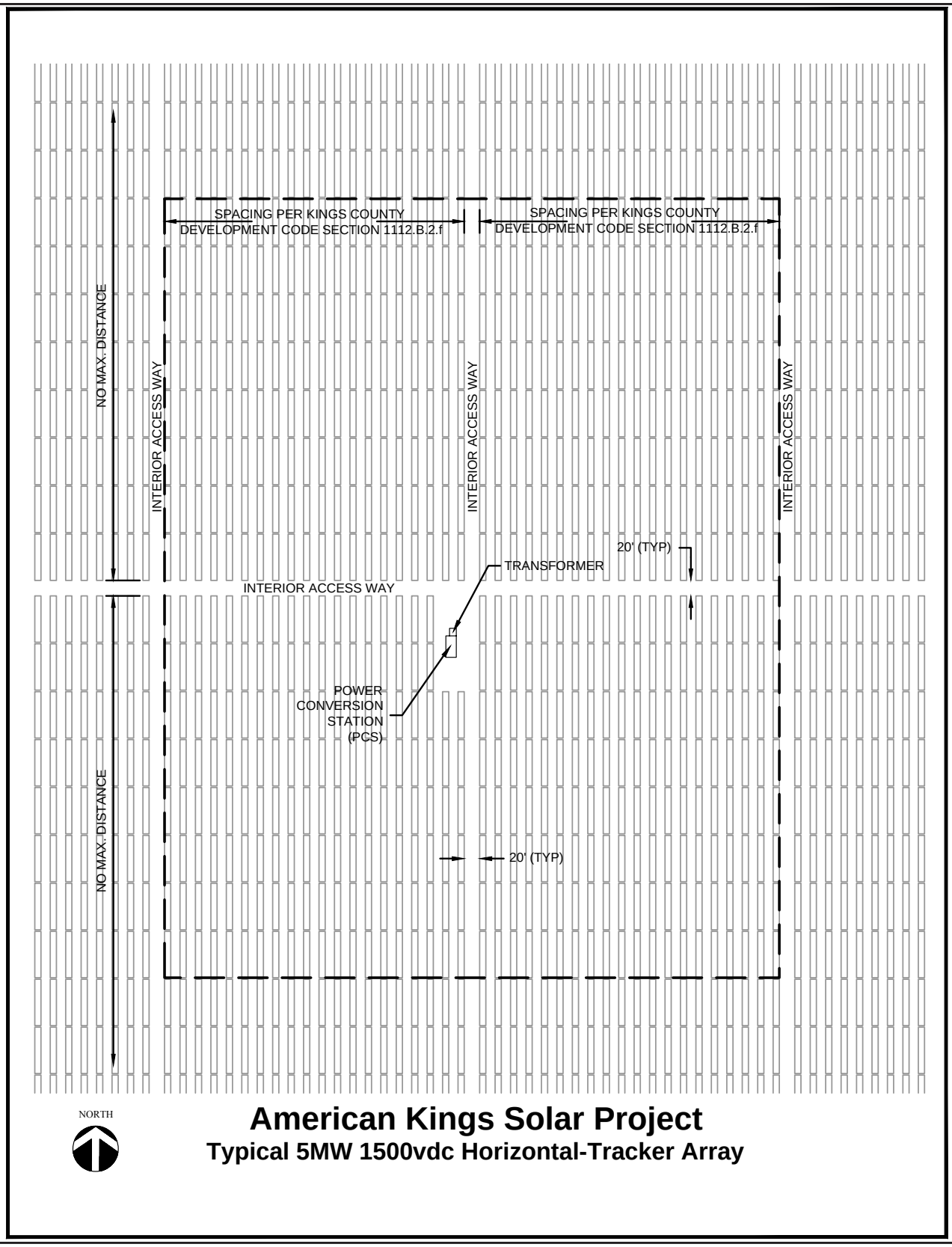

FIGURE 1-6

American Kings Solar Project

Typical Tracker Array Layout

SOURCE: First Solar (2015).

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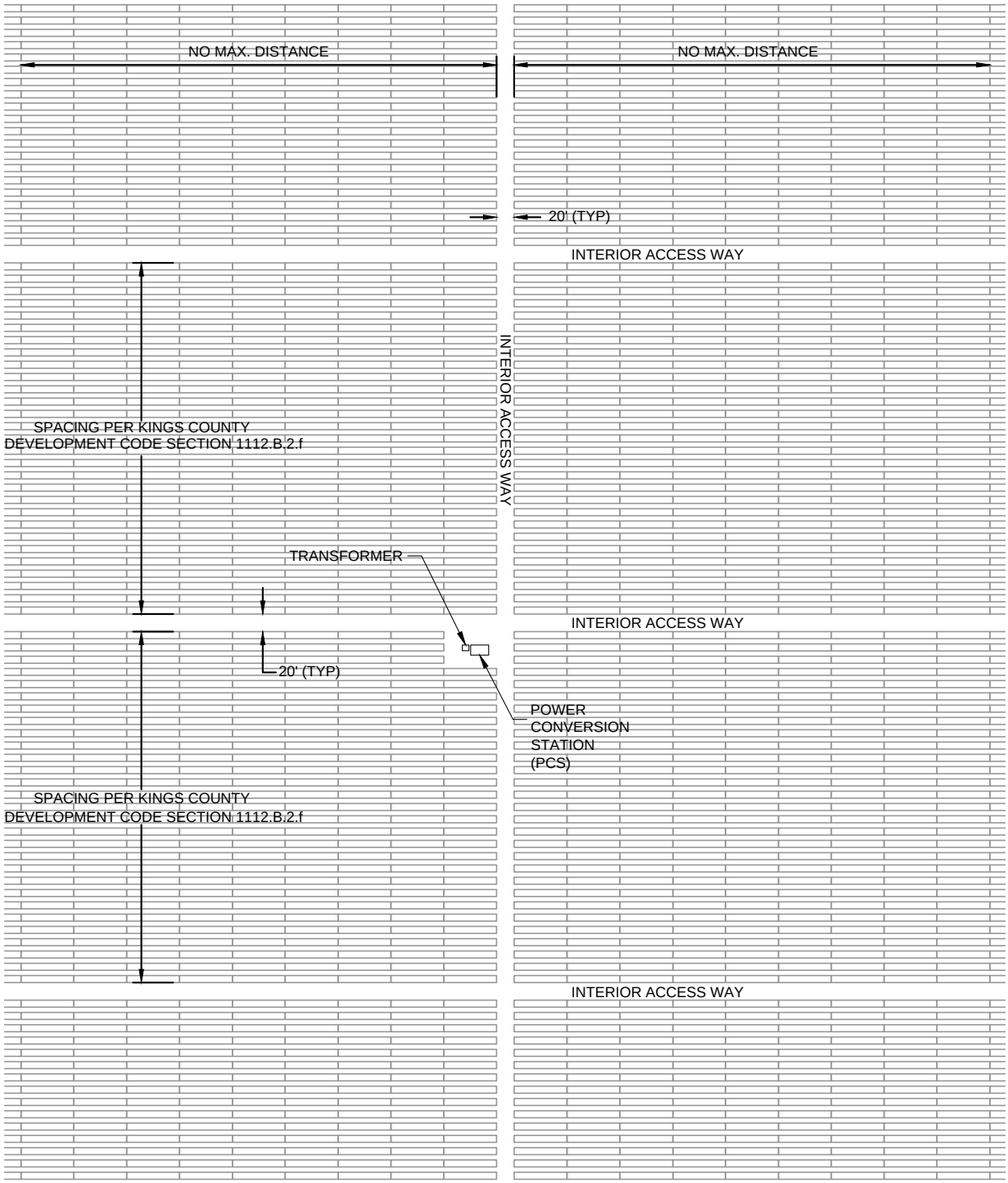

NORTH

American Kings Solar Project

Typical 5MW 1500 vdc Fixed-Tilt Array

FIGURE 1-7

American Kings Solar Project

Typical Fixed-Tilt Array Layout

SOURCE: First Solar (2015).

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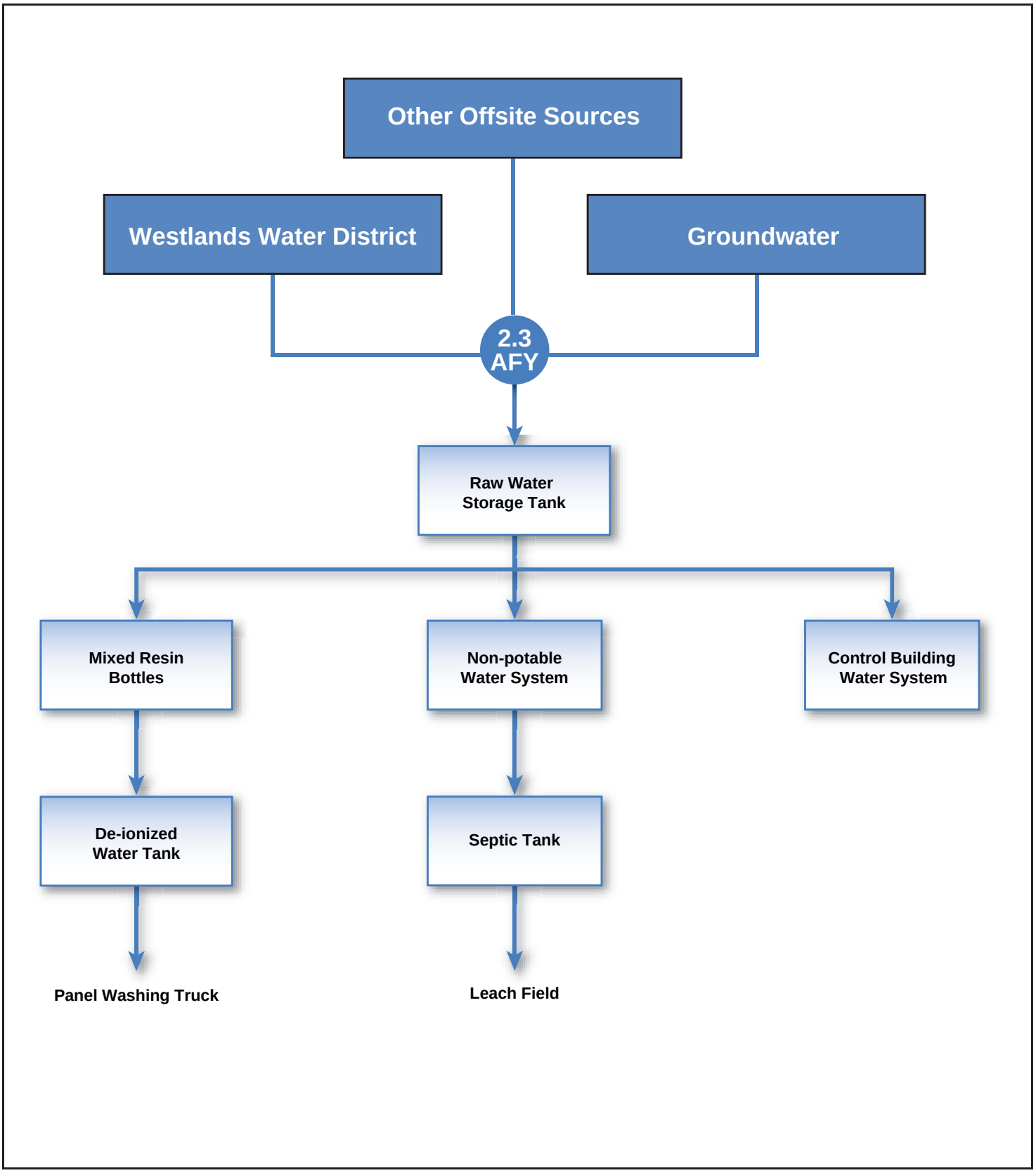


FIGURE 1-8

American Kings Solar Project
Water Flow Diagram

SOURCE: First Solar (2015). NOTES: AFY = acre-feet per year

I:\Fts1407\AI\Revised ISMND\Figure 1-8.ai (6/19/15)

VIEW FROM NORTH
SCALE: 1"=15'

VIEW FROM WEST
SCALE: 1"=15'

American Kings Solar Project

Elevation View of Operation & Maintenance Building (Control Building)

FIGURE 1-9

American Kings Solar Project

Elevation View of Operation and Maintenance Building (Control Building)

SOURCE: First Solar (2015).

I:\Fts1407\AI\Revised ISMND\Figure 1-9.ai (6/19/15)

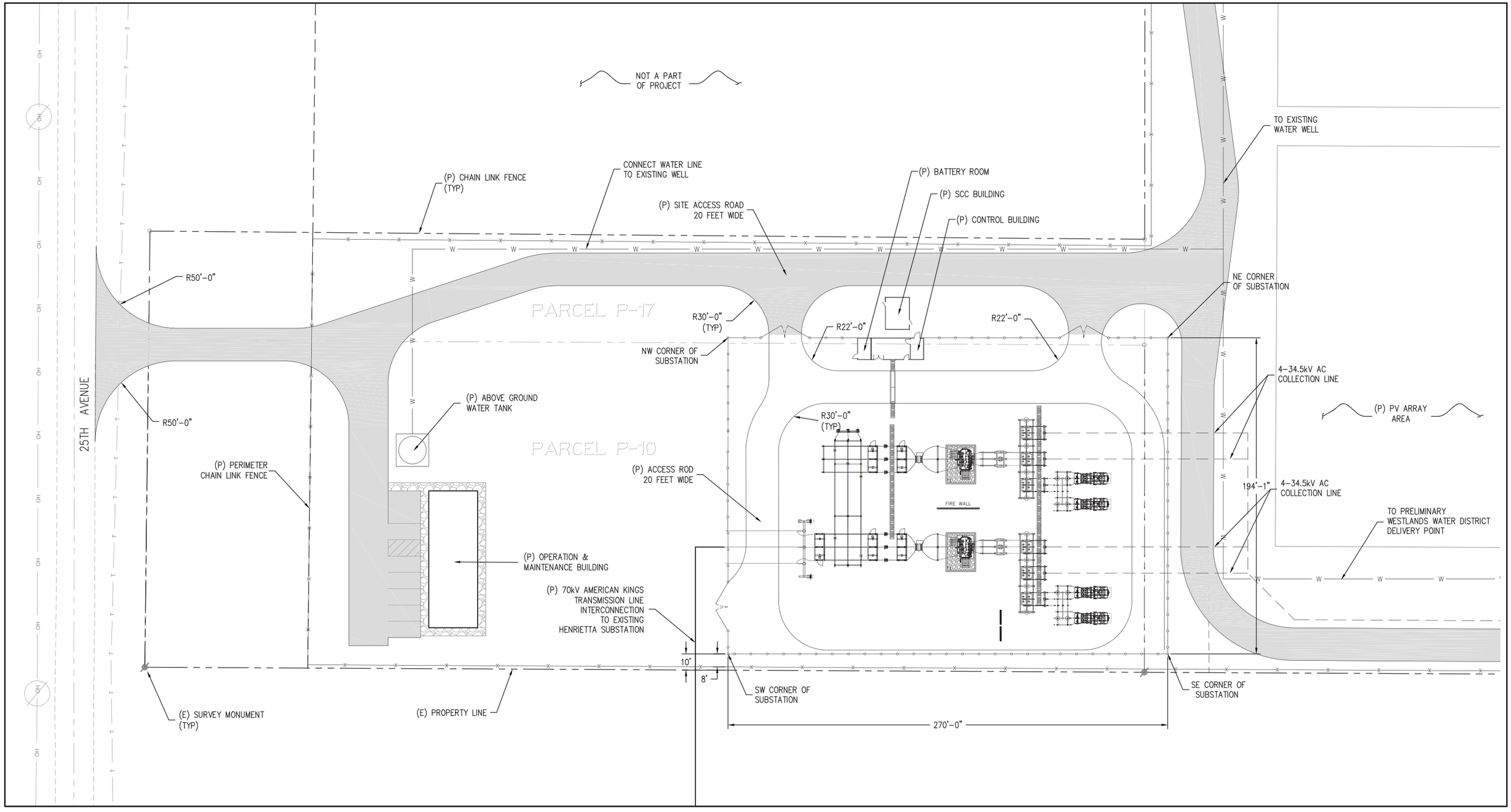
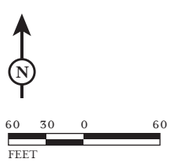


FIGURE 1-10



SOURCE: First Solar (2015).

American Kings Solar Project

Substation O&M Building Area (Control Building)

I:\Fts1407\AI\Revised ISMND\Figure 1-10.ai (6/19/15)

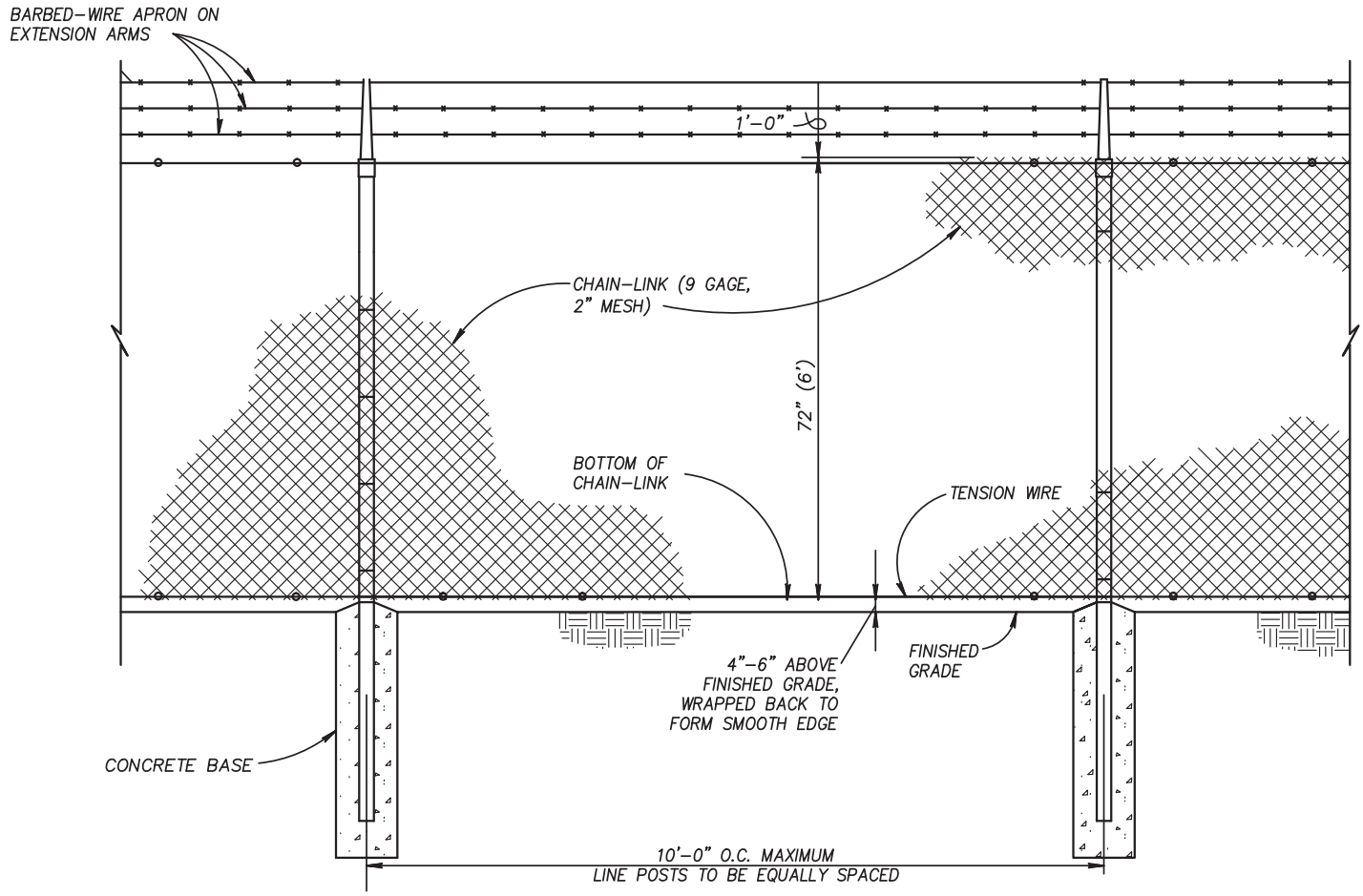


FIGURE 1-11

American Kings Solar Project

Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Gap

SOURCE: First Solar (2015).

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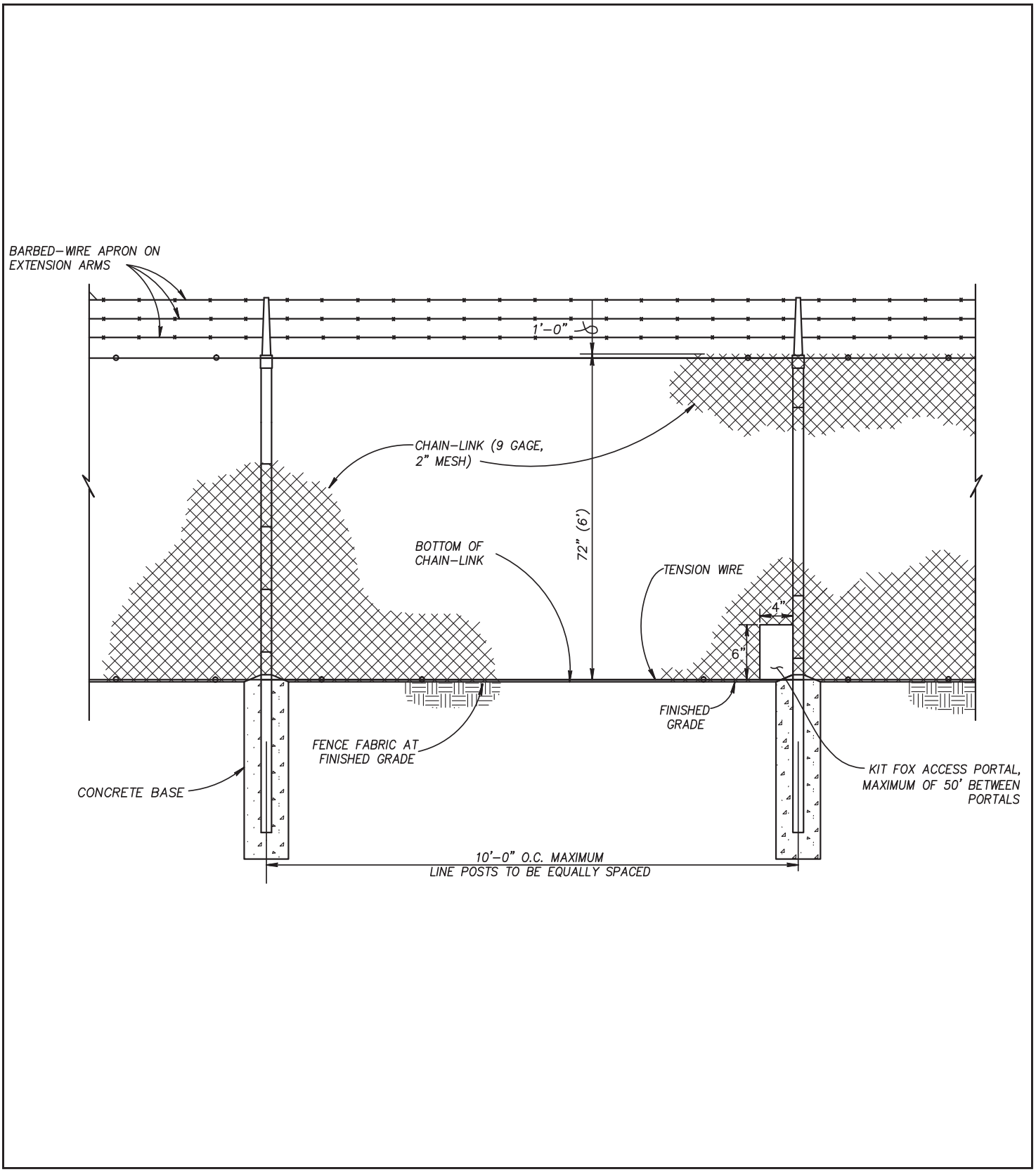

FIGURE 1-12

American Kings Solar Project

Proposed Chain Link Fence Design with San Joaquin Kit Fox Access Portal

SOURCE: First Solar (2015).

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2.0 ENVIRONMENTAL DETERMINATION

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agricultural Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Greenhouse Gas Emissions	☐	Hazards and Hazardous Materials	☐	Hydrology/Water Quality
☐	Land Use/Planning	☐	Mineral Resources	☐	Noise
☐	Population/Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities/Service Systems	☐	Mandatory Findings of Significance

2.2 DETERMINATION

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ In find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (1) have been analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

3.0 EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 AESTHETICS

Table 3.1-1 Aesthetics Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Setting

Environmental Setting

Agricultural land within Kings County is the predominant open space landscape throughout the unincorporated territory of the County. This resource represents approximately 91 percent of all unincorporated land within the County (Kings County, 2010). The Kings River is considered a scenic resource by Kings County; at its closest point, the river is located approximately 1 mile to the east of the project site.

Solar facilities are common in the County. As of June 2015, there were 25 solar PV projects distributed throughout the County, with a combined electrical generating capacity of approximately 911 MW. The status of the 25 solar projects is summarized as follows: eight projects have completed construction; 13 projects have been granted CUPs by Kings County but have not completed construction; and the other four solar projects have active CUP applications pending approval.

The ~~957~~966-acre project site is an agricultural field; it is flat land with no remarkable elevation contours, geologic features, or hydrologic features. ~~A site visit was conducted on June 22, 2010 to view the project site and its surroundings, and to take photographs from various locations of the area to demonstrate the character of the landscape.~~ Although the project setting is predominantly rural and agricultural, there are large structural elements in the immediate vicinity: ~~In the vicinity of the project site are~~ SR~~-~~198 and local roads, other agricultural fields, residences, industrial land uses (including a ~~cooling company~~cold storage facility; wastewater ponds; electrical infrastructure that includes a power plant, an electrical substation, a high voltage electrical transmission line, and several electrical

~~distribution~~ transmission lines); and the NAS Lemoore naval air training facility. In addition, solar arrays and the substation associated with the Kent South solar facility represent structural elements in the otherwise agricultural setting. The project would introduce similar uses as surrounding utility uses in the area. A site visit was originally conducted on June 22, 2010 to view the project site and its surroundings, and to take photographs from various locations of the area to demonstrate the character of the landscape. Figure 3.1-1 is an aerial photo of the project site and its surroundings. It shows the locations of the Key Observation Points ([KOPs] – locations where photographs were taken as well as showing the direction the camera was pointed for each photograph). Figures 3.1-2 through 3.1-6 are photographs of various views taken from the KOPs of the project site and the landscape around the project site. These photos demonstrate the character of the landscape in the vicinity of the project site.

The nearest ~~sensitive~~ receptors to the project site, and the only ~~sensitive~~ receptors in the area, are the military residences that are located in the NAS Lemoore naval training facility to the north of the site, across the street (SR 198) from the project site. Approximately half of the row of residences that border the north side of SR 198 would have an unobstructed view of the project site when looking south from their properties. The remaining half of the row of residences would continue to have an unobstructed view of an agricultural field that is east of and adjacent to the project site and would also have an unobstructed view of the project site when looking southwest. These receptors would also have a view of the Henrietta substation/power plant facility as well as existing and proposed solar projects in the area (Kent South and Westside).

When considering an effect on the visual character of the site, one must first determine the scenic quality of the existing site. There are no established guidelines for determining the scenic quality of CEQA project sites. Since the project site is on a highway, however, the Federal Highway Administration (FHWA) standards can provide a guideline for the analysis of scenic quality. However, it is important to note that aesthetics are, by nature, difficult to quantify. The FHWA standards are a qualitative assessment intended to provide a framework for the discussion.

The FHWA Visual Impact Assessment for Highway projects is commonly used to assess the potential visual impacts of development projects. Dimensions of landscape quality taken into account for the FHWA landscape evaluation and visual impact assessment include vividness, unity, and intactness. Vividness is defined as the memory of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern. Unity is defined as the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern, and the term refers to the compositional harmony or degree of intercompatibility between landscape elements. Intactness is defined as the integrity of the visual order in the natural and human-built landscape, and the extent to which the landscape is free from visual encroachment.

As determined using the FHWA methodology, the visual quality of the project site is low. Due to the lack of remarkable features on site, the vividness of the project site is low – i.e., the visual pattern of the site is not distinctive or memorable. The intactness of the project site is also low, due to the adjacent military base and adjacent solar facilities. Because the project site has been subjected to substantial ground disturbance from agricultural use, the unity of the site is also low.

SR 198 in Monterey, Fresno, and Tulare counties has been determined to be eligible for designation as a scenic highway; however, SR 198 near the project site (in Kings County) is not designated as a scenic highway nor has it been determined as eligible for designation (Caltrans, 2010).

Regulatory Setting

Federal. Aesthetic resources are protected by several federal regulations, none of which are relevant to this project because it would not be located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit.

State. The California Scenic Highway Program was created by the state legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The California Scenic Highway System is a list of highways that are either eligible for designation as scenic highways or have been designated as such (Caltrans, 2010).

The CEQA (California Public Resources Code (PRC) Sections 21000-21178.1 including Guidelines for Implementation of CEQA are codified in the California Code of Regulations (CCR) Sections 15000-15387. CEQA establishes policies and procedures for the review of proposed projects in California. With the preparation of this document, the proposed project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Open Space Element identifies the County's "open space land," and establishes guiding policies for the preservation and conservation of land within the County that is essentially unimproved and devoted to open space use. Kings County open space resources are comprised of natural areas and other lands devoted primarily for outdoor human use. Natural open space areas may include natural watershed terrain, riparian habitat, vernal pools, flood zones, and natural water courses. Other open spaces used primarily for human use include agricultural lands, recreation-oriented park lands, existing and proposed community open space buffers, aquifer recharge areas, and areas zoned for mineral and aggregate extraction.

General Plan Open Space goals, objectives, and policies that are pertinent to the project include:

- **OS Goal B1:** Maintain and protect the scenic beauty of Kings County.
- **OS Objective B1.1:** Protect and enhance views from roadways ~~that~~ which cross scenic areas or serve as scenic entranceways to cities and communities.
- **OS Objective B1.2:** Preserve roadside landscapes ~~that~~ which have high visual quality and contribute to the local environment.
- **OS Policy B1.2.1:** Review new development and utility projects for compatibility and potential for impacting scenic viewsheds along highly traveled scenic routes.
- **OS Objective B1.3:** Protect the scenic qualities of human-made and natural landscapes and prominent viewsheds.
- **OS Policy B1.3.1:** Require new development to be designed so that it does not significantly impact or block views of Kings County's natural landscape or other important scenic features. Discretionary permit applications will be evaluated against this requirement as part of the development review process. New developments may be required, as appropriate to:
    - Minimize obstruction of views from public lands and rights-of-way.
    - Reduce visual prominence by keeping development and structures below ridgelines.

- Limit the impact of new roadways and grading on natural settings. Such limits shall be within design safety guidelines.

- **OS Policy B1.3.2:** Protect the visual access to Kings River and other prominent watercourses by locating and designing new development to minimize visual impacts and obstruction of views of scenic watercourses from public lands and rights-of-way.
- **OS Goal E1:** Maintain open space areas near NAS Lemoore and underlying low-level military airspace corridors and ranges.
- **OS Policy E1.1.1:** The County will work with NAS Lemoore to protect current and future mission requirements by maintaining or designating open space, agricultural uses, or similar low intensity land uses in areas within, adjacent to, or proximate to military installations and low flying airspace corridors (Kings County, 2010).

3.1.2 Environmental Impacts and Mitigation Measures

Project Design Features

~~The applicant has incorporated the following PDF into the project to minimize or avoid impacts to aesthetic resources as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to aesthetics.~~There are no PDFs needed or incorporated into the project design to minimize or avoid impacts to aesthetic resources. See Chapter 1 for a complete list of PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

> ~~**PDF AES-1:** Plant a row of screening vegetation along the north boundary of the project site (along the south side of SR 198) to screen views of the project from SR 198 and the residences on the north side of SR 198.~~

> **a. Would the project have a substantial adverse effect on a scenic vista?**

NO IMPACT. The project site and its environs is primarily a rural agricultural landscape with several large structures, such as the Henrietta substation/power plant facility, an agricultural processing plant, and the existing Kent South solar facility, located ~~that is~~ across the street from a military facility that includes base personnel housing. The project site is not part of a scenic vista nor is it located within the viewshed of a scenic vista. Due to the low heights of the majority of the proposed project features, ~~(ranging~~ (solar panels would be approximately ~~from 8~~ 13 feet tall), ~~to 40 feet tall), with 800 feet of 55-foot tall distribution line poles (approximately 3 to 4 poles) connecting to the adjacent existing electrical substation,~~ development of the proposed project (either its construction or operation) would ~~have no effect on~~ not impact views of the Kings River or the hills within Kings County. ~~,~~ ~~resulting in~~ N~~n~~o impacts would occur.

> **b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

NO IMPACT. SR 198, which borders the north side of the project site, is not designated as a scenic highway, nor has it been determined to be eligible as a scenic highway. In addition, no rock outcroppings or historic buildings are located at the project site. The few fruit and shade trees that are located at the project site are landscaping trees that are considered typical of the area and are not

scenic. Therefore, the project (either its construction or operation) would not damage scenic resources, resulting in no impact.

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

LESS THAN SIGNIFICANT IMPACT. As discussed above in the Environmental Setting, the existing visual character and quality of the project site and surrounding area is low. As previously discussed, there are no scenic resources in the project area nor are there any scenic highways in the area. The project site is not part of a scenic vista nor is it located within the viewshed of a scenic vista. Although the project setting is predominantly rural and agricultural, there are large structural elements in the immediate vicinity including: NAS Lemoore naval training facility; an agricultural processing plant; and, the Henrietta substation/power plant facility to the west, along 25th Avenue. In addition, solar arrays and the substation associated with the Kent South Solar facility represent structural elements in the otherwise existing agricultural setting. The nearest receptors that may be sensitive to changes in the visual character/quality of the site include residents on NAS Lemoore just north of the project site, north of SR-198 and motorists traveling along SR-198.

During project construction, the project site's visual character would change from a working agricultural landscape to a temporary construction work site. Site grading and installation of PV panels and the construction of project buildings, a substation, and a water tank would occur during project construction. Construction personnel, equipment, and materials would be at the site. This would result in a temporary (~~35~~approximately 15 to 18-months) change to the visual character of the site. This is considered a change in visual character of the site, but is not considered a degradation of the visual quality of the site.

Once project construction is complete, the project site would be a field of solar PV panels and associated project infrastructure that includes a ~~control~~ Control ~~and maintenance building~~Building, a substation, a raw water storage tank, and a demineralized water storage tank which would result in a permanent change to the visual character of the site. To assist in assessment of potential aesthetic impacts from project development, visual simulation was performed by Mark Thomas & Company using the computer-aided design (CAD) drawings provided by the applicant. Figure 3.1-7 shows the locations of the four camera vantage points used to photograph the site. Figures 3.1-8, 3.1-10, 3.1-12, and 3.1-14 show that the scenic quality of the project site is low. Figures 3.1-9, 3.1-11, 3.1-13, and 3.1-15 show the landscape with the addition of the project.

Figure 3.1-8 shows the view from camera location #1 near the entrance to NAS Lemoore from SR 198. From this location, SR 198 and the associated infrastructure (streetlights, signs, sidewalks, etc.) is the main visual feature. Past the highway, unimproved fields are visible. The vividness of this view is low; it does not contain memorable visual components. The view has a certain amount of unity; the highway travels right through the frame. The area is not intact; there are both human and natural landscapes. Thus, the visual quality of the view is low.

Figure 3.1-9 shows the view from camera location #1 with the addition of the project. There is very little change in the view from this location. Past the highway, instead of unimproved fields, one can see the solar panels, which appear to be a dark and low ground cover. With the addition of the project, the vividness, unity, and intactness of the project site is not significantly altered.

Figure 3.1-10 shows the view from camera location #2, representative of views from NAS Lemoore residential areas fronting on SR 198. Again, the main visual feature is SR 198. Past the highway, several trees are visible in a natural landscape somewhat disturbed by a fence. The vividness of this view is low; it is not memorable. The view does not have unity; there are a variety of types of competing features. The area is not intact; there are both human and natural landscapes. Thus, the visual quality of the view is low.

Figure 3.1-11 shows the view from camera location #2 with the addition of the project. There is very little change in the view from this location. The solar panels appear below the height of the fence. The main visual feature is still the highway. With the addition of the project, the vividness, unity, and intactness of the project site is not significantly altered.

Figure 3.1-12 shows the view from camera location #3, at the residential area of NAS Lemoore near the northeastern extent of the Project site. At this location, tilled unimproved fields are in the foreground, with some low bushes and a fence visible in front of the highway. Telephone poles and more unimproved fields are seen past the highway. The vividness of this view is low; it is not memorable. The view does not have unity; there are a variety of types of features. The area is not intact; there are both human and natural landscapes. Thus, the visual quality of the view is low.

Figure 3.1-13 shows the view from camera location #3 with the addition of the project. From this viewpoint, the solar panels would be vaguely visible above the fence. The lines of the solar panels appear to blend in with the highway and the top of the fence line. With the addition of the project the vividness, unity, and intactness of the project site is not significantly altered.

Figure 3.1-14 shows the view from camera location #4, near the northwestern extent of the Project site. From this viewpoint, a viewer could see SR 198 intersecting with 25th Ave. The viewer would also see some unimproved fields and a dirt sloped shoulder with some vegetation. The vividness of this view is low; it is not memorable. The view does not have unity; there are a variety of types of features. The area is not intact; there are both human and natural landscapes. Thus, the visual quality of the view is low.

Figure 3.1-15 shows the view from camera location #4 with the addition of the project. From this viewpoint, a viewer would see the same intersection and vegetated shoulder. However, instead of a unimproved field, the viewer would see a portion of a unimproved field and then rows of solar panels. The panels appear shorter than nearby signs and trees. With the addition of the project, the vividness, unity, and intactness of the project site is not significantly altered.

As shown in Figures 3.1-8 thorough 3.1-15, the rows of solar panels, although taller, would appear similar in scale to rows of tall corn or other crops. The hard edges of the solar equipment could contrast with the softer edges of any crops planted on adjacent land, but would not introduce a new dominant visual element that is substantially out of scale with its existing surroundings. The maximum height of the PV modules for the single-axis tracking system is anticipated to be 13 feet, though PV module heights would often be less as the modules track the sun throughout the day. Should the applicant pursue the installation of a fixed-tilt system, the maximum height of the PV modules would also be 13 feet. At a maximum height of approximately 13 feet, the proposed PV modules would be relatively low in profile. Furthermore, prominent scenic landscapes are not

currently visible beyond the project site and therefore would not be blocked by project implementation. Features associated with the project (i.e., Control Building, substation, raw water storage tank, etc.) would be developed to comply with height limitations set forth by the County and would also be consistent in height and bulk with buildings/features associated with nearby/adjacent parcels of land.

The new features associated with the project would not result in a significant diminishment of visual quality because the vividness, intactness, and unity of the site are already low due to SR 198, NAS Lemoore, and previous land disturbance associated with agricultural production.

In addition to analyzing the low visual quality of the Project site, the applicant contacted NAS Lemoore in order to coordinate regarding potential aesthetic impacts. NAS Lemoore communications provided in Appendix C of the Addendum did not identify potential aesthetic impacts to the base due to project implementation. Representatives from NAS Lemoore did not recommend mitigation (such as screening on the north side of the project site) be implemented. According to the Air Installations Compatible Use Zones Report prepared in 2010, manufacturing and industrial uses (the report did not specifically consider solar generation facilities) are considered compatible with the naval base.

Based on the analysis discussed above, specifically the fact that the visual quality of the project site is low and would not be degraded by the project, impacts would be less than significant. No mitigation measures would be required.
~~Because the project site is considered typical of a working row crop agricultural site, i.e., it is not considered scenic.However, the proposed project development would substantially change the character of the site and its surroundings; therefore, PDF AES-1 has been incorporated into the project. By incorporating this PDF into the project, impacts to the existing visual character or quality of the site and its surroundings would be mitigated to less than significant.~~

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

LESS THAN SIGNIFICANT IMPACT. The project would include onsite lighting for safety, security, and emergency purposes. Typical areas covered by the lighting system would include: the project access gate, Control~~/Maintenance~~ Building perimeter and parking areas, the substation, the Inverter building entrances, and in certain locations along onsite roads and at onsite parking areas. Exterior lighting would use high-pressure sodium fixtures or similar lighting technologies, and would be appropriately shielded and directed inward to minimize offsite light and glare. In addition, PV solar panels are designed to absorb sunlight rather than reflect light by being made of specifically designed glass that has material reflectivity that is lower than that of smooth water (SunPower, 2009). Therefore, project lighting would result in a less than significant impact.

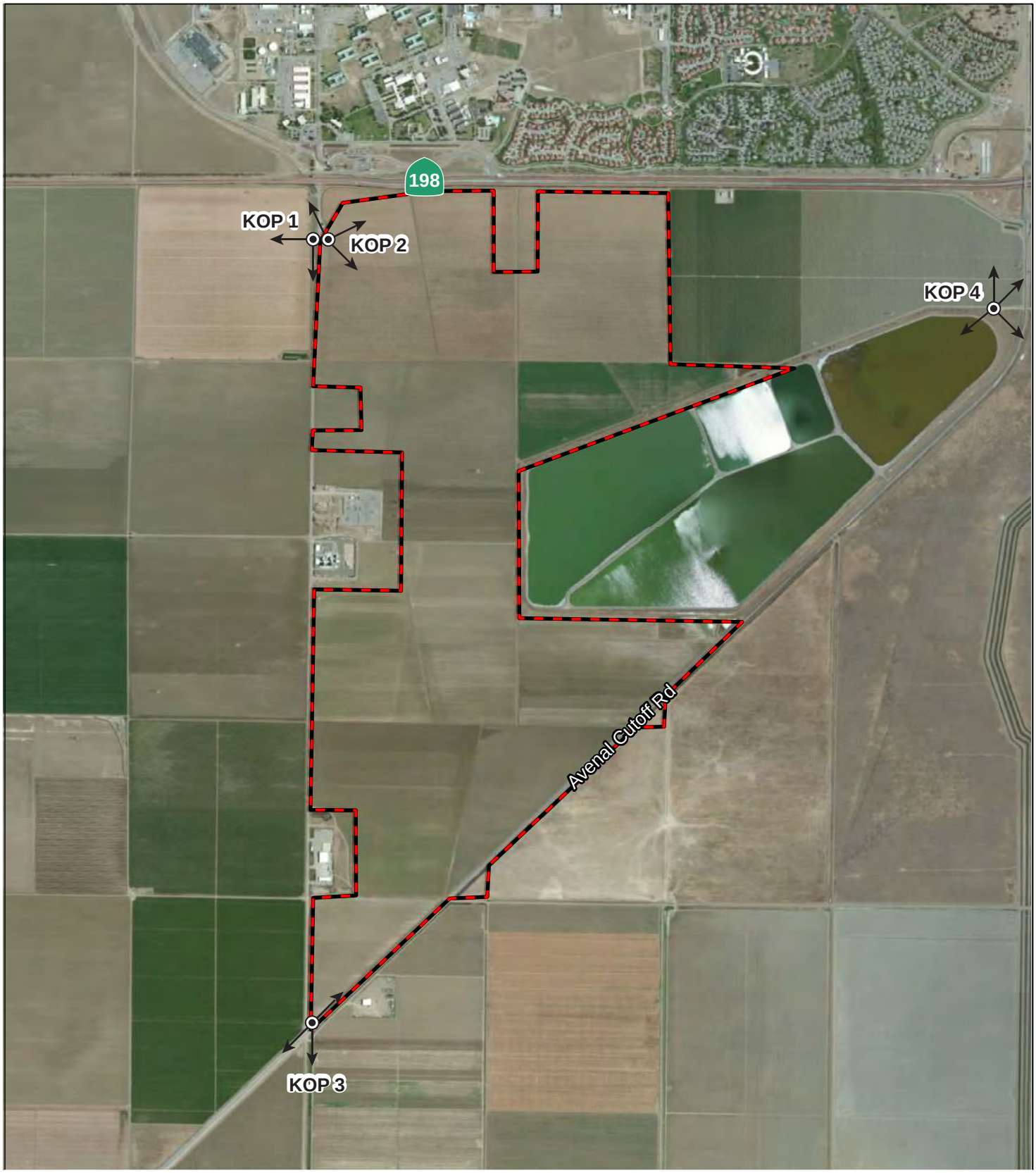
References

California Department of Transportation (Caltrans). 2010. Scenic Highway Program. Eligible and Officially Designated Routes.

Kings County. 2010. 2035 Kings County General Plan. Open Space Element. Adopted January 26. Pages cited: OS-1, OS-3, OS-14, OS-15, OS-16.

SunPower. 2009. SunPower Solar Module Glare and Reflectance. Technical Notification. September 29.

U.S. Department of Transportation Federal Highway Administration (FHWA). 1981. Visual Impact Assessment for Highway Projects. http://www.dot.ca.gov/ser/downloads/visual/FHWAVisualImpactAssmt.pdf



LEGEND

Project Site

FIGURE 3.1-1

N

0 1000 2000
FEET

SOURCE: ESRI Aerial Imagery (8/2010)

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American Kings Solar Project

Key Observation Points

View looking south from the west side of 25th Avenue toward the existing electrical substation and peaker plant. The project site is shown in the foreground on the left side of the photo.

View looking west from the west side of 25th Avenue.

FIGURE 3.1-2

Landscape Character Photos from KOP 1

GWF Henrietta Solar Photovoltaic Plant Project

View looking northwest from the east side of 25th Avenue toward NAS Lemoore.

View looking northeast from the east side of 25th Avenue toward the residential subdivision at NAS Lemoore. The planted agricultural field in the foreground is the project site.

View looking southeast from the east side of 25th Avenue showing the project site. The berm around the NAS Lemoore wastewater ponds is shown in the distance.

FIGURE 3.1-3
Landscape Character Photos from KOP 2
GWF Henrietta Solar Photovoltaic Plant Project

View looking southwest along the Avenal Cutoff Road at the 25th Avenue/Avenal Cutoff Road intersection.

View looking northeast along the Avenal Cutoff Road at the 25th Avenue/Avenal Cutoff Road intersection.

View looking south from the 25th Avenue/Avenal Cutoff Road intersection.

FIGURE 3.1-4

Landscape Character Photos from KOP 3

GWF Henrietta Solar Photovoltaic Plant Project

View looking northeast from the Avenal Cutoff Road/Murphy Ranch Road intersection.

View looking southeast from the Avenal Cutoff Road/Murphy Ranch Road intersection.

FIGURE 3.1-5
Landscape Character Photos from KOP 4
GWF Henrietta Solar Photovoltaic Plant Project

View looking southwest from the Avenal Cutoff Road/Murphy Ranch Road intersection. The prominent feature shown in this photo is the berm around the NAS Lemoore wastewater ponds.

View looking north from the Avenal Cutoff Road/Murphy Ranch Road intersection.

FIGURE 3.1-6
Landscape Character Photos from KOP 4
GWF Henrietta Solar Photovoltaic Plant Project

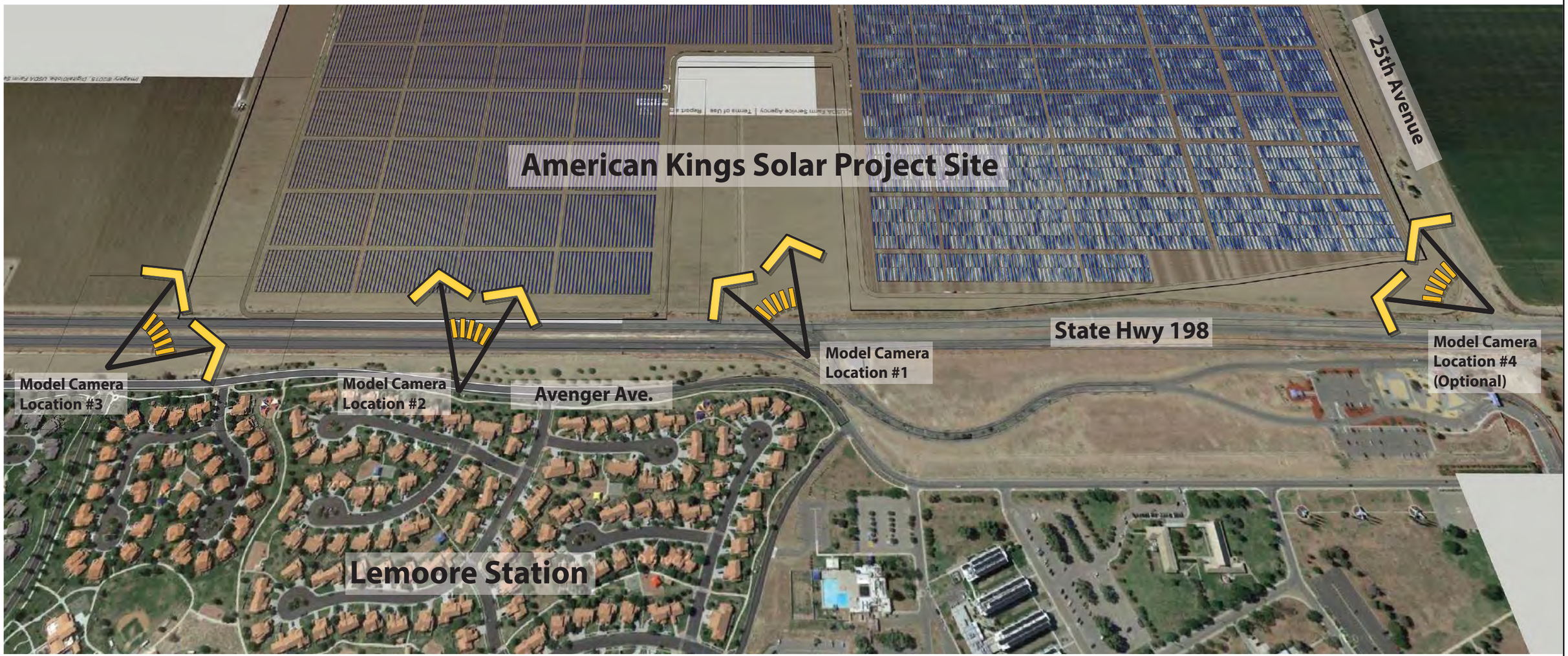

FIGURE 3.1-7

American Kings Solar Project

Camera Locations

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-8

American Kings Solar Project

Camera Location #1

SOURCE: Mark Thomas & Company (2015).

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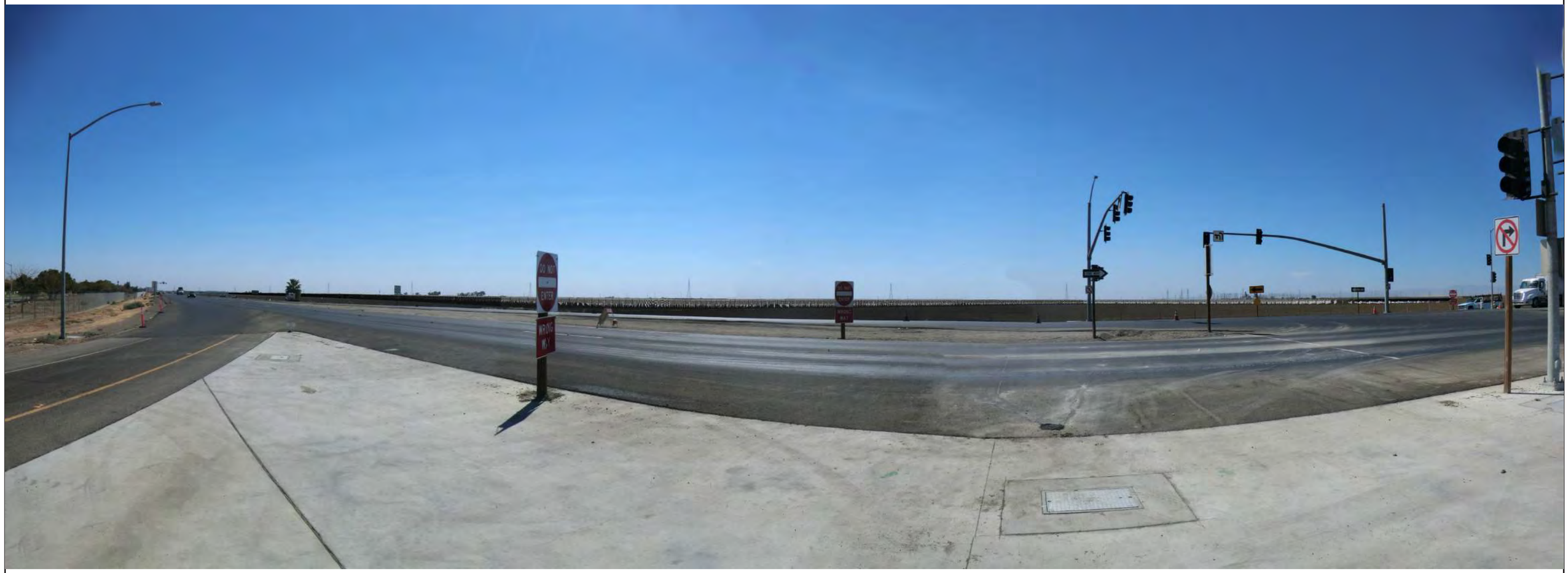

FIGURE 3.1-9

American Kings Solar Project

Camera Location #1 With Project

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-10

American Kings Solar Project

Camera Location #2

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-11

American Kings Solar Project

Camera Location #2 with Project

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-12

American Kings Solar Project

Camera Location #3

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-13

American Kings Solar Project

Camera Location #3 with Project

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-14

American Kings Solar Project

Camera Location #4

SOURCE: Mark Thomas & Company (2015).

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FIGURE 3.1-15

American Kings Solar Project

Camera Location #4 with Project

SOURCE: Mark Thomas & Company (2015).

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3.2 AGRICULTURE AND FOREST RESOURCES

Table 3.2-1 Agriculture and Forest Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐ ~~☒~~	☒ ~~☐~~	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☒ ~~☐~~	☐ ~~☒~~	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined in Public Resources Code Section 4526)?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

3.2.1 Setting

In 2008, Kings County was ranked 8th among California counties in agricultural production. The County is ranked 1st among California counties in cotton lint and cottonseed production; 2nd in wheat production; 3rd in the production of apricots, garlic, plums, silage, and processed tomatoes; and is the 4th largest producer of all milk and cream in the state (Kings County Department of Agriculture, 2010).

A review of the "Important Farmlands" mapping by the California Department of Conservation (CDC's) Farmland Mapping and Monitoring Program (FMMP) shows that the proposed project site is designated as Farmland of Statewide Importance. The FMMP provides statistics on conversion of farmland to nonagricultural uses for Kings County, where the project site is located. Of the total land area that was inventoried (890,784 acres), in 2006, Kings County had approximately 597,484 acres of Important Farmland (including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance) and an additional 243,183 acres of grazing land. The remaining 53,117 acres of land were Urban and Built-up Land, Other Land, and Water Area. In the period between 2004 and 2006, Important Farmlands had shown a net decrease of 12,677 acres (2.1 percent) within the County (CDC 2006). Pursuant to Kings County's Priority Agricultural Land Model, the project site has been designated a Medium Priority in terms of retaining the site as agricultural land (Kings County, 2010a).

Land use at the project site is agriculture. ~~A portion of the site is planted in row crops, a portion is tilled but not planted, and a portion is mowed (field crops).~~ As of 2013, the project site was occupied by 43 acres of cotton crops, 342 acres of wheat crops, 166 acres of tomato crops, and 80 acres of alfalfa crops. Land adjacent to the site is developed into industrial, transportation, and agricultural uses. An agricultural field is also situated on the east side of the project site. Agricultural land uses exist on the west side and southeast of the project site (west of 25th Avenue and southeast of Avenal Cutoff Road). No forest or timber land is present at the project site or in the project vicinity.

Regulatory Setting

Federal. Federal regulations for agriculture and forest resources are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. Preservation of farmland in California is encouraged by the California Land Conservation Act, more commonly known as the "Williamson Act." Pursuant to this program (which was initiated in 1965), a landowner signs a contract with the County in which the land is located, voluntarily restricting land to agricultural and open space uses, or compatible uses. The contract is automatically renewed annually, continuing indefinitely unless the owner or Kings County files for non-renewal or the owner requests cancellation. The minimal initial contract term is 10 years. The Williamson Act was designed to allow farming to continue in areas close to urbanization by a beneficial tax assessment procedure, i.e., Williamson Act parcels are assessed for property tax purposes at a rate consistent with their actual farming and open space uses, as opposed to potential market value.

In 1998, the provisions of the Williamson Act were expanded by Senate Bill 1182 to strengthen agricultural land preservation incentives. The 1998 changes to the Act provided a 35 percent property tax discount to the Williamson Act valuation or Proposition 13 valuation, whichever is lower, and other incentives for farmland owners willing to maintain their land in agricultural land use for 20 years. This latter program creates Farmland Security Zones within agricultural preserves. Land enrolled under a Farmland Security Zone contract is restricted to agricultural and open space uses for a minimum initial contract term of 20 years. Land within a Farmland Security Zone cannot be annexed into cities, and school districts are prohibited from acquiring Farmland Security Zone lands for school facilities.

Table 3.2-2 lists the parcels of land by Assessor's Parcel Number that would be affected by the proposed project, and the parcels' Williamson Act and Farmland Security Zone statuses. ~~Figure 3.2-1 shows the locations of the parcels within the project site.~~

The Williamson Act and Farmland Security Zone Program for Kings County represent the most cost effective and extensive agricultural land preservation mechanism available to the County. In 2008, of the 810,887 agricultural acres in the County 682,823 acres were under an agricultural land preservation contract. Williamson Act contracts accounted for 53 percent and Farmland Security Zone Contracts accounted for 47 percent of the contracted land (Kings County, 2010).

State regulations regarding forestry resources are not relevant to the proposed project because no forestry resources exist at the project site.

Table 3.2-2 Williamson Act and Farmland Security Zone Status of Parcels Affected by the Proposed Project

Assessor's Parcel Number	Williamson Act Status?	Farmland Security Zone Status?
024-190-023	No	Yes
024-190-044	No	Yes
024-190-059	No	Yes
024-190-063	No	Yes
024-190-066	No	Yes
024-190-068	No	Yes
024-190-071	No	Yes
024-210-003	No	Yes
024-210-016	No	Yes
024-210-017	No	Yes
024-231-008	No	Yes
024-232-004	No	Yes
024-241-001	No	Yes
024-242-001	No	Yes
026-020-015	No	Yes
024-250-001	No	Yes
024-250-013	No	Yes
024-250-014	No	Yes

Source: Kings County, 1997; Kinney, 2010a; Kinney, 2010b.

Local. The ~~957~~966-acre project site is designated Exclusive Agriculture 40-acre by the Kings County General Plan Land Use Map (Kings County, 2009). The Exclusive Agriculture land use designation serves as a safety buffer around NAS Lemoore. It limits potential conflicts between County land use and base operations by limiting types of structures and operations that may be allowed within this safety buffer. The County's commitment to maintaining an agricultural safety buffer around NAS Lemoore ensures the continuance of agricultural production, while also preserving the operational integrity of the military installation (Kings County, 2010b). The project site is zoned AX – Exclusive Agriculture by Kings County (Kings County, 1964).

Agricultural resources continue to remain one of the highest valued assets within Kings County. Since 1969, the County has implemented several programs, ordinances, and policies to sustain agriculture. Recently, Kings County has developed the "Priority Agricultural Land Model" by using geographic information system (GIS) data and other relevant information resources to evaluate farmland resources throughout the County. The model established a "highest to lowest" priority designation of all agricultural growing areas (Kings County, 2010).

Kings County adopted Resolution No. 13-058 on November 26, 2013 amending the County's Implementation Program entitled "County of Kings Implementation Procedures for the California Land Conservation 'Williamson' Act of 1965 Including Farmland Security Zones." Resolution No. 13-058, recognizes "…that due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions, and regulatory burdens, circumstances exist on agricultural preserves located within the portion of Kings County south of State Route 198 and west of State Route 41 that limit the use of much of the land within that territory for agricultural activities, such that it is reasonably foreseeable that certain parcels located there that currently are

used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing. Notwithstanding the present agricultural use of the land, solar farming as a concomitant use with dry farm seasonal grazing or a similar commercial agricultural activity may be deemed a compatible use within this region of the County if the applicant provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, and taking into account surface water availability, ground water quality and availability, and soil conditions, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land."

The use of the site for solar generation would not prevent the productive concomitant agricultural use of the site during project operation. The very light footprint of the solar generating facility upon the site would allow for the preservation of native soil cover in place and allow for low impact removal of solar arrays and electrical equipment at the end of the facility's productive life. The long-term productive agricultural capability of the project site after decommissioning of the solar generating facility would be ensured through implementation of PDF AG-1, AG-2, and AG-3 which require implementation of an Agricultural Management Plan and a Soil Reclamation Plan and contains detailed provisions on decommissioning, soil conditioning, revegetation, waste disposal, monitoring, and follow-up measures to ensure that the site has been effectively restored to pre-project conditions.

3.2.2 Environmental Impacts and Mitigation Measures

A technical report titled "Soil and Water Analysis Report for American Kings Solar Project" was prepared in September 2014 to provide analysis of soil and water conditions at the proposed Project site (Dellavalle, et. al. 2014 – attached as Appendix B in the Addendum). The report included review of publicly available information and in-field soil samples collected and analyzed from the project site to determine the existing and reasonably foreseeable quality of the site for sustaining agricultural production. The report concluded the following regarding soil conditions, water availability and future agricultural uses on the proposed project site:

- The project site is not suitable for sustaining long-term agricultural crop production due to saline-sodic soils that would cause agricultural crop damage located on the site;
- Poor groundwater quality, insufficient availability of groundwater, and curtailments of surface water allocations would not support sustained agricultural activities on the Project site;
- Based on poor soil conditions and insufficient future supply of water for irrigation a reasonably foreseeable agricultural use of the project site would be dry land farming with seasonal grazing;
- Since the proposed project is compatible with dry-farm seasonal grazing or a similar agricultural activity, the project is a compatible use with a Farmland Security Zone contract pursuant to Government Code Section 51238.1(a) and County of Kings implementation Procedures for the California Land Conservation "Williamson" Act of 1965.

The results of the aforementioned report are used in the analysis of the agricultural resources thresholds discussed below.

Project Design Features

The applicant has incorporated the following PDFs into the project to minimize or avoid impacts to agricultural land as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to agricultural land. There are no PDFs needed or incorporated into the project to minimize or avoid impacts on forest resources because these resources do not exist on the project site.

PDF AG-1: Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by the County.

Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil.

The Plan shall provide that all driveways and other areas compacted during original construction or by equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding has occurred. Additional seedlings and applications of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project.

The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. Waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of

decommissioning, the Plan shall be revised to provide that another equivalent facility will be utilized.

Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights.

The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months.)

PDF AG-2: Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated cost estimate.

PDF AG-3: The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies the use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, - existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be required to be submitted and approved prior to the issuance of a building permit.

~~**PDF BIO-1:** Mitigate the loss of up to 978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX).~~

~~Conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake.~~

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

LESS THAN SIGNIFICANT IMPACT~~ WITH MITIGATION INCORPORATED~~. The entire 966-acre project site is designated as Farmland of Statewide Importance according to the most current data available from the California Department of Conservation Farmland Mapping and Monitoring Program. As described above, Kings County adopted Resolution No. 13-058 recognizing that certain parcels south of State Route 198 and west of State Route 41 (which includes the area of the project site) have insufficient water supplies (both surface and groundwater), poor water quality, and poor soil quality that limit the use of much of the land within that territory for intensive agricultural activities. Based on these conditions the County has determined it is reasonably foreseeable that certain parcels located in this area currently used for intensive agricultural activities would be used in the near future for less intensive uses, including dry farm seasonal grazing. A soil and water analysis report was prepared for the proposed project concluding that soil conditions, water quality, and surface/groundwater availability make the project site unsuitable for sustaining long-term agricultural crop production. Based on the conditions of the soils onsite and existing and future water availability for the site, and in accordance with Resolution No.13-058, a reasonably foreseeable agricultural use of the site would be dry-farm seasonal grazing.

The proposed project would include the development of a solar facility and would allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously on-site for the duration of operational activities. Since the project site would continue to operate with a less intensive agricultural use, the land within the project site would not have to be redesignated from Farmland of Statewide Importance to a non-agricultural use. Impacts would be less than significant.
~~Implementation of the proposed project would remove up to 978 acres of land that is designated as Farmland of Statewide Importance from agricultural production. This would increase the 2006 loss of Important Farmlands from 12,677 acres (2.1 percent) to 13,667 acres (2.3 percent), and reduce 2006 Important Farmlands in the County from 594,484 acres to 593,494 acres. Due to the proposed project converting land that is designated as Farmland of Statewide Importance to a non-agricultural use, the applicant would provide funding toward an agricultural easement that would provide Swainson's hawk foraging habitat. This land would serve a dual purpose: to replace the displaced agricultural land and to provide additional Swainson's hawk foraging habitat (see PDF-BIO-1). With implementation of PDF-BIO-1 this impact is considered less than significant.~~

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED. The proposed solar use would be consistent with Kings County's AX agricultural zoning designation. Article 4. A Agricultural Districts of the ~~Zoning Ordinance~~Development Code lists "wind and solar PV electrical generating facilities that commercially produce power for sale, which comply with all local, regional, state and federal regulations" as being a conditional use subject to Planning Commission approval.

The solar farm and associated elements proposed for the project site would also be consistent with Kings County's Williamson Act implementation procedures. As described above, on November 26,

2013, Kings County passed Resolution No. 13-058 recognizing that certain land parcels within the County south of State Route 198 and west of State Route 41 that are under Williamson Act (Farmland Security Zone) contracts are limited in agricultural production due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions, and regulatory burdens. The Resolution indicates that these land parcels have such poor soil and water quality and insufficient water supplies (groundwater and surface water) to irrigate, that it is reasonably foreseeable that certain parcels located in this area that are currently used for more intensive agricultural activities would be used in the near future for less intensive uses, including dry farm seasonal grazing. The Resolution provides that solar uses (solar farming) with dry farm seasonal grazing or similar commercial agricultural activity may be compatible uses under the Williamson Act as long as the applicant for such a project provides a soil reclamation plan and financial assurances, and if a finding can be made, based upon substantial evidence, that the proposed concomitant commercial agricultural operation is a reasonably foreseeable use of the land (taking into account surface water availability, groundwater quality and availability and soil conditions).

The soil and water analysis report that was prepared for the proposed project (and is provided in Appendix B of the Addendum) fulfills the requirements of Resolution No. 13-058 in demonstrating that poor soil and water quality, and insufficient supplies of surface and groundwater currently exist and that the proposed concomitant commercial agricultural operation (solar facility and dry-farm seasonal sheep grazing) would be a reasonably foreseeable use of the land at the project site. The field analysis that was conducted as part of the soil and analysis report indicated that saline-sodic soils found at the project site are not appropriate for most agricultural crops and would cause damage to many of the crops grown on site and in the region. Groundwater at the site is of poor quality and was found to have salinity, boron, chloride, and sodium concentration that are not recommended for most tolerant crops. Groundwater availability in the existing aquifer is insufficient to accommodate continued agricultural production on the site and surface water availability is insufficient due to limited surface water allocations from Westlands Water District. The Project applicant intends to develop the solar facility on the project site and allow for dry farm seasonal grazing (with sheep) to occur for the duration of Project operation which would be a foreseeable use per Resolution No. 13-058 criteria. Per the criteria of Resolution No. 13-058, the project applicant would implement PDF AG-1, AG-2, and AG-3, which would provide an Agricultural Management Plan and a Soil Reclamation Plan as a condition of approval for project implementation. Based on the results from the soil and water analysis, compliance with Resolution No. 13-058, and implementation of PDF AG-1, AG-2, and AG-3, the proposed project would not conflict with Williamson Act contracts. Impacts would be less than significant with mitigation incorporated. ~~The County does not require that Williamson Act contracts be cancelled for solar project because Section 51238 of the Government Code has determined that electrical facilities to be compatible within an agricultural preserve (Kinney, 2010b).~~

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC section 1220(g)) or timberland (as defined in PRC section 4526)?

NO IMPACT. No forest or timber land is present at the project site or in the project vicinity. No forest land would be affected by the proposed project.

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

NO IMPACT. As discussed above for question c, no forest land is present at the project site or in the project vicinity. No forest land would be affected by the proposed project.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use?

LESS THAN SIGNIFICANT IMPACT. As of 2013, the project site was occupied by 43 acres of cotton, 342 acres of wheat, 166 acres of tomatoes, and 80 acres of alfalfa. The soil and water analysis report that was prepared for the proposed project concluded that based on the existing condition of the saline-sodic soils, poor surface and groundwater quality, and insufficient supply of surface- and groundwater for crop irrigation, the project site would not be suitable for sustaining long-term agricultural crop production but would be suitable for dry-farm seasonal grazing. The project applicant intends to develop the solar facility on the proposed project site and allow for dry-farm seasonal grazing (sheep grazing) to occur simultaneously for the duration of project operation. Therefore project implementation would not result in the conversion of farmland to non-agricultural uses as dry-farm seasonal grazing would continue to occur on the site through the duration of project operation (at least 30 years). A draft Agricultural Management Plan is being prepared for the proposed project site; this plan will be finalized, submitted to the Kings County Community Development Agency for approval prior to commencement of construction and will be implemented during the operational lifetime of the solar facility onsite.
~~As discussed above for question a, the proposed project would result in the long-term use of approximately 978 acres of Farmland of Statewide Importance at the project site for solar energy development, during the life of the project which would last 30 years. If the applicant determines adequate solar energy is still being produced following expiration of the project, the applicant may make a request for the Kings County Planning Commission to extend the CUP for additional years, as determined feasible. Agricultural uses would not continue at the project site.~~

The proposed ~~solar use~~project is considered compatible with the adjacent electrical infrastructure, public land (wastewater ponding basins), and surrounding agricultural uses, and is consistent with the Kings County General Plan Exclusive Agriculture land use designation and the AX zoning designation.

Although further solar and other development could take place in Kings County and in the general area of the proposed project, implementation of the proposed project would not ~~cause~~directly or indirectly cause the ~~other land use changes that would convert~~ conversion of existing farmland to a non-agricultural use~~,~~. The soil and water analysis report prepared for the proposed project also concluded that the conversion of the parcels within the project site from irrigated agricultural uses to a solar facility and dry-farm seasonal grazing would require less water supply than is currently demanded onsite which would provide for increased water availability for use on surrounding parcels under agricultural production. Impacts would be ~~resulting in a~~ less than significant~~impact~~.

References

California Department of Conservation (CDC) Farmland Mapping and Monitoring Program, Table A-11 Kings County 2010-2012 Land Use Conversion. (http://www.conservation.ca.gov/dlrp/fmmp/Pages/Kings.aspx). 2006. Table A-11 Kings County 2004-2006 Land Use Conversion. Accessed November 21, 2014.

Dellavalle, Nat B. Dellavalle Laboratory, Inc. and Ikemiya, Donald Provost & Pritchard Consulting Group, *Soil & Water Analysis Report for American Kings Solar Project*, September 15, 2014.

Kings County Board of Supervisors, Resolution No. 13-058, In the Matter of Amending the County of Kings Implementation Procedures for the California Land Conservation "Williamson" Act of 1965, November 26, 2013.

Kings County Department of Agriculture. 2010. Kings County 2009 Agricultural Crop Report. June 15. Page cited: 1, 3.

Kings County. 2010a. 2035 Kings County General Plan. Resource Conservation Element. Adopted January 26. Pages cited: RC-16, RC-19, RC-20.

Kings County. 2010b. 2035 Kings County General Plan. Open Space Element. Adopted January 26. Page cited: OS-10.

Kings County. 2009. Kings County Land Use Map. (Included in Kings County General Plan Land Use Element, Figure LU-11, page LU-52). May 5.

Kings County. 1997. Kings County Assessor's Maps.

Kings County. 1964 Zone Plan. Index of Section 302 Zone Maps. County of Kings, California. Adopted by the Board of Supervisors April 7.

Kinney, Jeremy. Senior Planner. County of Kings Community Development Agency, Planning Division. 2010a. Personal communication with Wendy Haydon/CH2M HILL on September 24.

Kinney, Jeremy. Senior Planner. County of Kings Community Development Agency, Planning Division. 2010b. Personal communication with Wendy Haydon/CH2M HILL on June 22.

~~**FIGURE 3.2-1**~~

3.3 AIR QUALITY

Table 3.3-1 Air Quality Checklist

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under and applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Setting

Existing Air Quality

The project site is located in Kings County within the San Joaquin Valley Air Basin (SJVAB), under the jurisdiction of the SJVAPCD. The SJVAB consists of the following counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare, and the western portion of Kern County. The SJVAPCD is the local agency charged with preparing, adopting, and implementing stationary and area air emission control measures and standards. Therefore, the project is required to comply with SJVAPCD Rules and Regulations including the Regulation VIII Fugitive PM_{10} Prohibition during construction and Rule 9510 ISR.

The SJVAPCD is required to monitor air pollutant levels to ensure that the air quality standards are met, or if they are not met, to develop strategies to meet the standards. Ambient pollutant concentrations recorded in the San Joaquin Valley are among the highest in California. The SJVAPCD measures air pollutant concentrations at 19 monitoring stations throughout the air basin. Pollutants monitored include ozone, carbon monoxide, nitrogen dioxide (NO_2), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). Depending on whether or not the standards are met or exceeded, an air basin is classified as being in “attainment” or “nonattainment.” The basin currently exceeds state and federal ambient air quality standards for several pollutants and is required to implement strategies that would reduce the pollutant levels to achieve the recognized standards. The entire air basin is designated as nonattainment for the state 1-hour and 8-hour ozone standards, the state 24-hour and the annual particulate matter less than 10 microns in diameter (PM_{10}) standards, as

well as the state annual $PM_{2.5}$ standard. The air basin is also designated as nonattainment for the federal 8-hour ozone standard and the federal 24-hour and annual $PM_{2.5}$ standards (SJVAPCD, 2009).

The SJVAB's nonattainment status is a result of several factors: the meteorological conditions that limit the dispersion of pollutants; the limited capacity of the local airshed to eliminate pollutants from the air; and the number, type, and density of emission sources within the air basin. The SJVAPCD is required to develop Air Quality Management Plans (AQMPs) for pollutants for which the air basin is designated as nonattainment for the federal standards. AQMPs provide strategies for the attainment or maintenance of the federal air quality standards. The following lists the SJVAPCD's AQMPs:

- On May 4, 2010, the U.S. Environmental Protection Agency (USEPA) approved SJVAPCD's redesignation request from serious to extreme nonattainment for the federal 8-hour ozone standard.
- On March 8, 2010, the USEPA approved SJVAPCD's 2004 Extreme Ozone Attainment Plan for 1-hour ozone.
- On September 25, 2008, the USEPA redesignated the San Joaquin Valley to attainment for the PM_{10} federal standard and approved the PM_{10} Maintenance Plan.
- The 2007 Ozone Plan for the 8-hour federal ozone standard was adopted by SJVAPCD and approved by the California Air Resources Board (ARB).
- In 2004, the ARB approved revisions to the 1998 CO maintenance plan.

Table 3.3-2 shows the current attainment status for regulated air pollutants in the air basin.

Regulatory Setting

Federal. The Federal Clean Air Act (CAA) establishes the statutory framework for regulation of air quality in the United States. Pursuant to this act, the USEPA has established various regulations to achieve and maintain acceptable air quality, including the adoption of NAAQS, mandatory State Implementation Plan (SIP) or maintenance plan requirements to achieve and maintain the NAAQS, and emission standards for both stationary and mobile sources of air pollution. NAAQS have been established for the following air pollutants (called "criteria" pollutants): CO, ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$ and Pb. The NAAQS represent levels established by the USEPA to avoid specific adverse health and welfare effects associated with each pollutant with a margin of safety. Table 3.3-3 summarizes the ambient air quality standards.

State. The ARB is the state agency responsible for California air quality management, including establishment of CAAQS, mobile source emission standards, GHG regulations, and oversight of local air quality districts and preparation of implementation plans, including regulations for stationary sources of air pollution. The CAAQS are generally more stringent (except for 1-hour average NO_2 and SO_2) and include more pollutants than the NAAQS. Similar to the USEPA, the ARB designates counties in California as in attainment or nonattainment for the CAAQS. Table 3.3-3 above includes the state attainment status for the SJVAB.

Table 3.3-2 Attainment Designations

Pollutant	Designation/Classification	
	Federal Standards[a]	State Standards[b]
Ozone – 1 hour	No Federal Standard[c]	Nonattainment/Severe
Ozone – 8 hour	Nonattainment/Extreme	Nonattainment
PM_{10}	Attainment (maintenance)[d]	Nonattainment
$PM_{2.5}$	Nonattainment[e]	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (particulate)	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81.
[b] See CCR Title 17 Sections 60200-60210
[c] Effective June 15, 2005, the USEPA revoked the federal 1-hour ozone standard, including associated designations and classifications. However, the USEPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
[d] On September 25, 2008, the USEPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS).
[e] The Valley is designated nonattainment for the 1997 national $PM_{2.5}$ standards. The USEPA released final designations for the 2006 $PM_{2.5}$ standards in December 2008 (effective in 2009), designating the Valley as nonattainment for the 2006 $PM_{2.5}$ standards.
Source: SJVAPCD, ~~2010~~2014.

Table 3.3-3 Ambient Air Quality Standards

Pollutant	Averaging Time	California Ambient Air Quality Standards (CAAQS)[a]	NAAQS[b]	
			Primary[c]	Secondary[d]
Ozone	8 hours	0.070 ppm	0.075 ppm	0.08 ppm
	1 hour	0.09 ppm	--	--
PM_{10}	Annual arithmetic mean	20 $\mu g/m^3$	--	--
	24 hours	50 $\mu g/m^3$	150 $\mu g/m^3$	150 $\mu g/m^3$
$PM_{2.5}$	Annual arithmetic mean	12 $\mu g/m^3$	15 $\mu g/m^3$	15 $\mu g/m^3$
	24 hours	35 $\mu g/m^3$	35 $\mu g/m^3$	35 $\mu g/m^3$
CO	8 hours	9.0 ppm	9 ppm	--
	1 hour	20 ppm	35 ppm	--
NO_2	Annual arithmetic mean	0.03 ppm	0.053 ppm	0.053 ppm
	1 hour	0.18 ppm	0.100 ppm	--
SO_2	Annual arithmetic mean	--	0.03 ppm	--
	24 hours	0.04 ppm	0.14 ppm	--
	3 hours	--	--	0.5 ppm
	1 hour	0.25 ppm	0.042 ppm[g]	--
Lead[e]	Calendar quarter	--	1.5 $\mu g/m^3$	1.5 $\mu g/m^3$
	Rolling 3-month average	--	0.15 $\mu g/m^3$	--
	30-day average	1.5 $\mu g/m^3$	--	--

Table 3.3-3 Ambient Air Quality Standards

Pollutant	Averaging Time	California Ambient Air Quality Standards (CAAQS)[a]	NAAQS[b]	
			Primary[c]	Secondary[d]
Visibility-reducing particles	8 hours	[f]	--	--
Sulfates	24 hours	25 µg/m^3	--	--
Hydrogen sulfide	1 hour	0.03 ppm	--	--
Vinyl chloride[e]	24 hours	0.01 ppm	--	--

[a] California standards for ozone, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, and suspended particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded.
[b] National standards other than ozone, PM, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standards. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentration, averaged over 3 years, is equal to or less than the standard.
[c] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
[d] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[e] The ARB has identified Pb and vinyl chloride as toxic air contaminants (TACs) with no threshold level of exposure for adverse health effects determined. ARB made this determination following the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
[f] Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.
[g] Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.
Notes:
µg/m^3 = micrograms per cubic meter
ppm = parts per million (by volume)
Source: ARB, 2010.

The California CAA requires each local air district in the state to prepare an air quality plan (part of the SIP) to achieve compliance with CAAQS. The ARB has ultimate responsibility for the SIP for nonattainment pollutants but relies on each local air district to adopt mandatory statewide programs and provide tailored additional strategies for sources under their local jurisdiction. The ARB combines its data with local district data and submits the completed SIP to the USEPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by the ARB, as well as attainment plans adopted by the air districts and approved by the ARB.

Local. The 2035 King's County General Plan adopted by the King's County Board of Supervisors on January 26, 2010 recognizes the problem of air pollution within the San Joaquin Valley. The General Plan Air Quality Element fulfills a number of objectives that are very important to King's County, including ensuring that growth occurs in ways that protect and enhance the health of the county's residents, and complying with air quality regulations.

General Plan Air Quality objectives and policies that are pertinent to the project include:

- **AQ Objective C1.1:** Accurately assess and mitigate potentially significant local and regional air quality and climate change impacts from proposed project within the County.
- **AQ Policy C1.1.1:** Assess and mitigate project air quality impacts using analysis methods and significance thresholds recommended by the SJVAPCD and require that projects do not exceed established SJVAPCD thresholds.
- **AQ Policy C1.1.3:** Ensure that air quality and climate change impacts identified during CEQA review are minimized and consistently and fairly mitigated at a minimum, to levels as required by CEQA.
- **AQ Objective E1.1:** Increase the use of energy conservation features, renewable sources of energy, and low-emissions equipment in new and existing development projects within the County (Kings County, 2010)

The local governmental entity tasked with implementing these and other strategies within Kings County is the SJVAPCD. The SJVAPCD is the local agency charged with preparing, adopting, and implementing mobile, stationary, and area air emission control measures and standards. Therefore, the project is required to comply with SJVAPCD Rules and Regulations including the Regulation VIII Fugitive PM_{10} Prohibition during construction and Rule 9510 ISR.

3.3.2 Environmental Impacts and Mitigation Measures

Project Design Features

The proposed project includes the following PDFs that minimize or avoid impacts to air quality as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to air quality.

PDF AQ-1: Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD.

PDF AQ-2: Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.

PDF AQ-3: Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.

Construction and Operation Emissions

Air pollutant emissions would occur as a result of the proposed project. For analysis purposes, project construction is discussed separately from project operation. The reason for this separation is that construction would produce only temporary impacts, whereas project operation would result in long-term emissions.

Project Construction. Short-term emissions associated with construction of the project would occur as a result of the following activities:

- Site clearing and grading
- Trenching
- Fence installation
- Pile installation
- Racking installation
- Electrical installation
- Module installation
- Dust mitigation
- Construction of inverter stations, substations, and control building
- Worker commutes
- Material/equipment deliveries

Construction emissions were calculated based on construction information provided from the project applicant. This information is included in Section 6 of this initial study. ~~Construction is scheduled to occur in 3 phases, with the majority of construction activities occurring during Phase 1. The following is an approximate project construction schedule:~~

~~Phase 1: July 25, 2012 to May 31, 2013(approximately 10 months)~~
~~Phase 2: June 6, 2013 to May 16, 2014(approximately 11.5 months)~~
~~Phase 3: May 19, 2014 to June 23, 2015(approximately 13 months)~~

The SJVAPCD has established CEQA thresholds of significance on an annual basis so construction emissions expected to occur within each calendar year were calculated ~~using the following assumptions:~~by year using the construction equipment usage for each year estimated by the applicant. Since the construction dates are unknown, the air quality impacts were modeled in a worst-case scenario assuming 12 months of construction in a single calendar year.

~~Calendar Year 2012: 50 percent of Phase 1 construction occurs~~
~~Calendar Year 2013: 50 percent of Phase 1 construction occurs; 61 percent of Phase 2 construction occurs~~
~~Calendar Year 2014: 39 percent of Phase 2 construction occurs; 58 percent of Phase 3 construction occurs~~
~~Calendar Year 2015: 42 percent of Phase 3 construction occurs~~

Based on these assumptions, emission estimates from the activities listed above were summed for comparison to the SJVAPCD CEQA Threshold of Significance for the following pollutants of concern in the SJVAB:

- PM_{10} and ozone Precursors (NO_x and ROG) from equipment exhaust

Air quality CEQA Thresholds of Significance for construction set forth by SJVAPCD are presented in Table 3.3-4, below (SJVAPCD, 2002).

Table 3.3-4 Air Quality Thresholds of Significance for Construction

Pollutant	Tons per Year
Reactive Organic Gas	10
NO_x	10
Fugitive PM_{10}	N/A

Note:
N/A = SJVAPCD has not established a threshold for this pollutant.
Source: SJVAPCD, 2002.

In addition to the CEQA Thresholds of Significance in Table 3.3-4, the SJVAPCD has set NO_x and PM_{10} thresholds of 2 tons per year (tpy) each for applicability of ISR.

PM_{10} Emissions from Fugitive Dust Sources. Emissions of fugitive PM_{10} are expected as a result of road grading activities and travel on unpaved roads. The SJVAPCD's approach to CEQA analyses of construction PM_{10} fugitive dust impacts is to require implementation of effective and comprehensive control measures rather than to required detailed quantification of emissions (SJVAPCD, 2002). Compliance with SJVAPCD Regulation VIII is considered to be sufficient to reduce a project's construction-related fugitive dust impacts to less than significant. Through PDF-3, the applicant would require that all contractors ensure compliance with SJVAPCD Regulation VIII and that fugitive dust control measures are implemented. Therefore, the project would comply with Regulation VIII during construction and the fugitive dust (PM_{10}) emissions from project construction would have a less than significant impact on air quality.

Ozone Precursors (NO_x and ROG) and PM from Vehicle and Equipment Exhaust. Construction of the project would include emissions from both on-road and off-road construction vehicles and equipment. On-road emissions would result from trucks delivering materials/equipment and construction worker commute trips. Off-road emissions would result from the use of diesel-fueled construction equipment, such as graders or forklifts.

To evaluate on-road vehicle emissions, the California Emissions Estimator Model was used which incorporates emission factors from the ~~EMFAC2007~~ EMFAC2011 Motor Vehicle Emission Factor Model ~~were used~~as well as the ARB's OFFROAD2011. ~~Emission factors were applied to the vehicle miles traveled (VMT) for each vehicle type and then summed to estimate total on-road vehicle emissions for each calendar year 2012 to 2015.~~ Detailed assumptions and calculations ~~for on-road vehicles emissions~~from the model are presented in Section 6.

Construction of the project would also involve off-road emissions from the use of diesel-fueled construction equipment. Emission factors from the~~,~~ URBEMIS2007 model were used. Specific emission factors for each type of equipment for calendar years ~~2012~~ 2015 ~~to~~ and ~~2015~~ 2016[6] were obtained from the URBEMIS2007 Software User's Guide (Jones & Stokes, 2007). Detailed assumptions and calculations for all off-road equipment emissions are presented in Section 6.

[6] Although the construction year is unknown since construction is dependent on completing CEQA review, receiving all necessary construction permits, and meeting preconstruction CEQA conditions, 2015 and 2016 were selected to model emission factors. This is the best available data.

A summary of the estimated construction exhaust emissions is presented in Table 3.3-5 ~~for the years 2012 through 2015, respectively~~.

Table 3.3-5 Unmitigated Construction Exhaust Emissions Estimates Summary in Tons per Year

Construction Year	ROG ~~(tpy)~~	NO_x ~~(tpy)~~	PM_{10} ~~(tpy)~~	$PM_{2.5}$ ~~(tpy)~~
~~2012~~Year 1	~~0.7~~0.51	4.7~~2.6~~	0.22~~0.2~~	~~0.2~~0.20
~~2013~~Year 2	~~1.5~~1.3	5.6~~5.8~~	0.29~~0.4~~	~~0.3~~0.27
~~2014~~	~~1.4~~	~~5.5~~	~~0.4~~	~~0.3~~
~~2015~~	~~0.6~~	~~2.3~~	~~0.1~~	~~0.1~~
SJVAPCD CEQA Thresholds of Significance	10	10	N/A	N/A
SJVAPCD ISR Threshold	N/A	2	2	N/A

Note: This modeling is based on a maximum of 1,200 construction workers.
Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the California Air Resources Board which created the model determined that the 2007 version included an error that was overestimating emissions of NO_x and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Additionally, newer equipment used in the OFFROAD2011 model has lower emission rates. The analysis used updated equipment emission factors more representative for the proposed year for start of construction, as well as the Project commitment to use a "Clean Fleet." Compliance will be documented as required by SJVAPCD Rule 9510 (ISR). According to the SJVAPCD, the Clean Fleet option under Rule 9510 (ISR) would require construction emissions to be reduced by 20 percent for NOX and 45 percent for PM10. When the Clean Fleet option is selected, the District will require a "monitoring and reporting schedule" under the Rule 9510 with detailed record keeping that gets reported back to the district for each phase of construction. Compliance with this rule is required by PDF AQ-2.
N/A = SJVAPCD has not established a threshold for this pollutant.
Source: LSA Associates, Inc., June 2015.

CO = carbon monoxide
CO_2 = carbon dioxide
CO_{2e} = carbon dioxide equivalent
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_x = sulfur oxides
ROG = reactive organic gases

The results presented in Table 3.3-5 show that unmitigated emissions associated with construction of the proposed project would be below the SJVAPCD's Thresholds of Significance for each construction year evaluated. ~~In addition, implementation of the PDF-2 would reduce NO_x emissions and demonstrate compliance with ISR Rule 9510.~~ Therefore, construction impacts would be less than significant.

Table 3.3-5 shows that the project construction emissions would exceed the ISR threshold of 2 ~~tpy~~ tons per year for NO_x ~~for the calendar years 2012, 2013, 2014, and 2015~~in both years. As such, ~~GWF~~ the project applicant will submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD. To comply with Rule 9510 for reducing construction NO_x emissions, the construction

equipment used for the project would meet the 20 percent reduction in NO_x emissions compared to the statewide average. The construction fleet information to support this reduction would be submitted to SJVAPCD prior to commencing construction. ISR would not be applicable to the PM_{10} emissions because the exhaust PM_{10} emissions would be below the 2 ~~tpy~~ tons per year ISR threshold for each construction year.

Project Operation. Operational emissions associated with the project would be minor and would result from routine solar panel maintenance, cleaning, and inspection activities through the use of on-road vehicles and off-road diesel-fueled equipment. Operation of the solar plant would not include stationary sources of emissions.

To evaluate on-road vehicle emissions, emission factors from the ~~EMFAC2007~~ EMFAC2011 Motor Vehicle Emission Factor Model were used. Emission factors were applied to the VMT for each vehicle type and then summed to estimate total annual on-road vehicle emissions. Off-road emissions from the use of the water trucks were estimated using URBEMIS2007 emission factors. Specific emission factors for each type of equipment were obtained from the URBEMIS2007 Software User's Guide (Jones & Stokes, 2007). ~~As a conservative approach, emission factors for the year 2015 were used, as this is the first year the project is expected to be operational.~~ Detailed assumptions and calculations for Project operation are presented as Section 6.

A summary of the estimated ~~unmitigated~~ operational emissions are presented in Table 3.3-6. ~~Because construction is scheduled to take place in the early part of 2015, with operation beginning shortly thereafter, the total from the construction analysis (Table 3.3-5) were summed with the operation totals for 2015. Table 3.3-6 also presents annual operation estimated to occur in 2016 and future years thereafter.~~

Table 3.3-6 ~~Unmitigated construction and~~ Project Operational Emissions Estimate Summary – ~~Calendar Year, 2015, 2016, and Future Years~~ Tons Per Year

Construction Year	ROG ~~(tpy)~~	NO_x ~~(tpy)~~	PM_{10} ~~(tpy)~~	$PM_{2.5}$ ~~(tpy)~~
~~2015 – construction~~	~~0.6~~	~~2.3~~	~~0.1~~	~~0.1~~
~~2015 – operation~~	~~0.04~~	~~0.6~~	~~0.03~~	~~0.02~~
~~2015 – total*~~	~~0.6~~	~~2.9~~	~~0.2~~	~~0.2~~
~~2016 and future years –~~ ~~o~~Operation Emissions	0.05	0.7	0.03	0.03
SJVAPCD CEQA Thresholds of Significance	10	10	N/A	N/A
SJVAPCD ISR Threshold	N/A	2	2	N/A

~~* Sum of the values may not match the totals due to rounding. Refer to Section 6~~.
Note: N/A = SJVAPCD has not established a threshold for this pollutant.
Source: LSA Associates, Inc., April 2015.
CO = carbon monoxide
CO_2 = carbon dioxide
CO_{2e} = carbon dioxide equivalent
lbs/day = pounds per day
NO_x = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SJVAPCD = San Joaquin Valley Air Pollution Control District
SO_x = sulfur oxides
ROG = reactive organic gases

As shown in Table 3.3-6, operation of the proposed project would not exceed SJVAPCD CEQA Thresholds of Significance. Therefore, project operation~~, beginning in the year 2015~~ impacts would be less than significant.

~~In the year 2015, the sum of emissions from construction and operational activities would exceed the ISR thresholds of 2 tpy for NO_x. However, as stated above, the construction NO_x emissions would be addressed by the construction fleet requirements; therefore, ISR would not apply to operation emissions and additional mitigation for operation would not be required.~~

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

LESS THAN SIGNIFICANT IMPACT. The SJVAPCD's primary means of implementing air quality plans is by adopting rules and regulations. Construction activities related to the project, as designed, would not conflict with or obstruct implementation of any SJVAPCD air quality plans, rules, or regulations that outline the long-term strategies designed to have regional air quality comply with NAAQS and CAAQS. The emission inventory, as part of SJVAPCD's plan, includes emissions from off-road equipment, such as construction equipment and fugitive dust. The emissions associated with project construction would be temporary and would represent only a very small fraction of the regional emission inventory included in SJVAPCD's plan. Therefore, project construction emissions are not expected to substantially contribute to the regional emissions. Project construction equipment would also be operated in compliance with applicable federal, state, and local regulations as outlined by the SJVAPCD, including applicable fugitive dust control measures pursuant to the Fugitive Dust Control Plan that would be prepared by the applicant. The Fugitive Dust Control Plan would be submitted to the SJVAPCD prior to the initiation of construction. An ISR application and AIA would be filed with the SJVAPCD to address NO_x emissions from construction.

Additionally, in 2007, the SJVAPCD adopted a "Fast-Track Action Plan" designed to improve the valley's air quality sooner than the 2024 federal attainment deadline. The Fast-Track Plan includes a comprehensive list of strategies and measures including "energy conservation and alternative energy" that encourage the use of electric, solar, hydrogen fuel cells and other low-emitting sources of energy. The proposed project would further the goals of the Fast-Track plan by installing solar energy capacity within the SJVAPCD's jurisdiction.

The project would not emit significant levels of pollutants during operation because no new stationary source would be operating as part of the project. Therefore, no conflicts with the SJVAPCD plans would result from operation of the project.

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

LESS THAN SIGNIFICANT IMPACT. Emissions generated from construction activities are anticipated to cause temporary increase in ambient air pollutant concentrations. Given that construction activities would be transient and would impact specific locations for only limited durations, long-term impacts would not occur.

The project design incorporates several PDFs that are designed to minimize temporary impacts associated with the construction of the project. Project construction emissions would be less than the SJVAPCD CEQA thresholds for determining whether projects have significant adverse air quality impacts. Therefore, emissions from project construction would have a less than significant impact on air quality.

Once operational, the project would not result in direct emissions, other than occasional inspection and maintenance vehicles for panel washing. Panel washing would occur approximately 4 times per year with water trucks driving between the panel rows. As indicated above, operational emissions would be below the CEQA Thresholds of Significance set by the SJVAPCD, resulting in a less than significant impact.

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

LESS THAN SIGNIFICANT IMPACT. The project would occur in an area that has been designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$. As indicated above, the short-term impacts from construction would be less than significant. Implementation of the PDFs listed above would reduce air pollutant emissions resulting from construction activities including emissions of NO_x and fugitive PM_{10}. Operation of the project would result in minor, long-term emissions which would be less than the SJVAPCD thresholds.

Because project related emissions would be below the SJVAPCD thresholds, the project would have a less than significant cumulative impact on air quality.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

LESS THAN SIGNIFICANT IMPACT. Sensitive receptors are generally defined as facilities that house or attract groups of children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Schools, hospitals, residential areas, and convalescent facilities are examples of sensitive receptors.

The proposed project site is located in an unincorporated area of Kings County that is currently zoned "Exclusive Agriculture" with a very limited amount of public establishments nearby. Although there are sensitive receptors (schools) located approximately 1.6 miles north of the project site, project operation would not include stationary emission sources that would emit TACs. TACs are air

pollutants that may cause adverse health effects, particularly cancer or reproductive harm. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in September 1987. The Act requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory; that risk assessments be conducted according to methods developed by the Office of Environmental Health Hazard Assessment; and that the public be notified of significant risks posed by nearby facilities. The project is not a stationary source subject to AB 2588 requirements. Therefore, air toxics emissions from operation of the project would be considered less than significant.

Construction of the project has the potential to emit TACs in exhaust emissions, such as diesel PM. However construction would be short-term with most project construction activities taking place over 1.6 miles from the nearest school. Operation of the project would result in minor, long-term emissions which would be less than the SJVAPCD thresholds. Therefore, the project would have a less than significant impact on sensitive receptors during construction and operation.

e. Would the project create objectionable odors affecting a substantial number of people?

LESS THAN SIGNIFICANT IMPACT. The SJVAPCD has determined some common types of facilities that have been known to produce odors in the San Joaquin Valley, along with reasonable distances from the source where the degree of odors could possibly be significant. These facilities include, but are not limited to wastewater treatment facilities, sanitary landfills, chemical manufacturers, and food processing plants. Solar PV plants are not listed in this guidance, nor are any of the listed "odorous" facilities similar to a solar PV plant. Accordingly no objectionable odors are expected from the operation of this type of facility.

Construction of the proposed project may have the potential to result in near-field odors from diesel fuel combustion in construction equipment, but as mentioned above, the construction periods are short-term. Furthermore, diesel-type construction odors are not typically detectable offsite and therefore are not considered a "nuisance" by the general public. Therefore, objectionable odors are not expected to be a significant concern during either project construction or operation.

References

California Air Resources Board (ARB). 2010 & 2014. California Ambient Air Quality Standards.

Jones and Stokes Associates (Jones & Stokes). 2007. Software User's Guide: URBEMIS2007 for Windows, Version 9.2 Emissions Estimation for Land Use Development Projects. November.

Kings County. 2010. 2035 Kings County General Plan. Air Quality Element. Adopted January 26. Pages cited: AQ-1, AQ-2, AQ-25, AQ-26, AQ-28.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2002. Guide for Assessing and Mitigating Air Quality Impacts. Revised January 2010.

San Joaquin Air Pollution Control District (SJVAPCD). 2010 & 2014. Ambient Air Quality Standards & Valley Attainment Status.

3.4 BIOLOGICAL RESOURCES

Table 3.4-1 Biological Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local or regional habitat conservation plan?	☐	☐	☐	☒

3.4.1 Setting

As of 2013, the proposed project site was occupied by 43 acres of cotton, 80 acres of alfalfa, 166 acres of tomatoes, and 342 acres of wheat (totaling 631.0 acres of cropland).~~The proposed project site is actively farmed with close spaced grain, alfalfa, or row crops (onions, tomatoes, melons).~~ Management includes summer irrigation and ditch and pond clearing. The site is devoid of natural vegetation or natural communities. Low ends of fields support seasonally saturated ground that provides habitat for common wetland plants. Field borders and roadsides are vegetated with weedy annual grasses and herbs. Herbicide use and discing of these marginal areas limits the plant growth outside of the fields. Perennial plants occurring under high-voltage electrical towers or adjacent to electrical ~~distribution and/or~~ transmission line poles. There is a small roadside area along 25th Avenue near the northwest corner of the project site that is planted with fruit and shade trees

(peaches, pomegranates, and ash), and an irrigation pump located there. There are no wetlands or drainage features on the proposed project site. There are two wastewater ponds on the property that is adjacent to the project site on its east side. Both ponds support emergent wetland vegetation.

In March 2012 a report titled "The Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities" was prepared for three solar projects (totaling approximately 1,422 acres) adjacent to the western boundary of the proposed project site. This report described the results of breeding season surveys of the state-threatened Swainson's hawk (*Buteo swainsoni*) in the vicinity of these projects in Kings County. The survey data that was gathered for this report assessed the impact of these projects, pursuant to the California Environmental Quality Act (CEQA), on the local and regional Swainson's hawk nesting population. The study area covered in this report for the projects included 254,805 acres of land. The report indicated a relatively sparse Swainson's hawk nesting population within the 254,805-acre study area, but with a substantially greater nesting density in the eastern half of the study area. The assessment was initially conducted using the entire study area to compare availability and species requirements followed by the same assessment within a smaller subarea that is more representative of the nesting distribution. The subarea was defined by including all of the lands east of the Kings River corridor and including all lands approximately 4 miles west of the Kings River corridor to ensure that the project area is within the assessment subarea. The western boundary was drawn by extending a line 4 miles due west of the Kings River at the center of the project site, and then using a straight northwest-southwest line that roughly parallels the Kings River. This boundary incorporates all of the proposed project sites and is from 3 to 5 miles west of the Kings River along its length.

A total of 27 nesting territories were confirmed in the study area, however, only 5 were located within 5 miles of the solar facilities with the bulk of the nest sites (22) within 5 to 10 miles of the solar facilities representing a nesting density of 0.07 nests per square mile within the 254,805 square foot study area. The report also indicated that 229,922 acres (90.2 percent of the study area) was considered suitable foraging habitat for Swainson's hawk and the highest value habitat (alfalfa and other hay fields and irrigated pastures) is found primarily east of the Kings River. The survey concluded that the loss or alteration of 1,422 acres of agricultural land would not affect the distribution or abundance of nesting Swainson's hawks in the study area. Since it represented only 0.6 percent of the available foraging habitat within the study area, its conversion was considered negligible relative to availability, and particularly with regard to the relatively small number of Swainson's hawks that nest in the study area. Mitigation measures were not included as part of the report since foraging and nesting habitat was determined not to be significantly impacted by the solar projects.

This report also conducted a cumulative assessment which included 9 proposed solar sites (including the proposed Project site) within the study area, totaling 4,670 acres or approximately 1.8 percent of the study area. In the study area, the cumulative assessment determined that following implementation of all of the proposed projects, approximately 98 percent of the total available foraging habitat and approximately 95.4 percent of the surplus portion would remain as suitable habitat for Swainson's hawk.

In the sub-area, the cumulative assessment determined that following implementation of all the proposed projects, approximately 96.3 percent of the available foraging habitat and 70.4 percent of

the surplus portion would remain as suitable foraging habitat, which suggested that the cumulative loss of foraging habitat within the assessment subarea would not affect the existing Swainson's hawk population. Overall, the report indicated that cumulative impacts from all proposed projects (including the Project) on Swainson's hawk foraging and nesting habitat would be less than significant.

Regulatory Setting

Federal. *Endangered Species Act.* The federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16USC1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Migratory Bird Treaty Act. The MBTA implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the CDFG Code.

Federal Clean Water Act. The federal Clean Water Act's (CWA's) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (ACOE). The definition of waters of the United States include rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b)." The USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require and individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or Waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWQCB.

State. ***California Environmental Quality Act.*** This project is being evaluated pursuant to CEQA.

California Endangered Species Act. The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called candidates by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the CDFG Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFG to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFG administers the act and authorizes take through Section 2081 agreements (except for designated fully protected species).

Fully Protected Species. The State of California first began to designate species as fully protected prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute (CDFG Code Section 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act. Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code Sections 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA, but can be protected pursuant to the CEQA. In addition, plants that are not state listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines Section 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the CNPS Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

California Lake and Streambed Alteration Agreement. Sections 1600 through 1616 of the CDFG Code require that a Lake and Streambed Alteration Program Notification Package be submitted to the CDFG for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFG reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal on which the CDFG and the applicant agree is the Lake and Streambed Alteration Agreement. Often, projects that require a Lake and Streambed Alteration Agreement also require a permit from the ACOE pursuant to Section 404 of the CWA. In these

instances, the conditions of the Section 404 permit and the Lake and Streambed Alteration Agreement may overlap.

Local. The following policies related to biological resources from the Kings County General Plan Resource Conservation Element were considered in this analysis:

- **RC Policy D1.1.1:** Evaluate all discretionary land use applications in accordance with the screening procedures contained in the Biological Resources Survey located in Appendix B. If the results of the project screening indicate the potential for important biological resources to exist on the site, a biological evaluation (consistent with Appendix B) shall be performed by a qualified biologist. If the evaluation indicates that the project could have a significant adverse impact, mitigation shall be required or the project will be redesigned to avoid such impacts. Mitigation shall be provided consistent with CEQA, and applicable state and federal guidelines, as appropriate. Mitigation may include habitat improvement or protection, acquisition of other habitat, or payment to an appropriate agency to purchase, improve, or protect such habitat.
- **RC Policy D1.1.2:** Require project applicants to consult with CDFG and the USFWS and to obtain appropriate authority for such take pursuant to Endangered Species Act requirements if new development or other actions are likely to result in incidental take of any threatened or endangered species.
- **RC Policy D2.1.1:** Follow state and federal guidelines for the protection of natural wetlands. Required developers to obtain authorization from the appropriate local, state, or federal agency prior to commencement of any wetland fill activities.
- **RC Policy D2.1.2:** Uses the CEQA process to assess wetland resources and require mitigation measure for development which could adversely impact a designated wetland.
- **RC Policy D2.1.3:** Exempt prior converted wetlands from consideration as wetlands pursuant to the County planning process, except as required by state and federal regulations.
- **RC Policy E1.1.1:** Complete the inquiry process outlined in Appendix B in the initial project review for development permits to determine whether the project is likely to have a significant adverse impact on any threatened or endangered species habitat locations and to assure appropriate consideration of habitat preservation by development. Maintain current copies of CDFG and USFWS maps showing locations of known threatened and endangered species habitat. If shown to be necessary, require the developer to consult with CDFG, USFWS, and the ACOE regarding potential impacts, appropriate mitigation measures, and required permits.
- **RC Policy E1.1.2:** Require as a primary objective in the review of development projects the preservation of health native oaks and other healthy native trees.
- **RC Policy E1.1.3:** Maintain to the maximum extent practicable the natural plant communities used a habitat by threatened and endangered species (see Appendix B for a listing and map of these plant communities) (Kings County, 2010).

Methods and Findings

Literature Reviews. This evaluation of biological resources included a review and inventory of potentially occurring special-status species (including those officially designated as “endangered” or “threatened”), wildlife habitats, vegetation communities, and jurisdictional waters of the U.S. The references reviewed for this report include the following:

- Lemoore (1954), Vanguard (1981), Stratford (1954), Stratford SE (1954), and Westhaven (1981), California, 7.5-minute topographic quadrangles (USGS).
- California Natural Diversity Database (CNDDB), RareFind computer program for the following 7.5-minute quadrangles: Lemoore, Vanguard, Stratford, Stratford SE, and Westhaven, California (CDFG, 2010).
- Inventory of Rare and Endangered Plants for the following 7.5-minute quadrangles: Lemoore, Vanguard, Stratford, Stratford SE, and Westhaven, California (CNPS, 2010)
- List of Federal Endangered and Threatened Species that May Be Affected by Project in the Lemoore, Vanguard, Stratford, Stratford SE, and Westhaven, California 7.5-minute quadrangles (U.S. Fish and Wildlife Service, 2010).

Special-Status Vegetation Species. Information acquired from the CNDDB (CDFG, 2010) and other sources resulted in a list of 5 special-status vegetation species potentially occurring in the vicinity of the project site (Table 3.4-2). The project site consists of land currently in agricultural production. Given the site conditions, it is unlikely that any of the special-status vegetation species that have been documented in the project vicinity would be found within the project site prior to construction

The special-status vegetation of the San Joaquin Valley is largely associated with alkaline soils in scrub vegetation, grasslands, or seasonal wetland habitats. These habitats, including Valley sacaton grassland, valley sink scrub (Holland, 1986; Sawyer and Keeler-Wolf, 1995), are also considered worthy of conservation. The large scale conversion of these natural habitats to agricultural use has eliminated habitats capable of supporting these species.

Earlimart orache has been found along roadsides, fields, and in alkaline grasslands. This species was at one time considered a subspecies of *Atriplex cordulata*, also a species of concern for conservation. Earlimart orache differs from *A. cordulata* in its more robustly branching habitat, late summer flowering period, and specific floral and seed characteristics. Most of the known occurrences of this species are found between Corcoran, Delano, and Porterville in remnant alkaline grassland habitats, although historic locations have been recorded as far north as Hanford. Associated species include salt grass (*Distichlis spicata*), common tarweed (*Centromadia (Hemizsonia) pungens*), alkali heath (*Frankenia salina*), alkali cress (*Cressa truxillensis*), and salt heliotrope (*Heliotropium curassavicum*) (U.S. Department of Agriculture, 2010).

Special-Status Wildlife Species. The project site is in active agricultural cultivation, resulting in potential habitat for most special-status wildlife species having been removed. A total of 10 special-status wildlife species have the potential to occur within the vicinity of the project (Table 3.4-2). Of these, 4 special-status wildlife species are known to occur within 1 mile of the project site: Swainson's hawk (*Buteo swainsoni*), a state Threatened species; loggerhead shrike (*Lanius ludovicianus*); tricolored blackbird (*Agelaius tricolor*); and the Western burrowing owl (*Athene cunicularia*); all state Species of Special Concern. The project site is within the historic range of the federally endangered and state threated San Joaquin kit fox (*Vulpes macrotis mutica*), although the closest known occurrences are within 10 miles north and east from the project site (CDFG, 2010).

Table 3.4-2 Special-Status Vegetation and Wildlife Species Potentially Occurring in the Vicinity of the Project Site

Scientific Name Common Name	Listing Status USFWS/CDFG/CNPS	General Habitat Description	Potential for Impacts
Vegetation			
Atriplex depressa Brittlescale	-/-/1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland vernal pools, alkaline clay. Flowers May to October	**Low.** Not present, no appropriate habitat.
Atriplex erecticaulis Earlimart orache	-/-/1B.2	Valley and foothill grassland, alkaline. Flowers August to September	**Low.** Not present, no appropriate habitat.
Atriplex subtilis Subtle orache	-/-/1B.2	Valley and foothill grasslands, saline depressions, summer beds of vernal pools. Flowers May to October	**Low.** Not present, no appropriate habitat.
Delphinium recurvatum Recurved larkspur	-/-/1B.2	Chenopod scrub, valley and foothill grassland, alkaline. Flowers March to May	**Low.** Not present, no appropriate habitat.
Lepidium jaredii ssp. album Panoche pepper-grass	-/-/1B.2	Alluvial fans and washes, valley and foothill grassland. Flowers February to June	**Low.** Not present, no appropriate habitat.
Amphibian and Reptiles			
Actinemys marmorata Western pond turtle	-/SSC/-	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. May move overland up to 325 feet for egg laying.	**Low.** The NAS Lemoore wastewater ponds to the east of the project boundary may provide suitable habitat for the species. Upland areas surrounding these ponds do not provide suitable nesting habitat due to active cultivation. There are no CNDDB-recorded occurrences of this species within 5 miles south of the project site (CNDDB, 2010).
Spea hammondii Western spadefoot toad	-/SSC/-	Inhabits lowlands in open areas with sandy or gravelly soils, in a variety of habitats including mixed	**Low.** The wastewater ponds to the east of the project boundary may provide suitable habitat for the

Table 3.4-2 Special-Status Vegetation and Wildlife Species Potentially Occurring in the Vicinity of the Project Site

Scientific Name Common Name	Listing Status USFWS/CDFG/CNPS	General Habitat Description	Potential for Impacts
		woodlands, grasslands, chaparral, sandy washes, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Breeds in temporary pools and quiet streams.	species. There are no CNDDB-recorded occurrences of this species within 5 miles south of the project site (CNDDB, 2010).
Birds			
Agelaius tricolor Tricolored blackbird[1]	--/~~S~~SE~~C~~/--	Largely endemic to California, most numerous in the Central Valley and nearby vicinity. Breeds near fresh water, preferably in emergent wetland with tall dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs. Feeds in grassland and cropland habitats.	**High**. The wastewater ponds to the east of the project boundary provide suitable habitat for the species. Species observed during surveys conducted in May 2010.
Athene cunicularia Western burrowing owl	--/SSC/--	Open, dry annual or perennial grasslands characterized by low-grazing vegetation. Subterranean nester, dependent upon burrowing mammals.	**High.** Suitable foraging habitat is present throughout the project site. Berms surrounding the wastewater ponds located to the east of the project boundary contain active burrows. Species observed along the north fence line of the wastewater ponds during surveys conducted in May 2010.
Buteo swainsoni Swainson's hawk	--/~~CT~~ST/--	Nests in open areas with stands of few dense-topped trees in juniper-sage flats, riparian areas, and oak savannas. Forages in open grasslands, grain, and alfalfa fields (supporting rodent populations) adjacent to nesting opportunities.	**High.** Suitable foraging habitat is present throughout the agricultural areas of the project site. Suitable nesting habitat occurs approximately 1.5 miles east of the project site in habitat along the Kings River slough. Species observed foraging on the project site during surveys conducted in May 2010. An active nest was

Table 3.4-2 Special-Status Vegetation and Wildlife Species Potentially Occurring in the Vicinity of the Project Site

Scientific Name Common Name	Listing Status USFWS/CDFG/CNPS	General Habitat Description	Potential for Impacts
			identified along Jackson Road in the riparian habitat of the Kings River slough.
Lanius ludovicianus Loggerhead shrike	--/SSC/--	Found in variety of habitats with open areas, available perches, and dense shrubs for nesting.	**High.** Suitable foraging habitat is present throughout the agricultural areas of the project site. Species observed during surveys conducted in May 2010.
Charadrius alexandrines nivosus Western snowy plover	FT/SSC/--	In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. In migration, flocks with other swallows over many open habitats.	**Low.** The project site may contain suitable foraging habitat for this species during migration; however, the likelihood of occurrence is low. There is one CNDDB-recorded occurrence of this species within 5 miles east of the project site (CNDDB, 2010).
Mammals			
Vulpes macrotis mutica San Joaquin kit fox	FE/ST/--	Grassland and scrub habitats of the San Joaquin Valley and surrounding foothills.	**Moderate.** The project site is within the historic range and movement corridor for the species. Suitable foraging habitat is present throughout the agricultural areas of the project site. There are CNDDB-recorded occurrences of this species within 10 miles of the project site (CNDDB, 2010).
Dipodomys nitratoides exilis Fresno kangaroo rat	FE/SE/--	Areas of grassland and chenopod scrub communities on the San Joaquin Valley floor.	**Low.** Active agricultural uses at the site eliminated suitable habitat. There are no CNDDB-recorded occurrences of this species within 5 miles of the project site (CNDDB, 2010).
Dipodomys nitratoides nitratoides Tipton kangaroo rat	FE/SE/--	Occurs in terrace grasslands devoid of woody shrubs. Burrows of	**Low.** Active agricultural uses at the site eliminated suitable habitat.

Table 3.4-2 Special-Status Vegetation and Wildlife Species Potentially Occurring in the Vicinity of the Project Site

Scientific Name Common Name	Listing Status USFWS/CDFG/CNPS	General Habitat Description	Potential for Impacts
		Tipton kangaroo rats are commonly located in slightly elevated mounds, the berms of roads (where placed above ground level), canal embankments, railroad beds, and bases of shrubs and fences where windblown soils accumulate above the level of surrounding terrain.	There are CNDDB-recorded occurrences of this species approximately 5 miles east of the project site (CNDDB, 2010).

Notes: [1] In December 2014, the California Fish and Game Commission approved an emergency listing of the tricolored blackbird under the California Endangered Species Act, upgrading it from its prior status as a Species of Special Concern (SSC) to State Endangered (SE).

Biological Resources Survey

Biological surveys were conducted on May 26-27, 2010 and December 5, 2014 to assess the biological resources at the project site. A rare plant survey and wildlife survey includes the ~~957~~966-acre project site and surrounding habitats.

The site contains few native plant species. Due to the year-round agricultural operations, the site is devoid of natural communities. Two irrigation basins are present on the property and both support emergent wetland vegetation. Low ends of fields support seasonally saturated ground that provides habitat for common wetland plants such as cattail (*Typha latifolia*), rabbitsfoot (*Polypogon monspeliensis*), and golden dock (*Rumex maritima*). Although these features contain wetland vegetation, they do not meet the criteria for classification as wetland habitat.

Field borders and roadsides are vegetated with weedy annual grasses and herbs such as ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), and cheeseweed (*Malva parviflora*). Herbicide use and discing of these marginal areas limits the plant growth outside of the fields. Perennial plants that were found under high-voltage electrical towers or adjacent to electrical ~~distribution and/or~~ transmission line poles include native tarweed (*Hemizonia pungens*) but were mostly summer annual weeds, such as milk thistle (*Silybum marianum*), little oak oracle (*Atriplex fruitcolosa*), pit-seed goosefoot (*Chernopodium berlandieri*), or mat amaranth (*Amaranthus blitoides*). There is a small roadside area planted with fruit and shade trees (peaches, pomegranates, and ash) at the project site.

The Valley sacaton grassland and valley sink scrub habitats were not found within the project site. None of the special-status vegetation known from the San Joaquin Valley area was noted at the project site due to the lack of appropriate habitats. Some rare species may persist in marginal habitats, including those under cultivation where fields remain fallow every other year. Due to the intense agricultural practices present at the project site, habitats for these species are not present. Field borders, as well as irrigation ditches and pond margins, are maintained to be free of weedy vegetation.

Seasonally wet habitats at the lower ends of fields were surveyed for remnant native vegetation or habitats for brittlescale (*Atriplex depressa*) and subtle orache (*Atriplex subtilis*). These species are spring to summer flowering annuals known from the dried beds of vernal pools or saline depressions. No appropriate habitat was found on the property and no new populations of these plants were located on the site.

Upland areas were surveyed for recurved larkspur (*Delphinium recurvatum*) and Panoche peppergrass (*Lepidium jaredii* ssp. *album*). These species would have been flowering or in fruit during the May survey. No populations of these rare species were found. Habitat assessments and vegetative surveys were conducted for the Earlimart orache (*Atriplex erecticaulis*) and subtle orache. These two species flower later in the summer.

Within the project site, only a single common tarweed plant was found along the roadway. None of the other common associates of Earlimart orache were present on the site. Although Earlimart orache characteristically flowers later in the summer, no plants similar to this species, or its close relative (*A.cordulata*) were observed during surveys. Other members of the *Atriplex* genus were recorded, but none with characteristic heart-shaped leaves of these closely related species. No populations of Earlimart orache were found on the property or are expected to occur there.

Wildlife species observed in the agricultural fields at the project site during the survey included common species such as Western kingbird (*Tyrannus verticalis*), Brewer's blackbird (*Euphagus cyanocephalus*), Western meadowlark (*Sturnella neglecta*), California ground squirrel (*Spermophilus beecheyi*), mourning dove (*Zenaida macroura*), and common raven (*Corvus corax*). Species observed within the wastewater ponds to the east of the project site included red-winged blackbird (*Agelaius phoenicus*), bullfrog (*Rana catesbeiana*), ruddy duck (*Oxyura jamaicensis*), mallard (*Anas platyrhynchos*), black-necked stilt (*Himantopus mexicanus*), and American avocet (*Recurvirostra Americana*).

The project site's agricultural fields provide foraging habitat for the Swainson's hawk and breeding and foraging habitat for the burrowing owl. The Swainson's hawk was observed foraging at the project site during the biological survey. The wastewater ponds that are located to the east of the property boundary contains stands of broad-leaved cattails and bulrush that provide suitable breeding habitat for nesting birds and the Western pond turtle (*Emys marmorata*) and Western spadefoot toad (*Spea hammondii*), both Species of Special Concern. Tricolored blackbirds were observed in the wastewater ponds during the survey. The berms of those ponds also contain suitable breeding habitat for the burrowing owl; several burrowing owl individuals were observed along the north fence line of those wastewater ponds. An active Swainson's hawk nest was identified approximately 1.5 miles east of the project site on Jackson Avenue where it crosses the Kings River.

3.4.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDFs into the project to minimize or avoid impacts to biological resources as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to biological resources.

PDF BIO-1: ~~Mitigate the loss of up~~ The project applicant shall retain a qualified biologist to ~~978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX).~~

~~Conduct~~ conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake.

The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE

Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat.

To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted.

If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines.

If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.

PDF BIO-2: A pre-construction clearance survey for burrowing owl shall be performed by a qualified biologist, not more than 30 days prior to construction, to ensure avoidance of this species during construction. If burrowing owls are determined to be present, avoidance measures in accordance with the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) shall be implemented. Copies of any survey results and forms shall be submitted to the USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.

PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the U.S. Fish and Wildlife Service (USFWS) San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County.

The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). ~~Incorporate openings in fencing design to facilitate passage of San Joaquin kit fox~~

~~through the project site (Figure 1-9).~~ Implement and maintain a weed control program around the perimeter fence.

PDF BIO-4: A qualified biologist shall conduct a preconstruction survey for nesting bird species that are protected by the Migratory Bird Treaty Act (MBTA) not more than 30 days prior to commencement of construction.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or USFWS?

Special-Status Plants. *NO IMPACT*. The proposed project site is in active agricultural production and does not contain suitable habitat for special-status plant species, thus special-status plant species, thus special-status plant species are not expected to occur on the proposed project site or be affected by construction of the solar field, resulting in no impact.

Special-Status Wildlife. *LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION.* Construction of the solar field would result in the permanent loss of up to ~~978~~ 966 acres of Swainson's hawk foraging habitat. Suitable Swainson's hawk nesting habitat is located within 1 mile of the project site; however, no nesting hawks were identified during the survey. The active nest identified during the survey was located offsite along Jackson Road, more than 1.5 miles from the eastern boundary of the project site. No impacts to nesting Swainson's hawks are anticipated as a result of the proposed project. A preconstruction survey for nesting hawks would be conducted prior to project construction to confirm the absence of active nests within ~~1~~0.5 mile of the project site.

To mitigate for the loss of foraging habitat, CDFG mitigation guidelines stipulate that projects within 1 mile of an active nest tree shall provide 1 acres of habitat management land for each acre of development authorized where 10 percent of the land is actively managed for habitat; or 0.5 acre of habitat management land for each acre of development authorized where 100 percent of the land is actively managed for habitat. Projects located between 1 and 5 miles of an active nest tree shall provide 0.75 acre of habitat management land for each acre of development authorized; projects located between 5 and 10 miles of an active nest tree shall provide 0.5 acre of habitat management land for each acre of development authorized. Implementation of PDF BIO-1, as part of the Project Description, would result in a less than significant impact on Swainson's hawks with mitigation incorporated.

Construction activities during the nesting season of the burrowing owl (February 1 through August 31) may disturb nesting owls located along the banks of the wastewater ponds located to the east of the project site. Preconstruction surveys following the Burrowing Owl Consortium's survey guidelines (1993) would be conducted prior to project construction to identify nesting burrowing owls. If an active burrow is located, a 250-foot buffer would be established around the burrow during construction until the young have fledged. Implementation of PDF BIO-2, as part of the Project Description, would result in a less than significant impact on burrowing owls with mitigation incorporation.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or USFWS?

NO IMPACT. There is no riparian habitat within the proposed project site; therefore, no impact to that habitat type would occur.

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

NO IMPACT. There are no wetlands or drainage features on the proposed project site; therefore, no impact to wetlands or drainage features would occur.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. Installation of the project site's fencing may interfere with the movement corridor of the San Joaquin kit fox. Implementing PDF BIO-3 (i.e., including portals in the fence or openings at the bottom of the fence [Figure 1-~~9~~11 and Figure 1-12]) would allow movement of kit fox through the project site. Pre-construction surveys and other prescribed avoidance measures included in PDF BIO-1, BIO-3, and BIO-4 in the Project Description would be implemented to protect potential Swainson's hawk, Western burrowing owl, loggerhead shrike, and other avian nest sites prior to construction activities. Therefore, this is considered a less than significant impact with mitigation incorporation.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. The project would not conflict with any local policies or ordinances protecting biological resources because the applicant has included PDF BIO-1, BIO-2, and BIO-3 in its Project Description to avoid and/or minimize impacts on Swainson's hawk, Western burrowing owl, and San Joaquin kit fox.

f. Would the project conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP?

NO IMPACT. Kings County has not developed a HCP or NCCP for lands within its jurisdiction. There are no biological resources at the project site that are protected by a HCP, NCCP, or other approved local, regional, or state conservation plans. Therefore, the project would not conflict with such plans, resulting in no impact.

References

California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. April. Pages cited: 1-10.

California Department of Fish and Game (CDFG). 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California. Pages cited: 1, 10-13.

California Department of Fish and Game (CDFG). 2010 & 2014. State and Federally Listed Endangered, Threatened, and Rare Plants of California. Biogeographic Data Branch, CNDDB. July 2010. Pages cited: 1-16.

California Department of Fish and Game (CDFG). 2010 & 2014. RareFind. California Natural Diversity Data Base. Version 3.1.0. Biogeographic Data Branch, Sacramento.

California Native Plant Society (CNPS). 2010 & 2014. Online Inventory of Rare and Endangered Vascular Plants of California. Version 7-10b. Sacramento, CA. Search of the Lemoore, Vanguard, Stratford, Stratford SE, and Westhaven, California 7.5-minute USGS quadrangles.

Estep Environmental Consulting, *The Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities*, March 2012.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished report for Nongame-Heritage Program, California Department of Fish and Game, Sacramento. Pages cited: 18-19, 35.

Kings County. 2010. 2035 Kings County General Plan. Resource Conservation Element. Adopted January 26. Pages cited: RC-46, RC-47, RC-49.

Sawyer, J.O. and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society. Sacramento, California. Pages cited: 30, 166, 188.

United States Department of Agriculture. 2010 & 2014. Plants Database. Field Search Atriplex erecticaulis. Species Account and Distribution.

United State Fish and Wildlife Service (USFWS). 2010 & 2014. Federal endangered and threatened species list website.

3.5 CULTURAL RESOURCES

Table 3.5-1 Cultural Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.5.1 Setting

Cultural Resources Setting

The proposed project is located adjacent to an existing power plant that was constructed in 2002. The site is bordered on the west by 25th Avenue, on the north by SR 198, and the east by an agricultural field and wastewater ponds, and on the south and east by Avenal Cutoff Road. Project site surroundings consist primarily of farmlands, rural residences, the NAS Lemoore, and undeveloped areas. The project site includes land currently in agricultural production, formerly in agricultural production, and undeveloped land. The project site, as well as the properties surrounding it to the east, south, and west, are a flat and graded former alluvial floodplain under intensive active agricultural use. NAS Lemoore is located immediately north of the project site on the opposite side of SR 198. The project site is assessed via farm roads, and no ungraded, unused, or otherwise undeveloped area is present within project site.

The area is situated in the southern Sierra section of the Central Valley Region of California. When Europeans first ventured into the region between 1772 and 1821, an estimated 100,000 people, one-third of the "state's" native population, lived in the Central Valley. This population was composed of peoples with shared heritage; material culture, and linguistic roots, with the languages breaking down into 7 Penutian tongues, 5 of the Sacramento Valley, and 2 of the San Joaquin Valley, Miwok (northern), and Yokut (southern). Ethnographically, the area of primary interest was populated by the Southern Yokuts. In the vicinity of the project site, there are 2 key points of historical interest: the town of Lemoore and NAS Lemoore.

Paleontological Resources Setting

The proposed project site is located in the southern San Joaquin Valley Physiographic Province. The region is underlain by Mesozoic crystalline rock and Cenozoic marine and lacustrine deposits,

including the Great Valley Sequence and Pliocene sediments recording the transition from a marine to a continental environment. This sequence is capped by a number of large fluvial fans (Weissman et al., 2005). The project site lies near where several of these fans coalesce near the Tulare Lake Bed to create a region with little topographic relief (Croft and Gordon, 1968).

Pleistocene sediments of California have yielded many vertebrate faunas. Highly diverse faunas of Irvingtonian and Quaternary age have been found in landfill excavations in the region (Dundas et al., 1996; Fey and Thiessen, 1993). Undifferentiated Quaternary-age units in the San Francisco Bay Region also provide a diverse fossil vertebrate assemblage, and provide one of the best-known records of Pleistocene faunas in California (Miller, 1971; Stirton, 1951; Wolf, 1975). In Kings County, ancient Tulare Lake shore deposits have yielded fish fossils important for both the paleontological and archaeological record (Gobalet and Fenenga, 1993). No fossil sites are located within 1 mile of the project site.

Regulatory Setting

Cultural Resources

Federal. Cultural resources are protected by several federal regulations, none of which are relevant to this project because it would not be located on lands administered by a federal agency and the project applicant is not requesting federal funding.

State. The project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term "historical resources" to include buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource;
- Cause a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries.

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1 (k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant

- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a)).

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)). A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristic of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history

Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

Local. The Kings County General Plan Resource Conservation Element includes a goal with supporting objectives and policies related to archaeological, cultural, and historical resources. Those policies that are pertinent to the project are included below:

- **RC Policy I1.1.3:** Encourage the protection of cultural and archaeological sites with potential for placement on the National Register of Historic Places and/or inclusion in the California Inventory of Historic Resources.
- **RC Policy I1.2.1:** Participate in and support efforts to identify significant cultural and archaeological resources and protect those resources in accordance with PRC 5097.9 and 5097.993.
- **RC Policy I1.2.2:** Continue to solicit input from local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance.
- **RC Policy I1.2.3:** Address archaeological and cultural resources in accordance with CEQA for discretionary land use applications (Kings County, 2010).

Paleontological Resources

Federal. Paleontological resources are protected by several federal regulations, none of which are relevant to this project because it would not be located on lands administered by a federal agency and the project applicant is not requesting federal funding.

State. CEQA (PRC Sections 21000 et seq.) requires public agencies and private interests to identify the environmental consequences of their proposed projects on any object or site of significance to the scientific annals of California (Division I, California PRC: 5020.1 [b]). Although CEQA does not define what is a unique paleontological resource or site, Section 21083.2 defines unique archaeological resources as any archaeological artifact, object, or site about which it can be clearly

demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- It has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event.

With only slight modification, this definition is equally applicable to recognizing "a unique paleontological resource or site." Additional guidance is provided in CEQA Section 15064.5 (a)(3)(D), which states "Generally, a resource shall be considered historically significant if it has yielded, or may be likely to yield, important information in prehistory or history."

Local. The Kings County General Plan does not specifically include goals, objectives, or policies aimed at protecting paleontological resources.

Methods and Findings

Cultural Resources Archival Literature Review. An archival literature search was conducted of the archives of the Southern San Joaquin Valley Information Center of the California Historical Resources Information System (CHRIS). The record search included CHRIS files, as well as a search of California Points of Historical Interest, California Historical Landmarks, CRHR, National Register of Historic Places, and California State Historic Resources Inventory. According to the information from the CHRIS, there have been 2 previous cultural resource studies prepared for the project vicinity. A third study, not available in the CHRIS files, was prepared in 2002 (URS, 2002) and was also referenced. All 3 studies were regarding the power plant that is located adjacent to the project site. Additionally, historic maps of the project area were reviewed.

No prehistoric or historic resources were located during the initial survey of the project vicinity (URS, 2002), although a later visit yielded the discovery of a possible basalt mortar fragment and a possible basalt pestle fragment (later designated P-16-000199) (URS, 2002). The literature search identified recorded cultural resources at the adjacent power plant site, as well as within a 1-mile radius of that project site. As part of the URS 2002 study, a Sacred Lands File search of the California NAHC was conducted with negative results, and contacts were made to local Native American groups, as recommended by the NAHC. No known specific areas of concern were reported by any of the contacts made.

Paleontological Resources Records Search and Literature Review. A literature review was conducted to determine the presence and nature of any fossil sites near the proposed project site. Information sources consulted include the University of California Museum of Paleontology database and the PaleoBiology Database, published and unpublished paleontological research papers, and investigations of other project sites. Data gathered in the investigation of the adjacent power plant was consulted. No fossil sites exist within 1 mile of the project site. Fossil sites within 10 miles include vertebrate faunas of the Tulare Formation, and an invertebrate fauna of the San Joaquin Formation.

Cultural Resources Survey. A reconnaissance and intensive pedestrian survey of the project site was conducted on June 7-8, 2010 and again on November 28, 2014. At the time of inspection, approximately 80 percent of the project site was in active agricultural production and unsuitable for intensive pedestrian survey.

No cultural resources were previously documented within the project site, and none were found during either of the field surveys. An attempt was made to relocate and evaluate all previously recorded cultural resources immediately adjacent to the project site. No artifacts were found at the location reported by URS for site P-16-000199.

New discoveries were limited to two isolated artifacts, both historic in age (over 50 years old). Isolate 1 is a brown-glazed ceramic electric transmission line insulator fragment which, while missing a date stamp or other evident diagnostic traits, matches another fragment seen on the other side of 25th Avenue (immediately west of the project site) exhibiting a clear "1917" date stamp. Isolate 2 is a single possible 1936 electric drop-line pole (hooking into the north-south electric transmission line aligned along the west side of 25th Avenue), which is still used with a modern line attached. Both were discovered along the western end of the project site and north of the existing PG&E Henrietta substation located adjacent to the project site. Neither of these resources meets any of the criteria for listing on the CRHR.

The archaeological sensitivity of the project site was found to be low based on the negative survey results and the high degree of ground disturbance from decades of agricultural use.

Paleontological Resource Survey. A field survey of the site was conducted on June 7, 2010 to determine the site condition and the stratigraphic units that would be encountered by onsite elevation. No fossils were found in the project site, and the surface sediment was found to be heavily re-worked soil and agricultural fields.

Potentially Affected Lithologic Units and Their Paleontological Sensitivity. The project site is overlain by Quaternary alluvial fan, and potentially lacustrine, deposits ranging in facies type from sandstone to unconsolidated siltstone and clays, all of which are potentially fossiliferous. Fluvial fans form the eastern side of the San Joaquin Basin (Weissmann et al., 2005). A series of Pleistocene lake deposits, known as the Corcoran and Tulare lakes, were buried by the major westward-flowing alluvial fan sediment drainage (Bartow, 1991), which resulted in an interfingering of lake and alluvial deposits in the region (Croft and Gordon, 1968; Bartow, 1991). The surface of the project site is covered by a thin layer of heavily reworked soil.

Although the Pleistocene units outcrop extensively in the southern San Joaquin Valley region, such outcrops are not occurring at the project site. The project site and nearby area is relatively flat and featureless, but these units would be encountered during excavations of the soil and re-worked sediment.

In the vicinity of the project site, the Older Alluvium unit is subdivided into oxidized and reduce subunits (Croft and Gordon, 1968). The oxidized subunit, which is up to 600 feet thick, has not produced fossils, but includes well-developed paleosols (Croft and Gordon, 1968), which can contain fossils such as roots, burrows, and vertebrate fossils (Boggs, 2001). The reduced subunit, which is a maximum of 1,000 feet thick, has yielded a unique mollusk fauna. due to the lack of previous

productivity, the oxidized subunit has a low paleontological sensitivity, although fossils could be uncovered in the paleosols that comprise this unit. The reduced subunit has a high paleontological sensitivity.

The Tulare Lake Formation has yielded significant fossil assemblages, extending from the Pleistocene to the Holocene (Page, 1983; Gobalet and Fenega, 1993). The Tulare Lake existed as recently as approximately 100 years ago (Page, 1983), and the upper portions are too young to contain fossils. It is, therefore, unlikely that the Tulare Lake Formation would yield significant paleontological resources. This unit, therefore, has a low sensitivity, increasing to high sensitivity with increased depths.

3.5.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDFs into the project to minimize or avoid impacts to cultural and paleontological resources as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to cultural and paleontological resources.

PDF CUL-1: ~~Identification and treatment of any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains that are encountered during project construction.~~ The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.

The project proponent shall retain a professional archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources and Kings County Community Development Agency shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA~~-~~.

PDF CUL-2: ~~Identification and treatment of Native American archaeological, ethnographic, or spiritual resources that are unearthed during project construction.~~ If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and

recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County Community Development Agency. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

PDF CUL-3: ~~Actions to be taken if human remains or bone of unknown origin are found during project construction.~~ Pursuant to State Health and Safety Code Section 7070.5(e) and Public Resources Code Section 5097.98, if human remains or remains of unknown origin are found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that "... the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.

PDF PALEO-1: ~~Identification and treatment of paleontological resources (fossils) that are uncovered during project construction.~~ If paleontological resources are discovered during excavation activities at the project site, work in the vicinity of the find (a 50-foot radius) shall cease, and a qualified professional paleontologist shall be retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any

significant paleontological resources shall be undertaken with the approval of the Kings County CDA.

a., b., d. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? Would the project disturb any human remains, including those interred outside of formal cemeteries?

LESS THAN SIGNIFICANT. The project is not expected to cause a substantial adverse change in the significance of a historical or archaeological resource as defined in Section 15064.5, nor is the project likely to disturb human remains. The sensitivity for cultural resources in this area is considered to be low because no cultural resources were identified at the project site through archaeological and historical records searches or through pedestrian surveys. In addition, the project site exhibits a high degree of disturbance due to intensive agricultural use. However, because the project would require excavation and grading during its construction phase, the potential exists for currently unidentified buried cultural resources to be discovered. The applicant has included PDF CUL-1, CUL-2, and CUL-3 in its Project Description that address the incidental discovery of cultural resources during construction activities in the area of the proposed project site where previously undisturbed soils and sediments are located. Therefore, impacts on cultural resources would be less than significant.

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

LESS THAN SIGNIFICANT. Excavations that extend beneath the surficial re-worked sediment would encounter Older Alluvium, which ranges from low to high paleontological sensitivity. The upper (oxidized) subunit of this formation can be as much as 600 feet thick, and no fossils have been found in this subunit (Croft and Gordon, 1968). Because of the thickness of the oxidized subunit, the lower (reduced) unit, which is of high paleontological sensitivity, would not likely be encountered during excavation. The project-related excavations would not extend into sediments of the Tulare Formation likely to contain fossils. Therefore, it is unlikely that these excavations would encounter paleontological resources.

The methods used to install the foundations for the solar panels would not result in impacts to paleontological resources. No excavations would be necessary using the vibrating pile driving system, and the depth of the foundations (up to 8 feet) would not likely reach any units with high paleontological sensitivity.

No impacts to paleontological resources are expected; however, the applicant has included PDF PALEO-1 in its Project Description that addresses the incidental discovery of paleontological resources during construction activities in areas of the proposed project site where previously undisturbed soils and sediments are located. Therefore, impacts on paleontological resources would be less than significant.

References

Cultural Resources

Kings County. 2010. 2035 Kings County General Plan. Resource Conservation Element. Adopted January 26. Pages cited: RC-52, RC-53.
http://www.countyofkings.com/home/showdocument?id=3112

URS. 2002. GWF Henrietta Peaker Project Final Cultural Resources Report. URS Corporation, Oakland, CA, USA.

LSA Associates. 2014. Cultural Resources Study, American Kings Solar Project, Lemoore, Kings County, California.

Paleontological Resources

Bartow, J.A. 1991. The Cenozoic Evolution of the San Joaquin Valley, California. *U.S. Geological Survey Professional Paper* 1501. Pages cited: 1-40. http://pubs.usgs.gov/pp/1501/report.pdf

Boggs, S. Jr. Ed. 2001. Principles of Sedimentology and Stratigraphy, Third Edition. Prentice Hall, New Jersey. Pages cited: 14-18.

Croft, M.G. 1969. Subsurface geology of the Late Tertiary and Quaternary water-bearing deposits of the San Joaquin Valley, California. *U.S. Geol. Survey – Water Resources Div., Open File Report*. Pages cited: 1-7.

Croft, M.G. 1968. Geology, hydrology, and water quality in the Hanford-Visalia Area, San Joaquin Valley, California. *U.S. Geol. Surv. – Water Resources Div., Open File Report.* http://pubs.usgs.gov/of/1968/0067/report.pdf

Croft, M.G. and G.V. Gordon, 1968. Geology, hydrology, and quality of water in Hanford-Visalia area, San Joaquin Valley, California. Prepared in Cooperation with the California Department of Water Resources. http://pubs.usgs.gov/of/1968/0067/report.pdf

Dundas, R.G., Smith, R.B., and Verosub, K.L. 1996. The ~~Fairmeaad~~Fair mead Landfill locality (Pleistocene, Irvingtonian), Madera County, California: preliminary report and significance. *PaleoBios*, v. 17, n. 2-4, pages cited: 50-58. http://docubase.berkeley.edu/cgi-bin/pl_dochome?query_src=pl_search&format=INDEX&collection=PaleoBios_Archive_Public&id=104&show_doc=yes

Fay, L.P. and Thiessen, K.R. 1993. A preliminary noted on the Arvin Landfill Local fauna (Holocene), Kern County, California. In New Additions to the Pleistocene Vertebrate Record of California (R.G. Dundas and D.J. Long, eds.). *PaleoBios* 15(4): 78-80. http://docubase.berkeley.edu/cgi-bin/pl_dochome?query_src=pl_search&format=INDEX&collection=PaleoBios_Archive_Public&id=179&show_doc=yes

Gobalet, K.W., and Fenenga, G.L. 1993. Terminal Pleistocene-Early Holocene fishes from Tulare Lake, San Joaquin Valley, California, with comments on the evolution of Sacramento squawfish (*Ptychocheilus grandis:* Cyprinidae). *PaleoBios*, 15(1): 1-8. http://docubase.berkeley.edu/cgi-bin/pl_dochome?query_src=pl_search&format=INDEX&collection=PaleoBios_Archive_Public&id=177&show_doc=yes

Miller, W.E. 1971. Pleistocene vertebrates of the Los Angeles Basin and vicinity (exclusive of Rancho La Brea). *Los Angeles Co. Mus. Nat. Hist. Sci. Bull.* Vol. 10, No. 4, pp. 47-142.

Page, R.W. 1983. Geology of the Tulare Formation and other continental deposits, Kettleman City area, San Joaquin Valley, California, with a section on ground-water management considerations and use of texture maps. *U.S. Geological Survey Water-Resources Investigations Report 83-4000.* Pages cited: 1-24. http://pubs.usgs.gov/wri/1983/4000/report.pdf

Society of Vertebrate Paleontology (SVP). 1995. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontological Resources B Standard Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:22-27.

Society of Vertebrate Paleontology (SVP). 1996. Conditions of Receivership for Paleontological Salvage Collections. *Society of Vertebrate Paleontology News Bulletin* 166:31-32.

Stirton, R.A. 1951. Prehistoric land mammals of the San Francisco Bay Region. *In-Geologic Guidebook of the San Francisco Bay Counties, Calif. Div. Mines Geol. Regional Map Series*, Bulletin 154, pp. 177-186.

Weissmann, G.S., Bennet, G., and Lansdale, A.L., 2005. Factors controlling sequence development on Quaternary fluvial fans, San Joaquin Basin, California, USA. *In* Harvey, A., Mather, A., and Stokes, M. Alluvial Fans: Geomorphology, Sedimentology, Dynamics. Geological Society of London Special Publications 251, p. 169-186.

Wolf, R.G. 1975. Sampling and Sample Size in Ecological Analyses of Fossil Mammals. *Paleobiology*, Vol. 1, No. 2, pp. 195-202.

3.6 GEOLOGY AND SOILS

Table 3.6-1 Geology and Soils Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life of property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

3.6.1 Setting

The project would be located in Kings County, in the southern section of California's Great Valley Geomorphic Province. The project site is on a relatively flat plain along the western flank of Kettleman Hills. The Great Valley (or Central Valley) is a large, asymmetrical, northwest-trending, structural trough formed between the California Coast Ranges to the west and the Sierra Nevada mountains to the east. The Great Valley is filled with up to 6 vertical miles of Sediment that include marine, alluvial, and lacustrine (lake) deposits (Norris and Webb, 1990).

Faulting and Seismicity

The project site is not located within an Alquist-Priolo Earthquake Fault Zone. The nearest mapped principal fault is the San Andreas Fault map that is located approximately 45 miles to the southwest of the project site. The San Andreas Fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates.

The San Andreas Fault is approximately 4 miles west of the Kings County boundary and approximately 45 miles southwest of the project site. The Nunez fault is located approximately 24.5 miles northwest of the project site. The Owens Valley fault group is on the east side of the Sierra Nevada and the White Wolf fault is south of Kings County (Kings County, 2010).

Historical records of earthquakes in the vicinity of the project document earthquakes that produced low level ground shaking and low local magnitude in Kings County (Kings County, 2010). These include the 1857 Fort Tejon earthquake (Magnitude [M] 7.9), with an epicenter approximately 7 miles west of the Kings County boundary in Monterey County, in the community of Parkfield. During this event, the San Andreas Fault ruptured for a length of approximately 225 miles between Parkfield and San Bernardino. The largest earthquake in southern California since the Fort Tejon earthquake was the 1952 Kern County earthquake (M 7.3), which occurred on the White Wolf fault. The epicenter occurred approximately 38 miles southeast of the Kings County boundary near Bakersfield and produced ground shaking felt over 200 miles away. The most recent earthquakes in Kings County occurred during the 1980s. The 1982 New Idria earthquake (M 5.4) and the 1983 Coalinga (M 6.5) earthquakes both occurred approximately 20 miles from the western border of Kings County. These two earthquakes were followed by the 1985 Kettleman Hills earthquake (M 6.1) with an epicenter located 4 miles west of the Kings County border, just north of the City of Avenal.

The USGS produces seismic hazard maps of peak horizontal acceleration (ground shaking). Peak acceleration is the largest potential ground acceleration at a location during an earthquake event. The project site could be subject to seismic hazards because of its proximity to active faults, fault systems, and fault complexes. The project site could be subject to a peak ground acceleration of up to 20 to 30 percent gravity (Kings County, 2010).

Soils

Mapped soil units at the project site include the Panoche loam and Wasco sandy loam. These soils are deeply developed on alluvium and are well-drained to moderately well drained. The surface soils are typically loam, sandy loam, sandy clay, and clayey sand, with the permeability being moderately slow to moderately rapid. Soil runoff potential is moderate, and the erosion hazard is also moderate. The shrink-swell potential of soils in the project site is considered to be variable, and may range from low to high (SCS, 1986).

Figure HS-4 on Page HS-13 of the Health and Safety Element of the 2035 Kings County General Plan shows that the project site is located in an area with expansive soil and a geotechnical soils report is required.

Regulatory Setting

Federal. Federal regulations for geology and soils are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project -applicant is not requesting federal funding or a federal permit).

State. The California Building Code (CBC) requires that project structures be designed with adequate strength to withstand the lateral dynamic displacements induced by the Design Basis Ground Motion, which the CBC defines as the earthquake ground motion that has 2 percent chance of being exceeded in 50 years.

In addition, this project is being evaluated pursuant to CEQA.

3.6.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDFs into the project to minimize or avoid impacts on and from site geology and soils as part of the Project Description. Chapter 1 contains a complete list of PDFs, including those relevant to geology and soils.

PDF GEO-1: Prepare and implement a SWPPP for the project.

PDF GEO-2: ~~For~~ E~~e~~xpansive soils have been determined to be ~~that may be present at the~~ present onsite and pose a structural issue~~, treat the soil according to the site~~ ; therefore a geotechnical report ~~recommendations~~is required prior to issuance of a building permit.

PDF GEO-3: Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.

a. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

LESS THAN SIGNIFICANT IMPACT. The project site does not lie within an Alquist-Priolo Earthquake Fault Zone. The nearest mapped principal fault is the San Andreas Fault map that is located approximately 45 miles to the southwest of the project site.

Construction of the project facilities to CBC standards is expected to result in less than significant impacts to the project from an earthquake that could occur.

ii. Strong seismic ground shaking?

LESS THAN SIGNIFICANT IMPACT. The primary geologic hazard that could affect the project site is seismic activity from ground shaking as a result of an earthquake. The potential for extensive

surface rupture is considered to be minimal because no major fault systems have been mapped or are known to be present in Kings County. No known active fault or potentially active fault crosses the project site (CGS, 2010). A moderate or large earthquake on the San Andreas Fault could cause strong ground shaking at the project site and potentially damage project structures. Construction of the project facilities to CBC standards would result in less than significant impacts to the project from seismic ground shaking that could occur.

iii. Seismic-related ground failure, including liquefaction?

NO IMPACT. Strong ground shaking can cause loose, saturated, cohesion-less soils to experience a temporary loss of shear strength. This phenomenon is known as liquefaction. Liquefaction depends on grain size distribution, relative density of the soils, degree of saturation, and intensity and duration of an earthquake. Liquefaction can cause buildings to sink or tilt, slope failures, level ground to shift laterally, and ground to crack.

Although the depth to groundwater at the project site is relatively shallow, the predominant soil type in the area of the project site has been mapped as clayey sand that would not be susceptible to liquefaction (Kleinfelder, 2001). Therefore, seismic related ground failure, including liquefaction, would not occur.

iv. Landslides?

NO IMPACT. The project location is relatively flat and no significant grading is planned. The project site is not mapped as an area that is susceptible to landslides (Kings County, 2010); therefore, no impact from landslides is expected.

b. Would the project result in substantial soil erosion or the loss of topsoil?

NO IMPACT. Initial construction activities, such as grading, excavation, and removal of vegetation cover associated with construction activities, have the potential to result in erosion, runoff, and sedimentation. Construction activities could also increase wind erosion effects that could affect soils and reduce the re-vegetation potential at the construction site and staging area. Standard construction BMPs would be implemented, including PDF GEO-1 and PDF GEO-2 (see Chapter 1) documented in the project-specific SWPPP.

c. Would the project be located on a geologic unit or soils that is unstable, or that would become unstable as a result of the project, and potentially result in an onsite or off site landslide, lateral spreading, subsidence, liquefaction, or collapse?

NO IMPACT. The project would be located on near-surface materials that include alluvial silt and clay soils. The project site, including the access routes to install the solar panels, is relatively flat land. Only minimal excavation, grading, and fill operations would occur.

Onsite or Offsite Landsliding. The project site does not lie within an area that is known to be prone to landslides (Kings County, 2010), resulting in no impact from landslides.

Lateral Spreading. Lateral spreading of the ground surface can occur within loose, saturated, and cohesionless soils (liquefiable) during seismic events. Lateral spreading generally requires an abrupt change in slope (i.e., a nearby steep hillside or deeply eroded stream bank), but can also occur on gentle slopes, such as at the project site. Other factors, such as distance from the epicenter, magnitude

of the seismic event, and thickness and depth of liquefiable layers, also affect the amount of lateral spreading. Because the project site is not subject to liquefaction, the potential for lateral spreading of the surface during seismic events is negligible, resulting in no impact.

Liquefaction. As discussed above, the potential for liquefaction to be a significant hazard is negligible at the project site, resulting in no impact (Kleinfelder, 2001).

Subsidence and Collapse. There are no known subsurface soil features that would subject the project site to collapse (Kleinfelder, 2001). Therefore, the threat of ground subsidence or subsurface collapse is considered negligible across the area, resulting in no impact.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

LESS THAN SIGNIFICANT IMPACT. Soils that contain a high percentage of expansive clay minerals can be prone to expansion if subjected to an increase in water content. Expansive soils are usually measured with an index test, such as the expansive index potential. For a soil to be a candidate for testing, the soil must have high clay content and the clay must have a high shrink-swell potential and a high plasticity index. Soils in the project site have been mapped as a sandy to silty clay and clayey silt (Kleinfelder, 2001) that could pose an expansive soil concern. PDF GEO-2, which is incorporated into the proposed Project Description, would require that the onsite soil be treated according to the site geotechnical report recommendations, resulting in a less than significant impact.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

NO IMPACT. ~~The soils present in the project site would support the use of a septic system and therefore, no impact would occur~~ The Project site is located in an area with a perched water table and engineering is required for any new septic system that is installed to ensure a minimum separation of five (5) feet between the bottom of the disposal field and the highest anticipated groundwater level. As indicated in PDF GEO-3, the applicant would submit the plans for the proposed septic system to the County Environmental Health and the Building ~~Department~~Division of the Kings County Community Development Agency.

References

California Geologic Survey (CGS), 2010. 2010 Fault Activity Map of California.

Kings County, 2010. 2035 Kings County General Plan, Health and Safety Element. Adopted January 26. Pages cited: HS-6, HS-7, HS-11, HS-12.

Kleinfelder, 2001. Geotechnical Investigation Report, Henrietta Peaker Power Project, GWF Power Systems, Lemoore, CA. November. Pages cited: 8, 9.

Norris and Webb, 1990. Geology of California. Second Edition. John Wiley & Sons, Inc. New York. Pages cited: 412 and 423.

United States Department of Agriculture, National Resources Conservation Service (NRCS). 2010. Soil Survey Geographic (SSURGO) Database for California.

Soil Conservation Service, 1986. Soil Survey of Kings County. United States Department of Agriculture. Page cited: 10.

3.7 GREENHOUSE GAS EMISSIONS

Table 3.7-1 Greenhouse Gas Emissions Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.7.1 Setting

Various gases in the earth's atmosphere play an important role in moderating the earth's surface temperature. Solar radiation enters earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward pace, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs axe transparent to solar radiation, but are effective in absorbing infrared radiation. Consequently, radiation that would otherwise escape back into space is retained, resulting in a warming of the earth's atmosphere. This phenomenon is known as the greenhouse effect (USBR, CCWD, and WAPA, 2009).

Scientific research to date indicates that some of the observed climate change is a result of increased GHG emissions associated with human activity. Among the GHGs contributing to the greenhouse effect are water vapor, carbon dioxide (CO_2), methane (CH_4), ozone, NO_x, and chlorofluorocarbons. Human-caused emissions of these GHGs in excess of natural ambient concentrations are considered responsible for enhancing the greenhouse effect. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (USBR, CCWD, and WAPA, 2009).

Global climate change is, indeed, a global issue. GHGs are global pollutants, unlike criteria pollutants and TACs (which are pollutants of regional and/or local concern). Global Climate change, if it occurs, could potentially affect water resources in California. Rising temperatures could be anticipated to result in sea-level rise (as polar ice caps melt) and possibly change the timing and amount of precipitation, which could alter water quality. According to some, climate change could result in more extreme weather patterns; both heavier precipitation that could lead to flooding, as well as more extended drought periods. There is uncertainty regarding the timing, magnitude, and nature of the potential changes to water resources as a result of climate change; however, several trends are evident (USBR, CCWD, and WAPA, 2009).

Snowpack and snowmelt may also be affected by climate change. Much of California's precipitation falls as snow in the Sierra Nevada and southern Cascades, and snowpack represents approximately 35

percent of the state's useable annual water supply. The snowmelt typically occurs from April through July; it provides natural water flow to streams and reservoirs after the annual rainy season has ended. As air temperatures increase due to climate change, the water stored in California's snowpack could be affected by increasing temperatures resulting in: (l) decreased snowfall, and (2) earlier snowmelt (USBR, CCWD, and WAPA, 2009).

Regulatory Setting

Federal. The USEPA Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO_2-equivalent per year beginning in 2010, report their emissions on an annual basis.

On May 13, 2010, the USEPA issued a final rule that established an approach to addressing; GHG emissions from stationary sources under the CAA permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA On April 17, 2009, the USEPA found that CO_2, CH_4, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not proposed regulations based on this finding.

State. California is taking action to reduce GHG emissions. In June 2005, Governor Schwarzenegger signed Executive Order S-3-05 to address climate change and GHG emissions in California. This order sets the following goals for statewide GHG emissions:

- Reduce to 2000 levels by 2010
- Reduce to 1990 levels by 2020
- Reduce to 80 percent below 1990 levels by 2050

In 2006, California passed AB 32, the California Global Warming Solutions Act of 2006. The Act requires ARB to design and implement emission limits, regulations, and other feasible cost-effective measures to reduce statewide GHG emissions to 1990 levels by 2020 (USBR, CCWD, and WAPA, 2009).

Senate Bill 97 was signed into law in August 2007. The Senate Bill required the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resource Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. On April 13, 2009, the OPR submitted to the Secretary for Natural Resources its recommended amendments to the State CEQA Guidelines for addressing GHG emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rule making process for certifying and adopting the amendments. Following a 55-day public comment period and 2 public hearings, and in response to comments, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the

entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the amendments, and filed them with the Secretary of State for inclusion in the CCR. The Amendments became effective on March 18, 2010.

The AB 32 Scoping Plan contains the main strategies California will use to reduce GHG emissions that cause climate change. The scoping plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program. The first regulation adopted by the ARB pursuant to AB 32 was the regulation requiring mandatory reporting of GHG emissions. The regulation requires large industrial sources emitting more than 25,000 metric tons of CO_2 per year to report and verify their GHG emissions from combustion of both fossil fuels and biomass-derived fuels. The California Cap and Trade program is being developed and the ARB must adopt regulations by January 1, 2011. Finally, Governor Schwarzenegger directed the ARB, pursuant to Executive Order S-21-09, to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020.

Local. The 2035 King's County General Plan adopted by the King's County Board of Supervisors on January 26, 2010 recognizes the problem of air pollution and climate change within the San Joaquin Valley. The Air Quality Element of the General Plan fulfills a number of objectives that are very important to King's County, including ensuring that growth occurs in ways that protect and enhance county residents' health, and complying with air quality regulations.

General Plan Air Quality goals and objectives, with respect to GHGs, that are pertinent to the project include:

- **AQ Goal G1:** Reduce Kings County's proportionate contribution of GHG emissions and the potential impact that may result on climate change from internal governmental operations and land use activities within its authority.
- **AQ Objective Gl.1:** Identify and achieve GHG emission reduction targets consistent with the County's proportionate fair share as may be allocated by ARB and the Kings County Association of Governments (Kings County, 2010).

To assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project-specific GHGs on global climate change, the SJVAPCD has adopted the following: *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, and the policy: District Policy - Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA Wizen Serving as the Lead Agency*. The guidance and policy rely on the use of Best Performance Standards (BPS) to assess significance of project-specific GHG emissions on global climate change during the environmental review process, as required by CEQA. Projects implementing BPS would be determined to have a less than cumulatively significant impact on global climate change. Otherwise, demonstration of a 29 percent reduction in GHG emissions, from business-as-usual, is required to determine that a project would have a less than cumulatively significant impact.

3.7.2 Environmental Impacts and Mitigation Measures

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid GHG emissions impacts. See Chapter 1 for a complete list of PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

Construction and Operation Greenhouse Gas Emissions

GHG emissions would be emitted as a result of the construction and operation of the proposed project. The majority of GHG emissions would be temporary and occur during the construction phase. Since the construction dates are unknown, the air quality impacts were modeled in a worst-case scenario assuming 12 months of construction in a single calendar year. ~~, which is expected to last from 2012 through the early part of 2015.~~ These emissions would result from the use of on-road vehicles and diesel-fueled off-road equipment. GHG emissions for the entire construction phase were estimated and are presented in Table 3.7-2. Detailed assumptions and calculations for estimating purposes are included in Section 6.

The GHG construction emission estimates were calculated using CalEEMod (Version 2013.2.2). CalEEMod stands for "California Emissions Estimator Model," and is an air quality modeling program that estimates air pollution emissions in lbs/day or tons per year for various land uses, area sources, construction projects, and project operations. Mitigation measures can also be specified to analyze the effects of mitigation on project emissions. CalEEMod estimates a project's CO_2, N_2O, and CH_4 emissions from area and mobile sources and as a result of energy and water consumption and waste generation.

~~**TABLE 3.7-2: Project Construction Greenhouse Gas Emissions**~~

~~**Emissions Type**~~	~~**CO_2 (Metric Tons)**~~
~~On-road~~	~~1,341~~
~~Diesel Off-road~~	~~866~~
~~Total Construction Emissions~~	~~2,207~~

~~Note:~~
~~The emissions of N20 and CH4 from construction were not included in the calculations. Emissions of N20 and CH4 from combustion sources are minimal, approximately less than 2 percent of the C02 emissions (this includes adjusting to C02-equivalent emissions). Furthermore, the URBEMIS2007 model only calculates C02 emissions. Therefore, only C02 emissions were calculated and reported for each of the emission sources.~~

Table 3.7-2: Project Construction Greenhouse Gas Emissions

Construction Year	Annual Regional Pollutant Emissions (MT/year)			
	CO_2	CH_4	N_2O	CO_2e
Year 1	630	0.10	0	630
Year 2	1,960	0.21	0	1,960

Source: LSA Associates, Inc. (June 2015).
Note: This modeling is based on a maximum of 1,200 construction workers.
Emission rates from OFFROAD2011 are lower than those estimated in OFFROAD2007 because the California Air Resources Board which created the model determined that the 2007 version included an error that was overestimating emissions of NO_x and PM by 33 percent. The 2011 version corrects this error, resulting in lower estimated emissions. Additionally, newer equipment used in the OFFROAD2011 model has lower emission rates. The analysis used updated equipment emission factors more representative for the proposed year for start of construction, as well as the Project commitment to use a "Clean Fleet." Compliance will be documented as required by SJVAPCD Rule 9510 (ISR). According to the SJVAPCD, the Clean Fleet option under Rule 9510 (ISR) would require construction emissions to be reduced by 20 percent for NOX and 45 percent for PM10. When the Clean Fleet option is selected, the District will require a "monitoring and reporting schedule" under the Rule 9510 with detailed record keeping that gets reported back to the district for each phase of construction. Compliance with this rule is required by PDF AQ-2.
Total construction GHG emissions = 2,590 MT of CO_2e.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT = metric tons
MT/year = metric tons per year
N_2O = nitrous oxide

Once constructed, emissions associated with project operation would result from routine maintenance and inspection activities. Emissions would occur from on-road vehicles as well as off-road diesel-fueled equipment. Annual emissions are expected to be minimal and are presented in Table 3.7-3. Detailed assumptions and calculations for operational GHG emissions are included in Section 6.

Table 3.7-3: Annual Operational Greenhouse Gas Emissions

Emissions Type	CO_2 (Metric tpy)
On-road	135
Diesel Off-road	20
Annual Operational Emissions	155

Note:
The emissions of N_2O and CH_4 from operation were not included in the calculations. Emissions of N_20 and CH_4 from combustion sources are minimal, approximately less than 2 percent of the CO_2 emissions (this includes adjusting to CO_2-equivalent emissions). Furthermore, the URBEMIS2007 model only calculates CO_2 emissions. Therefore, only CO_2 emissions were calculated and reported for each of the emission-sources.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

LESS THAN SIGNIFICANT IMPACT. The SJVAPCD determined that existing science is inadequate to support quantifying the project-specific impacts that GHG emissions would have on global climate change (SJVAPCD, 2009a). Rather, the effects of project-specific GHG emissions are cumulative,

and unless reduced or mitigated, their incremental contribution to global climate change could be considered significant (SJVAPCD, 2009b). Therefore, SJVAPCD's approach to GHG emissions is to develop BPS applicable to projects that result in increased GHG emissions. Projects that implement BPS, following SJVAPCD guidance, would be considered to have a less than significant individual and cumulative impact on global climate change and would not require project-specific quantification of GHG emissions (SJVAPCD, 2009a). For development projects (i.e., residential, commercial, industrial), reducing GHG emissions by 29 percent from business-as-usual through a combination of BPS and SJVAPCD GHG reduction measures would have a less than significant impact. However, the BPS under development are for stationary sources, such as boilers or gasoline dispensing facilities, which would not be part of the proposed project. Also, the current list of GHG reduction measures for development projects are primarily aimed at reducing energy consumption and VMT.

The project would result in a short-term increase in GHG emissions during construction and minor GHG emissions from its operation. The project would also reduce GHG emissions to the extent that it displaces energy generated from fossil-fuel combustion. Furthermore, the project would help the state meet the renewable energy standard required by 2020. Implementing BPS or GHG reduction measures would not be necessary during project operation because the project would displace GHG emissions from energy generated from fossil-fuel combustion. Therefore, the project would result in a less than significant impact to GHG emissions.

b. Would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?

LESS THAN SIGNIFICANT IMPACT. See the response to question a. The project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. The short-term construction GHG emissions would not interfere with the long-term goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. Operation of the project would result in minor GHG emissions from periodic maintenance activities. Therefore, the project would not conflict with plans, policies, or regulations intended to reduce GHGs.

References

Kings County. 2010. 2035 Kings County General Plan. Air Quality Element. Adopted January 26. Pages cited: AQ-1, AQ-2, AQ-30.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009a. Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17. Pages cited: 3 through 8.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009b. Final Staff Report: Addressing GHG Emission Impacts under CEQA. December 17. Pages cited: 26 through 48 and 71 through 121.

U.S. Bureau of Reclamation, Contra Costa Water District, and Western Area Power Administration (USBR, CCWD, and WAPA). 2009. Los Vaqueros Reservoir Expansion Project. Environmental Impact Statement/ Environmental Impact Report. State Clearinghouse No. 2006012037. February. Pages cited: 5-1, 5-2, 5-3, 5-4.

3.8 HAZARDS AND HAZARDOUS MATERIALS

Table 3.8-1 Hazards and Hazardous Materials Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

3.8.1 Setting

Existing land uses in the vicinity of the project site include the PG&E Henrietta Substation, the GWF Peaker Power Plant, 25th Avenue, undeveloped agricultural land, the NAS Lemoore wastewater ponds, SR 198, the Avenal Cutoff Road, and the NAS Lemoore.

NAS Lemoore is located immediately north of the project site on the opposite side of SR 198. NAS Lemoore is a restricted naval air training facility that is not open to commercial or general aviation. The nearest general aviation airport to the project site is the Hanford Municipal Airport, located

approximately 16 miles to the east. The closest private airstrip is located approximately 6.5 miles southwest of the project site.

The project site is located within the USGS 7.5-minute Westhaven Quadrangle map. The project site is at an elevation that ranges from approximately 215 to 225 feet above mean sea level. The area is relatively flat with little topographic relief. Regionally, land slopes gently to the east. The property is used for agricultural purposes. ~~Crops grown on the site include cotton, wheat, and onions~~As of 2013, the project site was occupied by 43 acres of cotton crops, 342 acres of wheat crops, 166 acres of tomato crops, and 80 acres of alfalfa crops.

Regulatory Setting

Federal. The NFPA 70®: National Electrical Code® is adopted in all 50 states. It includes requirements for electrical wiring and equipment. Article 705 covers interconnecting generators, windmills, and solar and fuel cells with other power supplies (NFPA, 2010).

The federal Resource Conservation and Recovery Act (RCRA) and California Hazardous Waste Control Law regulate the disposal of solar PV cells. The local hazardous waste regulatory authority is Kings County.

State. The California Department of Industrial Relations, Division of Occupational Safety and Health is the administering agency designed to protect worker health and general facility safety.

The California Department of Forestry and Fire Protection (CAL FIRE) has designated the area that includes the project site as a Local Responsibility Area, defined as an area where the local fire jurisdiction is responsible for emergency fire response. The project area is also defined as Unzoned, which means that the fire hazard severity of the site has not been determined (CAL FIRE, 2007).

In addition, this project is being evaluated pursuant to CEQA.

Local. *Kings County.* The Kings County General Plan Health and Safety Element is organized into the following sections: Natural Hazards, Community Health, Community Safety, Health and Safety Policies, and Implementation (Kings County, 2010). The following Natural Hazards policies are applicable to the project:

- **HS Objective C2.2:** Provide quality fire protection services throughout the County by the Kings County Fire Department, and fire safety preventative measures to prevent unnecessary exposure of people and property to fire hazards in the Local Responsibility Areas and State Responsibility Area.
- **HS Policy C2.2.2:** Development proposals and code revisions shall be referred to the County Fire Department for review and comment.
- **HS Policy C2.2.3:** Use the 1997 Uniform Code for the abatement of Dangerous Buildings. All new structures to be occupied shall be built to current Fire Code Standards.
- **HS Policy C2.2.4:** Review development proposals according to Cal Fire "Fire Hazard Severity Zone Maps" to determine whether a site is located within a Very High Fire Hazard Severity Zone

and subject to Wildland-Urban Interface Fire Area Building Standards and defensible space requirements as adopted pursuant to Senate Bill 1595, effective January 1, 2009.

The Kings County Fire Department has specific safety requirements that the project applicant must comply with. These requirements include the installation of a Knox box, internal site roadway specifications, continuous weed suppression to eliminate a potential fire hazard, PV fire suppression training, and associated hazards and mitigation processes related to PV power generation. Standard industrial security measures should include approved site fencing and security gates (Virden, 2010a and 2010b). ~~Roads~~ Access driveways throughout the site should be spaced ~~no more than 400 feet apart~~in accordance with Section 1112.B.2.f of the Kings County Development Code -to allow for coverage by the fire department's ~~200-foot-long hoses (Virden, 2010a)~~equipment.

Kings County Fire Department Station 7, located at 1285 South Lemoore Avenue in Lemoore, and Station 10, located at 20200 Main Street in Stratford, would be the primary responding stations to the project site. Stations 7 and 10 are located approximately 8 miles from the project site and the response time to an emergency at the project site would be approximately 10 to 12 minutes. The fire department would be responding to fire emergencies with fire trucks that contain 1,000 to 2,000 gallons of water. Fire hydrants are not expected to be present at the project site (Virden, 2010b).

Methods and Findings

A records search was conducted on the project site. The search, which encompassed an area within a 1-mile radius of the project site, concluded that the project is not situated on land designated as a hazardous materials site pursuant to Section 65962.5 of the California Government Code. One regulated site, the NAS Lemoore, was identified within the search range of the project site. The records search included the following state and federal databases:

- **Federal:** US Brownfields, Emergency Response Notification System, RCRA Information System, CERCLIS No Further Remedial Action Planned, National Priority List.
- **State of California:** Cortese List, California SWRCY, California SWF/ LF, California LUST, ENVIROSTOR.

Additionally, a Phase I Environmental Site Assessment (ESA) was conducted in April and May 2010, in accordance with American Society for Testing and Materials Standard E 1527-05, Standard Practice for ESAs. The results of the Phase I do not identify recognized environmental conditions at the project site which would require further action (Mactec, 2010).

3.8.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDFs (including PDF GEO-1 identified above in Section 3.6.2) into the project to minimize or avoid impacts on and from hazards and hazardous materials. Chapter 1 contains a complete list of the PDFs, including those relevant to hazards and hazardous materials.

~~**PDF GEO-1:** Prepare and implement a SWPPP for the project~~

PDF HAZ-1___: ~~Fire Prevention Training and Measures~~The applicant shall implement the following measures during project construction and operation:

The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e., fire engines) to the main entrance, to the Control Building, and the substation. Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site.

The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards.

Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire.

Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.

Smoking shall be prohibited at the project site except in designated areas.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

LESS THAN SIGNIFICANT IMPACT. Hazardous materials would be handled in compliance with applicable laws and regulations regarding transport, handling, disposal, and storage. In addition, the applicant would comply with federal and state regulations regarding the use, handling, disposal, recycling and reuse of PV cells.

Crystalline and amorphous silicon (c-Si) are used as the light-absorbing semiconductor in solar cells. Solar PV cells are assembled and manufactured prior to delivery and installation in solar fields at the site. The c-Si found in PV cells is bound in a substrate that would not readily expose the public if broken.

Small quantities of hazardous materials would be used during project construction and operation. They would be limited to gasoline, diesel fuel, motor oil, cleaning chemicals and detergents, lubrication oil, mineral insulating oil (for onsite transformers) sodium hypochlorite (for onsite water treatment), sulfur hexafluoride (contained within switchyard switchgear devices), and oxygen and acetylene for welding activities.

Project construction would involve the transport of limited quantities of hazardous materials to the project site, and would pose minor hazards associated with their use. Small fuel (gasoline, diesel, or

oil) spills may occur during onsite refueling. Equipment refueling would be performed away from water bodies to prevent contamination of water. Therefore, the potential environmental effects from fueling operations is expected to be limited to small areas of contaminated soil, if spills occur during fueling.

Standard construction BMPs, included in the SWPPP, as part of PDF GEO-1, would be implemented by trained contractor personnel. The use of BMPs would reduce the potential for the release of construction-related fuels and other hazardous materials to storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials. Small spills would be cleaned up immediately by trained onsite personnel. Larger spills would be reported via emergency phone numbers to obtain help from off-site containment and cleanup crews. If there is a large spill, contaminated soil would be placed into barrels or trucks by service personnel for offsite disposal at an appropriate facility. All federal, state, and local reporting requirements would be followed.

A SWPPP would be prepared and implemented at the project site. It would include project information, monitoring and reporting procedures, and BMPs, such as storm water runoff quality control measures and storage and cleanup measures for hazardous materials at the site.

Hazardous materials would also be required for facility operation and maintenance, for the lubrication of equipment, and may be contained within transformers and electrical switches. The applicant would comply with applicable federal, state, and local laws and regulations for the storage, transport, and use of these materials.

The onsite substation would be designed so that the transformer would be set on a concrete pad within an oil spill containment area designed to contain the transformer oil if a leak or spill occurred. Used transformer oil would be handled by trained personnel and would be stored and recycled in accordance with applicable regulations.

Therefore, the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and impacts would be less than significant.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

LESS THAN SIGNIFICANT IMPACT. All federal, state, and local reporting requirements would be followed regarding the use of hazardous and non-hazardous materials at the project site. Therefore, impacts would be less than significant.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

NO IMPACT. The nearest schools to the project site are located within the NAS Lemoore. They are Neutra Elementary School and Akers Elementary School, both located approximately 1.6 miles northeast of the project site (Mapquest, 2010). Therefore, there is no risk that the project would emit

hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school, and no impact would result.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

NO IMPACT. The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and would not create a significant hazard to the public or environment (DTSC, 2010). Several federal and state databases were reviewed and the results indicate that the project site is not located on a hazardous materials site. Therefore, no impact would result.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

NO IMPACT. The nearest general aviation airport to the project site is the Hanford Municipal Airport, located approximately 16 miles to the east. NAS Lemoore is located much closer to the project site, but it is not a public airport. The project site is not located within an airport land use plan or within two miles of a public airport or public use airport. NAS Lemoore and the Hanford Municipal Airport are outside of the boundaries that would require submittal of a Notice of Construction pursuant to Title 14 CFR, Part 77. The project would not result in any safety hazard for people residing or working in the project area. Therefore, no impact would result.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

NO IMPACT. There are no private airstrips located within the project vicinity (the closest is approximately 6.5 miles away). The proposed project would not result in a safety hazard for people residing or working in the project area. Therefore, no impact would result.

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

LESS THAN SIGNIFICANT IMPACT. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

~~Road~~ Internal access driveway construction and design ~~has been~~will be coordinated with the Kings County Fire Department. Therefore, impacts would be less than significant.

h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

LESS THAN SIGNIFICANT IM PACT. The presence of the proposed project would not increase the potential for fire incidents at the site. The potential fire hazards in northwestern Kings County are considered to be moderate to no threat (Kings County, 2010). The project site is currently under ~~an~~ agricultural ~~field~~production. The only trees at the site are a few landscaping trees and shrubs along the 25th Avenue site border.

The Kings County Fire Department has specific safety requirements that the project applicant must comply with, which include continuous weed suppression to eliminate a potential fire hazard. ~~Weed suppression would be conducted with a 20-foot clearance buffer around the project site, transformers, and gas lines~~ Vegetation control (including weeds) will be implemented within the Project perimeter fence in accordance with the Project's Agricultural Management Plan. If necessary, to supplement sheep grazing, mechanical means will be employed to adequately control vegetation.

The project would be constructed in accordance with applicable federal, state, and local standards and would be designed to meet the applicable fire protection requirements. -Project construction and design has been coordinated with the Kings County Fire Department with regard to fire protection standards and requirements. Provisions included in the CAL FIRE Solar PV Installation Guide (CAL FIRE, 2008) regarding state requirements for construction and operation of a solar PV system have been considered during project design.

Site-specific fire prevention measures in PDF HAZ-1 would be implemented at the site to limit the exposure of people and structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts would be less than significant.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2007. Draft Fire Hazard Severity Zones in LRA Map. September 20.

California Department of Forestry and Fire Protection (CAL FIRE). 2008. Solar Photovoltaic Installation Guideline. April 22.

California Department of Toxic Substance Control (DTSC). 2010. Envirostor Database.
Kings County. 2010. 2035 Kings County General Plan. Health and Safety Element. Adopted January 26. Page cited : HS-49.

Mactec. 2010. Phase I Environmental Site Assessment and Soil Sampling, GWF - Henrietta Solar Site 25th Avenue and Highway 198, Lemoore, California. May 14.

Mapquest. 2010. Schools near State Hwy 198 and 25th Avenue.

National Fire Protection Association (NFPA). 2010. NFPA 70®: National Electrical Code®.

Virden, Mike. Assistant Fire Chief. Kings County Fire Department. 2010a. Personal communication with Mark Kehoe/GWF Energy, LLC. September 23.

Virden, Mike. Assistant Fire Chief. Kings County Fire Department. 2010b. Personal communication with Megan Sebra/CH2M 1-IlLL. June 16 and 28.

3.9 HYDROLOGY AND WATER QUALITY

Table 3.9-1 Hydrology and Water Quality Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	☐	☐	☒	☐
e. Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	☐	☐	☐	☒
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

3.9.1 Setting

The project site has no natural surface water features, but has an existing onsite drainage pipe. The local climate is considered warm desert with annual precipitation between approximately 7 to 9 inches, and rainfall rates are highly variable. Rainfall occurs primarily during the winter months. Kings County has a dry climate with evaporation rates that exceed rainfall. The California Aqueduct (also known in this area as the San Luis Canal) and other irrigation waterways transect that portion of the county.

Hydrology in the project vicinity is associated with the Tulare Lake Basin, one of three main subareas in the county. The Tulare Lake Basin is in the northern alluvial fan and basin subarea characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey water from the Sierra Nevada to the west toward the Tulare Lake Bed. The southern portion of the basin is internally drained by the Kings, Kaweah, Tule, and Kern Rivers (DWR, 2006). The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River, and is essentially a closed basin because surface water drains north into the San Joaquin River only in years of extreme rainfall.

For groundwater, the Tulare Lake Hydrologic Region is divided into 13 groundwater subbasins. The project is located in the Westside Subbasin, which mainly consists of lands in the WWD (DWR, 2006). The groundwater in the upper aquifer is generally high in calcium and magnesium sulfate. Groundwater in the lower aquifer contains sodium sulfate.

The proposed project site, as of 2013, was occupied by unplanted cropland with some fields planted with tomatoes, wheat, alfalfa, and cotton. These specific crops demand high amounts of water to remain sustainable and productive. On an annual basis cotton crop demands 3.16 acre-feet of water per acre of crop, alfalfa crop demands 4.51 acre-feet of water per acre of crop, tomato crops demand 2.54 acre-feet of water per acre of crop, and wheat crop demands 2.00 acre-feet of water per acre of crop. In 2013 the project site was occupied by 43 acres of cotton crops, 166 acres of tomato crops, 342 acres of wheat crops, and 80 acres of alfalfa crops thus totaling 631 acres of the 966 acre project site currently under agricultural production. **Table 3.9-1** shows the amount of water the project site used in 2013 based on the types and amount of crops occupying the site.

Table 3.9-1: Water Demand of Crops on Project Site (2013)

Crop Type	Water Demand for Crop Type (acre-feet/acre/year)	Acres Planted in 2013	Water Use in 2013 (acre-feet)[1]
Cotton	3.16	43	136
Alfalfa	4.51	80	361
Tomato	2.54	166	422
Wheat	2.00	342	684
Total		**631**	**1,603**

Source: LSA Associates, Inc. (January 2015).
Notes: [1] Water usage has been rounded to the nearest whole number.

Table 3.9-1 shows that the agricultural uses occupying the proposed project site utilized 1,603 acre feet of water in 2013. Approximately 329 acre-feet of water used in 2013 was supplied by Westlands

Water District (WWD) allocations and 1,274 acre-feet of water was supplied by groundwater. The average WWD allocation since 2008 has been approximately 40 percent to the project site and in 2014 the project site received no surface water from WWD; therefore, all irrigation water in 2014 was provided from groundwater sources.

Regulatory Setting

Federal. In California, discharges of storm water are regulated by the State Water Resources Control Board (SWRCB) through each RWQCB pursuant to the federal CWA and the state Porter-Cologne Water Quality Control Act. Regulatory details are discussed below.

State. ***Construction Storm Water NPDES Permit.*** The federal CWA effectively prohibits discharges of storm water from construction sites unless the discharge is in compliance with a NPDES permit. The SWRCB is the permitting authority in California and has adopted a statewide General Permit for Storm Water Discharges Associated with Construction Activity (SWRCB Water Quality Order No. 2009-0009-DWQ; SWRCB, 2009) that applies to projects resulting in one or more acres of soil disturbance (effective July 1, 2010).

In addition, this project is being evaluated pursuant to CEQA.

Local. ***Kings County Grading Regulations.*** Kings County requires that a grading plan be submitted to the Kings County Public Works Department for review prior to commencing project construction.

3.9.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated ~~the following PDFs~~PDF GEO-1(identified above in Section 3.6.2) into the project to minimize or avoid impacts to hydrology and water quality as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to hydrology and water quality.

~~**PDF GEO-1:** Prepare and implement a SWPPP for the project.~~

Water Requirements

Construction. During construction, water would be used primarily for dust suppression. Additional uses include concrete washout and soil compaction. Construction activities are short-term and have water requirements ~~of approximately~~totaling approximately ~~2,500 gallons per day~~250 acre-feet during the 15 to 18 month construction period. It should be noted that the amount of water that would be demanded for project construction is approximately 1,353 AFY less than the current demand of 1,603 AFY on the project site under existing conditions.

Operation. The proposed project would require approximately 2.3 AFY (750,000 gallons) of water for panel washing, based on 4 washings per year and other onsite domestic water uses. Each wash is estimated to require 180,000 gallons of demineralized water. The majority of the water usage would take place during the peak energy season, during which all panels would be washed to maintain their absorption. All of these water supply requirements would be served from the existing WWD supply and/or groundwater and/or offsite sources. It should be noted that the amount of water that would be demanded for project operation is approximately 1,601 AFY less than the current demand of 1,603

AFY on the project site under existing conditions. ~~Groundwater would not be a source of water for project use.~~

Water Treatment

Construction. Water treatment is not part of the proposed project during construction.

Operation. Raw water would be provided by an onsite well and/or ~~the~~ WWD and/or other offsite sources, used as service water, and ~~stored~~ may be pumped into ~~the 50,000-gallon~~a raw water~~/ fire water~~ storage tank that would be located onsite. Service water would be pumped and metered through a service lateral pipeline to the proposed project service water loop. ~~Most of this~~The water ~~would~~ may then be treated (filtered and/or demineralized) using a non-stationary water treatment plant (delivered to the site ready to "plug in" and operate). Filtered and/or demineralized water ~~would~~ may be stored in a ~~50,000-gallon~~treated water storage tank. Filter residues would be hauled offsite and disposed of appropriately. Untreated supply water would be used for other purposes, such as service water~~ and fire water systems~~. Non-potable water would be used for domestic sanitary purposes.

Water Quality

Construction. Impacts are anticipated to be related primarily to short-term construction activity and would typically consist of increased turbidity from erosion of newly excavated or placed soils. Activities, such as grading, could increase rates of erosion during construction. Additionally, construction materials could contaminate runoff or groundwater if not properly stored and used. Compliance with engineering and construction specifications, following approved grading and drainage plans, and adhering to proper material handling procedures would ensure effective mitigation of these short-term impacts. BMPs for erosion control, as well as erosion and sediment controls, and surface water pollution prevention measures to minimize this impact are included in the SWPPP, as part of PDF GEO-1, in the Project Description.

The proposed project would result in disturbance of more than 1 acre of soil. Therefore, the applicant would apply for a NPDES Permit by submitting a Notice of Intent (NOI) to the Central Valley RWQCB. The construction activities related to this project would require the preparation of a construction SWPPP that specifies site management activities to be implemented during site development. The applicant would develop a SWPPP to prevent the offsite migration of sediment and other pollutants, and to reduce the effects of runoff from the construction site to offsite areas. These management activities would include construction storm water BMPs, dewatering runoff controls, and construction equipment decontamination. Water used for dust control and soil compaction during construction would not result in discharge. During the construction period, sanitary waste would be collected in portable toilets (no discharge) supplied by a licensed contractor for collection and disposal at an appropriate receiving facility. During project construction, the existing onsite drainage pipe would be removed.

Operation. ~~The project site would be designed to contain all storm water onsite by retaining a dirt surface at the proposed solar field, and by the development of a perimeter road that would be higher in elevation than the remainder of the facility.~~ Storm water retention pond(s) would be constructed to retain storm water flows. ~~Any water within the site would then evaporate or percolate into the ground. The entire solar field would act as a storm water retention basin. Sheet flow is not anticipated across the site because the site is relatively flat, and rainfall in the area is minimal and would soak in to the~~

~~soil.~~ Minimal grading would occur where the PV panels would be installed, and the site would be graded to prevent excessive pooling of water. There would be approximately 65 acres of grading for access ~~roads~~driveways, inverter pads, a ~~control~~Control~~/ maintenance~~ ~~building~~Building, water storage tanks, and other ~~project~~ features affecting approximately 6.7 percent of the ~~project~~ site. ~~Inverter pads, panels, control building, and water tanks would be high enough off the ground to avoid issues.~~

Areas of potential oily water contamination, such as paved parking areas, would be sited as required by the County's Improvement Standard and operated to prevent oily water from mixing with storm water and migrating offsite. Impervious areas would be limited to site features with a small footprint including inverter pads, substation pads, the C~~c~~ontrol ~~center/ maintenance~~ B~~b~~uilding pad, water storage tanks, and solar panel racking system supports. Most of the site would be pervious native soil surfaces, including the perimeter roadway that would have a gravel surface. The 20-foot-wide ~~gravel~~ perimeter access ~~road~~ driveway would be ~~built~~ gravel~~at a higher level than the surrounding area, which would retain storm water onsite~~.

Panel washing would be conducted with water supplied by an onsite well and/or WWD and/or other offsite sources, be treated onsite as necessary, ~~that does~~and would not contain chemical~~s or other~~ additives. ~~All wash water would be contained onsite by the site's perimeter roadway and allowed to evaporate or percolate into the soil~~All water used from panel washing would be contained onsite and absorbed into the ground or evaporated.

a. Would the project violate any water quality standards or waste discharge requirements?

LESS THAN SIGNIFICANT IMPACT. Construction activities, such as road grading for access and pile driving for solar panel support, would disturb the ground surface, potentially resulting in soil erosion. The applicant or its contractor would follow construction BMPs (PDF GEO-1) to minimize hazardous and non-hazardous contaminants during construction.

The applicant and/ or its contractor would implement appropriate storm water control measures for construction (based on SWPPP requirements) and operation (based on Conditional Use Permit and ~~grading permit~~other applicable County requirements) of the facility. Grading and drainage would be designed in accordance with applicable regulations. The project would not have facilities subject to waste discharge requirements. A SWPPP (described in the Project Description) would be prepared and implemented, and would describe erosion and sediment control measures appropriate for the project. The SWPPP would include BMPs to control erosion from disturbed areas and reduce runoff.

Impacts related to water quality are not anticipated during operation and maintenance activities. Implementation of the SWPPP and construction BMPs would reduce potentially significant impacts associated with construction-related erosion to a less than significant level. Therefore, impacts would be less than significant.

b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

NO IMPACT. ~~Groundwater would not be used for construction or operation of the proposed project; therefore, the project's construction and operation would not affect existing groundwater levels.~~ As of 2013 (the most current data available) the proposed project site was occupied by 631 acres of active agricultural land that included: 43 acres of cotton crops, 166 acres of tomato crops, 342 acres of wheat crops and 80 acres of alfalfa crops. In order to stay productive, cotton crops require 3.16 acre-feet of water per acre per year; tomato crops require 2.54 acre-feet of water per acre per year; wheat crops require 2.00 acre-feet of water per acre per year; and, alfalfa crops require 4.51 acre-feet of water per acre per year. **Table 3.9-1**, above, shows that agricultural uses occupying the site in 2013 used 1,603 acre-feet of water to maintain agricultural production. Of the 1,603 acre-feet of water used in 2013, approximately 329 acre feet of water was supplied by surface water from WWD allocations and approximately 1,274 acre-feet of water was supplied by groundwater sources. As of 2014, WWD had allocated no water to the project site; therefore, the agricultural uses occupying the site received water solely from groundwater sources.

Implementation of the proposed project would require approximately 250 acre feet of water during the 15 to 18 month construction period and 2.3 acre-feet of water per year during project operation. The project applicant has indicated that water from construction and operation of the proposed project would be received from an onsite well and/or WWD and/or other offsite sources. Any groundwater that would be used during project construction and operation would be substantially less than what is currently being supplied by the on-site groundwater wells to the existing agricultural uses. Implementation of the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge any more than what is currently occurring on the project site. Therefore, no impact would result.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or off site?

LESS THAN SIGNIFICANT IMPACT. The site is relatively flat and would require minimal grading and disturbance. No streams or rivers would be affected by project construction because the project site has no natural surface water features. Grading plans would be reviewed by Kings County prior to construction, and would adhere to the NPDES Permit. The applicant would comply with County requirements and conditions of the Conditional Use Permit for construction activities, including measures addressing drainage.

Construction activities that could disturb the ground surface and potentially result in soil erosion or siltation include grading, pile driving for solar panel support, and construction material laydown. Inverters, transformers, and other electrical equipment would be built on concrete foundations. Some project components, including substations, would increase the total impervious surface in the project site by approximately 65 acres, an area less than 7 percent of the total project site. Implementation of the SWPPP and its BMPs directed at erosion control (PDF GEO-1) would minimize the potential for the project to substantially alter the existing drainage pattern in a manner that would result in substantial erosion or siltation onsite or off site. With the implementation of the SWPPP, impacts would be less than significant.

d. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase

the rate or amount of surface runoff in a manner which would result in flooding onsite or off site?

LESS THAN SIGNIFICANT IMPACT. As discussed for question c, the existing site is relatively flat and would require minimal grading and disturbance. No surface hydrologic features are located at the project site, and the proposed project would not substantially alter the existing drainage pattern in a manner that would result in onsite or offsite flooding.

As previously described, the project would implement a SWPPP with BMPs (PDF GEO-1) that would address erosion control and drainage. The applicant and/ or contractor would have grading plans reviewed by the County prior to the start of project construction. The project is not located within a Federal Emergency Management Agency (FEMA) 100-year flood zone. The project would not result in flooding onsite or offsite. Impacts would be less than significant.

e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

LESS THAN SIGNIFICANT IMPACT. The project site is relatively flat and requires minimal grading. Construction would have a minor effect on surface runoff due to the small footprint of impervious surfaces. An NPDES Permit would be required for the project for construction of the facilities, and a SWPPP would be required to be implemented to minimize impacts from storm water runoff. BMPs would be implemented to prevent erosion and sediment and effectively prevent offsite migration of storm water, as part of PDF GEO-1. Storm water runoff would be contained onsite. With the implementation of these measures, impacts would be less than significant.

f. Would the project otherwise substantially degrade water quality?

LESS THAN SIGNIFICANT IMPACT. The potential for impacts to water quality are addressed in questions a through e above. Therefore, impacts would be less than significant.

g. Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

NO IMPACT. No housing construction is proposed as a part of the project, and the project site is not located within a 100-year flood hazard area (i.e., a FEMA flood zone). Therefore, construction and operation of the project would result in no flood hazard impact.

h. Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

NO IMPACT. The project is not located in a 100-year FEMA flood zone. Proposed facilities would not be designed in a manner that would impede or redirect flood flows. Therefore, the project would result in no impact on flood flows.

i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding; including flooding as a result of the failure of a levee or dam?

NO IMPACT. The project would not expose people or structures to a significant risk involving flooding because there are no levees or dams in the project vicinity. Pine Flat Dam (the closest dam to the project site) is located east of the project site. The dam's expected inundation area if the dam were to fail does not include the project site. The chance of this dam failing while at full capacity is considered remote (Kings County, 2010). The project would result in no impact on flood flows.

j. Would the project result in inundation by seiche, tsunami, or mudflow?

NO IMPACT. People or structures would not be exposed to hazards associated with seiches, tsunamis, or mudflows. This is because the Pacific Ocean is a considerable distance from Kings County and beyond the Coast Ranges, so tsunamis are not considered a threat. The danger of seiches and mudflows is also considered low for the project site because there are no large bodies of water near the project site. Therefore, no impact would result.

References

California Department of Water Resources. 2006. California's Groundwater Bulletin 118.

Kings County. 2010. 2035 Kings County General Plan. Health and Safety Element. Adopted January 26. Pages cited: HS-15, HS-16.

3.10 LAND USE AND PLANNING

Table 3.10-1 Land Use and Planning Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.10.1 Setting

The project site is located in northwest unincorporated Kings County, west of the City of Lemoore, on the south side of SR 198, across the street from (south of) the NAS Lemoore.

Land use at the project site is agriculture. A portion of the site is planted in row crops, a portion is tilled but not planted, and a portion is mowed (field crops). Land adjacent to the site is developed into industrial uses, transportation uses and agricultural uses. An electrical substation, a peaking electrical power plant, and a cooling company are located along the site's west side, and wastewater ponds are situated on the site's east side. An agricultural field is also situated on the east side of the project site. Roads surround the site: 25th Avenue borders the west side of the project site, Avenal Cutoff Road borders the south side of the project site, and SR 198 borders the north side of the project site. A high-voltage electrical transmission line bisects the project site in a southwest-northeast direction, a lower voltage electrical ~~distribution~~ transmission line is aligned east-west across the southern portion of the project parcel, and an east-west oriented high-pressure gas pipeline exists near the southern tip of the parcel. Electrical ~~distribution~~ transmission lines also exist along both sides of 25th Avenue on the west side of the project site. Agricultural land uses exist on the west side and southeast of the project site (west of 25th Avenue and southeast of Avenal Cutoff Road).

On the north side of SR 198, across the street from, and north of, the project site is the NAS Lemoore (a naval air training facility). Bordering the north side of SR 198 is the restricted entrance to NAS Lemoore, residential subdivisions for that facility, and some industrial uses.

Regulatory Setting

Federal. Federal regulations for land use are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. This project is being evaluated pursuant to CEQA.

Local. The ~~957~~ 966-acre project site is designated Exclusive Agriculture 40-acre by the Kings County General Plan Land Use Map (Kings County, 2009). The Exclusive Agriculture designation is applied around NAS Lemoore and its flight paths to reduce potential conflicts between military jet aircraft operations and surrounding land uses. Areas subject to potential military aircraft noise and safety issues are designated Exclusive Agriculture to reduce the number of residences and preserve priority agricultural lands from encroachment by incompatible uses. High quality soils exist throughout these areas, while natural and manmade waterways carry agricultural sustaining water resources. These lands are suitable for agricultural crop, orchard and vineyard production, or small concentrations of livestock (Kings County, 2010).

The Kings County General Plan Land Use Element establishes goals, objectives, and policies that are relevant to specific areas of land use designations and provides land use policy guidance for all land within the County's jurisdiction through the year 2035. Goals and associated objectives and policies that are relevant to the project are listed below:

- **LU Objective B6.1:** Establish Exclusive Agriculture designated areas in coordination with NAS Lemoore officials to serve as an open space buffer for public safety purposes that is consistent with the base's defined areas of operation.
- **LU Policy B6.1.1:** Areas identified as significant to NAS Lemoore operations as defined in the base's "Encroachment Action Plan," "Airport Installation Compatible Use Zones," "Military Influence Area," or multi-agency coordinated "Joint Land Use Study" shall be designated Exclusive Agriculture.
- **LU Policy B6.1.2:** Exclusive Agriculture shall be used along NAS Lemoore defined flight path corridors that exhibit levels of at least 70 decibel (dB) Community Noise Equivalent Level (CNEL) aircraft-generated noise to limit and discourage intensive agricultural and structure-based land uses that may pose increased risks to inhabitants and base operations (Kings County, 2010).

The project site is zoned AX by Kings County (Kings County, 1964). As indicated in the Kings County ~~Zoning Ordinance~~Development Code Article 4. A Agricultural Districts, the purpose of the Agricultural Districts is to preserve land best suited for agriculture from the encroachment of incompatible uses in order that commercial agricultural operations may continue in a manner customary in the agricultural industry. The Agricultural Districts are also intended to prevent the intrusion of urban development into agricultural areas in such a manner as to make agricultural production uneconomical or impractical, to preserve in agricultural use land suited to eventual development in other uses until such time as streets, utilities and other community facilities may be provided or programmed as to ensure the orderly and beneficial conversion of these lands to non-agricultural use. Agricultural Districts also: provide appropriate areas for certain predominantly open uses of land (which are not injurious to agricultural uses but which may not be harmonious with urban uses); provide appropriate locations for certain types of establishments primarily serving agricultural producers; and permit the application of regulations to major agricultural areas of the county that reflect basic physical differences and attractions among such areas (Kings County, 2008).

This AX District is intended primarily for those rural areas of the county where it is necessary and desirable to reserve for exclusive agricultural use appropriately located areas suitable for the raising of crops or small concentrations of livestock because of high quality soils, scenic characteristics, existing or potential irrigation works, or exclusive agricultural character of the area. It also applies

around NAS Lemoore by reducing potential conflicts regarding noise and safety due to the operation of military jet aircraft, by reducing the potential number of parcels where residences can be built, and by preserving lands best suited for agricultural uses from encroachment by incompatible uses (Kings County, 2008).

Article 4. A Agricultural Districts of the ~~Zoning Ordinance~~Development Code lists the following as a conditional use, subject to Planning Commission approval:

- ~~13.~~ Wind and solar PV electrical generating facilities that commercially produce power for sale, which comply with all local, regional, state, and federal regulations (Kings County, 2008).

The Kings County Airport Land Use Compatibility Plan addresses the impacts of development in the County on flight safety for the Corcoran Airport and Hanford Municipal Airport influence areas, countywide impacts on flight safety regardless of whether these impacts occur within an airport influence area, and provides policies regarding proposed new public-use or special-use airports or heliports within the County (Hodges & Shutt, 1994). The project site is not located within the Corcoran Airport or Hanford Municipal Airport's airspace zones. The project is located approximately 18 miles from the Corcoran Airport and 16 miles from the Hanford Municipal Airport.

The Department of Defense (DoD) has delineated Accident Potential Zones (APZs) in the vicinity of airfield runways where, if a problem developed, an aircraft mishap would likely occur. The military does not have land use authority on land under County jurisdiction; however, the DOD recommends that land uses within the APZs be minimal or low density to ensure maximum protection of public health and property. The development of APZs gives local planners a tool to promote development compatible with military operations. The DoD's recommended land uses within the APZs is nearly identical to the allowed land uses found in the County's Airport Land Use Compatibility Zones (ALUCZ). The project site is approximately 0.9 mile southeast of NAS Lemoore's nearest APZ, identified as APZ #2. This zone is equivalent to the County's ALUCZ Bl and B2, the approach and departure zone.

3.10.2 Environmental Impacts and Mitigation Measures

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid impacts on land use. Chapter 1 contains a complete list of the PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

a. Would the project physically divide an established community?

NO IMPACT. The project would not physically divide an established community. The project site is located in unincorporated Kings County west of and outside of the City limits of Lemoore, in an area that is characterized by a mix of land uses (agricultural, public, residential). The nearest urban development to the project site is the residential and public facility development that comprises NAS Lemoore. SR 198, which borders the northern boundary of the project site and the southern end of NAS Lemoore, provides a boundary between the two distinct land uses. Development of the project at the proposed site would not diminish that boundary, nor would it disrupt existing circulation infrastructure or displace a residential community, resulting in no impact.

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

NO IMPACT. Development of the proposed project would introduce a solar PV use into an existing agricultural field that is surrounded by a mix of land uses that include electrical utilities, transportation, residential, public, and agricultural. The agricultural land use at the project site would change to a solar PV field. The project is a relatively low-profile land use that is compatible with the surrounding land uses in terms of height and density of structures, intensity of use, and use of transportation and public service infrastructure.

The proposed project would be consistent with the identified Kings County General Plan land use policies. A solar PV use is specifically recognized as a conditional use in AX Districts (Exclusive Agriculture) in Kings County's ~~Zoning Ordinance~~Development Code language. In addition, the proposed project would have no effect on the Kings County Airport Land Use Compatibility Plan or its policies because the project site is located outside of the airport environs that the Plan addresses. Because proposed project implementation would change the site land use to an allowable and compatible use and would be consistent with County General Plan and zoning regulations, no impact would result.

c. Would the project conflict with any applicable habitat conservation plan or NCCP?

NO IMPACT. Kings County has not developed a HCP or NCCP for lands within its jurisdiction. Therefore, the project would not conflict with such plans, resulting in no impact.

References

Hodges & Shutt. 1994. Kings County Airport Land Use Compatibility Plan. July 5.

Kings County. 2010. 2035 Kings County General Plan. Land Use Element. Adopted January 26. Pages cited: LU-14, LU-37.

Kings County. 2009. Kings County Land Use Map. (Included in Kings County General Plan Land Use Element, Figure LU-11, page LU-52). May 5.

Kings County. 2008. Zoning Ordinance. Article 4. Agricultural Districts. Last amended November 27. Pages cited: 4-1, 4-6, 4-9.

Kings County. 1964. Zone Plan. Index of Section 302 Zone Maps. County of Kings, California. Adopted by the Board of Supervisors April 7.

3.11 MINERAL RESOURCES

Table 3.11-1 Mineral Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.11.1 Setting

Kings County has only one surface mining permit for a non-active gravel operation and two agricultural reclamation sites that have been fully reclaimed. Historical local mines that are now closed include an open pit gypsum mine and a mercury mine in southwestern Kings County (Kings County, 2010).

Regulatory Setting

Federal. Federal regulations for mineral resources are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. Pursuant to the California State Surface Mining and Reclamation Act of 1975, Mineral Resource Zones (MRZs) are classified by the State Geologist to classify land according to its level of significance as a mineral resource. MRZs are used to help identify and protect state mineral resources from urban expansion or other irreversible land uses that might preclude mineral extraction, The MRZ categories used to classify land include:

- **SZ:** Areas containing unique or rare occurrence of rocks, minerals, or fossils that are of outstanding scientific significance.
- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-2a:** Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present.
- **MRZ-2b:** Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present.

- **MRZ-3:** Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ (Ecology and Environment, Inc., 2010).

No MRZ designations have been identified within Kings County because the County is one of several in the state for which no SMARA classification has occurred (CDC, 2001a). The CDC, Division of Mines and Geology, has identified Kings County as a source of gypsum; however, the only gypsum mine in Kings County is no longer in production (Ecology and Environment, Inc., 2010).

In addition, this project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Resource Conservation Element includes a goal with a supporting objective and policies related to mineral resources; however, they only address requirements for mining (mineral extraction) (Kings County, 2010), which is not relevant to the project.

3.11.2 Environmental Impacts and Mitigation Measures

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid impacts on mineral resources. Chapter 1 contains a complete list of the PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

NO IMPACT. The proposed project would not result in the loss of availability of a known mineral resource because the project area has not been classified as an MRZ. No known mineral resources occur; therefore, no impact would result from construction and operation of the project.

b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

NO IMPACT. The proposed project would not result in the loss of availability of a mineral resource recovery site because no mineral resources have been delineated at the site. The project site is not located within an established MRZ, and no economically viable mineral deposits are known to be present. The site is zoned AX (Kings County, 1964), and the current land use is agriculture.

In addition, the project site is not located near a producing oil and gas field (CDC, 2001b); therefore, the potential for oil and gas production from beneath the project site is considered to be low. Oil and gas production in Kings County has diminished over the past 40 years, and the trend continues (Kings County, 2010).

References

California Department of Conservation. Division of Mines and Geology. Mineral Resources Program. 2001a. Publications of the SMARA Mineral Land Classification Project Dealing with Mineral

Resources in California. May 14. Page 22. Accessed online on June 1, 2010 at http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/Index.aspx

California Department of Conservation. Division of Oil, Gas, and Geothermal Resources. 2001b. Oil, Gas, and Geothermal Fields in California. Map 5-1. Accessed online on June 1, 2010 at http://www.conservation.ca.gov/dog/pubs_stats/Pages/gcneral_info.aspx

Ecology and Environment, Inc. 2010. CEQA Initial Study/Mitigated Negative Declaration for the Avenal Photovoltaic Solar Farm, Kings County, California. January 2010. Pages 3.11-1 and 3.11-2.

Kings County. 2010. 2035 Kings County General Plan. Resource Conservation Element. Adopted January 26. Pages cited: RC-33, RC-34, RC-51, RC-52.

Kings County. 1964. Zone Plan, County of Kings, California. A Part of Section 301 of Ordinance No. 269. Adopted April 7.

3.12 NOISE

Table 3.12-1 Mineral Resources Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Exposure of persons to or generation of excessive groundborne vibration or ground borne noise levels?	☐	☒	☐	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.12.1 Setting

Community Noise Concepts

Noise is defined as unwanted sound. Levels of sound are measured and expressed in dB. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Methods used to measure or quantify sound levels depend on the source, the receiver, and the reason for measurement.

The most common metric is the overall A-weighted sound level measurement, which measures sound in a manner similar to the way a person perceives or hears sound, thus achieving a strong correlation for evaluating acceptable and unacceptable sound levels. A-weighted measurement has been adopted by regulatory agencies worldwide. These sound levels are expressed as dBA.

A-weighted sound levels are typically measured or presented as L_{eq}, which is defined as the average noise level on an equal energy basis for a stated period of time. The L_{eq} is commonly used to measure steady state sound or noise that is usually dominant. The relative A-weighted noise levels of common sounds measured in the environment and industry for various qualitative sound levels are provided in Table 3.1-2-2.

Table 3.12-2: Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance	A-Weighted Sound Level in Decibels	Qualitative Description
Carrier Deck Jet Operation	140 130	Pain Threshold
Jet Takeoff (200 feet)	120	
Auto Horn (3 feet)	110	Maximum vocal effort
Jet Takeoff (1,000 feet) Shout (0.5 feet)	100	
New York Subway Station Heavy Truck (50 feet)	90	Very Annoying Hearing damage (8-hour continuous exposure)
Pneumatic Drill (50 feet)	80	Annoying
Freight Train (50 feet) Freeway Traffic (50 feet)	70 to 80 70	Intrusive (Telephone use difficult)
Air Conditioning Unit (20 feet)	60	Quiet
Light Auto Traffic (50 feet)	50	
Living Room, Bedroom	40	
Library, Soft Whisper (5 feet)	30	Very Quiet
Broadcasting/Recording Studio	20	
	10	Just Audible

Source: New York Department of Environmental Conservation 2001.

Statistical methods are used to capture the dynamics of a changing acoustical environment. These measurements are typically denoted by L_{xx}, where xx represents the percent of time a sound level is exceeded. The L_{90} represents the noise level that is exceeded during 90 percent of the measurement period. Similarly, the L_{10} represents the noise level exceeded for 10 percent of the measurement period. Another sound level expression is L_{max}, which is the maximum sound pressure level over a defined period.

Another metric used in determining the effect of environmental noise is the difference in response that people have to daytime and nighttime noise levels. During the evening and at night, exterior background noises are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are more sensitive to intrusive noises at that time. To account for human sensitivity to evening and nighttime noise levels, the Daytime-Nighttime Noise Level (DNL) (also abbreviated as L_{dn}) and the CNEL for California were developed. The DNL is a noise metric that accounts for the greater annoyance of noise during the nighttime hours (10:00 p.m. to 7:00 a.m.). The CNEL is a noise index that accounts for the greater annoyance of noise during the evening hours (7:00 p.m. to 10:00 p.m.) and nighttime hours.

DNL values are calculated by averaging hourly L_{eq} sound levels for a 24-hour period and applying a weighting factor to the nighttime L_{eq} values. CNEL values are calculated similarly, except that a weighting factor is also added to evening Leg values. The weighting factors, which reflect the increased sensitivity to noise during evening and nighttime hours, are added to each hourly L_{eq} sound level before the 24-hour DNL or CNEL is calculated. For the purposes of assessing noise, the 24-hour day is divided into 3 time periods, with the following weightings:

- Daytime hours: 7:00 a.m. to 7:00 p.m. (12 hours) - Weighting factor of 0 dBA

- Evening hours (for CNEL only) 7:00 p.m. to 10:00 p.m. (3 hours) - Weighting factor of 5 dBA
- Nighttime hours (for both CNEL and DNL) 10:00 p.m. to 7:00 a.m. (9 hours) - Weighting factor of 10 dBA

The adjusted time period noise levels are then averaged (on an energy basis) to compute the overall DNL or CNEL value. For a continuous noise source, the DNL value is easily computed by adding 6.4 dBA to the overall 24-hour noise level (L_{eq}) For example, if the expected continuous noise level from a noise source is 60.0 dBA, the resulting DNL from the source would be 66.4 dBA. Similarly, the CNEL for a continuous noise source is computed by adding 6.7 dBA to the overall 24-hour L_{eq} Given the small differences, the two are often used interchangeably.

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities, such as speech, sleep, learning
- Physiological effects, such as startling and hearing loss

In most cases, environmental noise effects are limited to the first two categories - creating an annoyance or interference with activities. No completely satisfactory way exists to measure the subjective effects of noise or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise. Therefore, an important way of determining a person's subjective reaction to a new noise is by comparing it to the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise is, as perceived by the exposed individual.

The general human response to changes in noise levels that are similar in frequency content (for example, comparing increases in continuous [L_{eq}] traffic noise levels) are summarized as follows:

- A 3 dB change in sound level is considered a barely noticeable difference
- A 5 dB change in sound level is typically noticeable
- A 10 dB change is considered to be a doubling in loudness

Existing Noise Environment

Because the land use at the project site is agriculture, noise levels at the site are periodic and are associated with farm equipment and activities. Maximum noise levels generated by farm-related tractors typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions. Due to the seasonal nature of the agricultural industry, there are often extended periods of time when no noise is genera ted at the project site, followed by short-term periods of intensive mechanical equipment usage and corresponding noise generation (Kings County, 2010).

Land that is near the site is developed into public facility uses, transportation uses, residential uses, and agricultural uses. Therefore, noise levels near the project site emanate primarily from aircraft

flying to and from NAS Lemoore, vehicles on the local roads, farm equipment, the high-voltage electrical transmission line, electrical substation, power plant, and the cooling company.

Sensitive Receptors

The nearest sensitive receptors are the residences at NAS Lemoore that border the north side of SR 198, across the street from, and north of, the project. The nearest residences to the northern boundary of the project site are located approximately 300 feet away from that boundary. The primary noise experienced by those residences is aircraft noise from planes flying to and from NAS Lemoore, as well as vehicle noise from vehicles traveling at highway speeds along SR 198. SR 198 is located between the residences and the project site.

The traffic noise level along SR 198 in 2006 between NAS Lemoore and Avenal Cutoff Road was 68 dB Ldn at 100 feet from the roadway (Kings County, 2010). This is the ambient noise level that is expected to occur at the nearest residential receptors to the project site. This noise level is similar to ambient noise measurements that were taken in 2002 during the evaluation of the then-proposed Henrietta Peaker Plant. Measured noise levels near the NAS Lemoore residential housing at that time ranged from 51.1 dBA Leq to 69.2 dBA Leq (CH2M HILL, 2008). The noise level along this same roadway segment in 2035 is expected to be 72 dB Ldn (Kings County, 2010).

Regulatory Setting

Federal. Guidelines are available from the USEPA (1974) to assist state and local governments in development of state and local laws, ordinances, regulations, and standards for noise. Because there are local regulations that apply to the proposed project, the USEPA guidelines are not applicable.

State. The California Noise Control Act was enacted in 1973 (Health and Safety Code § 46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff would work with the OPR to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

In addition to General Plan requirements, some jurisdictions have established noise ordinances in their municipal codes. Noise ordinances establish limits for which penalties or enforcement action may be taken. Therefore, a noise ordinance generally must not be exceeded; whereas, General Plan limits are to be taken into consideration during the development of a project and may or may not be strictly applied, depending on the particular circumstances of the proposed project. In preparing the noise element, a city or county must identify local noise sources and analyze and quantify, to the extent practicable, current and projected noise levels for various sources, including highways and freeways; passenger and freight railroad operations; ground rapid transit systems; commercial, general, and military aviation and airport operations; and other ground stationary noise sources.

Local. Kings County General Plan Noise Element. The purpose of the Kings County General Plan Noise Element is to identify the existing and projected future noise environment in Kings County, and provide policy direction and implementation efforts to protect County residents from exposure to excessive noise levels. It provides the basis for comprehensive local policies to control and abate

environmental noise from stationary and mobile noise sources, and reduce conflicts between noise and noise-sensitive land uses. The County has not established a noise ordinance.

The non-transportation noise standard for outdoor areas for all residential land uses is 55/ 75 dB (average/ maximum L_{eq}) for the daytime and 50/ 70 dB (average/ maximum L_{eq}) for the nighttime. The non-transportation noise standard for interior areas for the day and night is 35/ 55 dB L_{eq}. The non-transportation standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds those standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient (Kings County, 2010).

General Plan Noise objectives and policies that are pertinent to the project include:

- **N Objective Bl.1:** Reduce the potential for exposure of County residents and noise-sensitive land uses to excessive noise generated from non-transportation noise sources.
- **N Policy Bl.1.1:** Appropriate noise mitigation measures shall be included in a proposed project design when the proposed new use(s) will be affected by or include non-transportation noise sources and exceed the County's "Non-Transportation Noise Standards" (listed above). Mitigation measures shall reduce projected noise levels to a state of compliance with this standard within sensitive areas. These standards are applied at the sensitive areas of the receiving use.
- **N Policy Bl.1.3:** Noise associated with construction activities shall be considered temporary, but will still be required to adhere to applicable County Noise Element standards (Kings County, 2010).

3.12.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDF into the project to minimize or avoid impacts on ambient noise levels as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to noise.

PDF NOI-1: Limit noise-generating construction activities to between the hours of 6:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday and Sunday if additional hours are needed to make up schedule deficiencies or to complete critical construction activities.

Prohibit construction activities on major federal- and state-recognized holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). [7]

[7] Of the list of federal and state recognized holidays, a United States Department of Labor, Bureau of Labor Statistics article (and supporting study) identifies the most common six holidays provided to workers are those six holidays listed above, with 95 percent of employers recognizing these holidays. NOI-1 is provided to prohibit construction on those holidays that local residents are most likely to be at home. Because of the high percentage of employers that recognize these holidays, avoiding construction activities on these holidays should reduce construction-related noise impacts to local residents.

Equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and maintain it in good working order.

Locate stationary construction equipment (i.e., portable power generators and compressors) the furthest distance possible from nearby residences. Park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible.

Notify nearby residents whenever extremely noisy work would be occurring.

Shut off idling equipment.

Include these noise PDFs in construction bid documents. ~~Limit noise-generating construction activities to specific hours and days; equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers; maintain equipment in good working order; locate stationary construction equipment the furthest distance possible from nearby residences; park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible; notify nearby residents whenever extremely noisy work would be occurring; shut off idling equipment; and include these noise PDFs in construction bid documents.~~

Noise from Project Construction

Project construction would occur ~~on weekdays from typically~~between 6:00 a.m. to 6:00 p.m. Monday through Friday, with additional construction occurring, if necessary, to make up schedule deficiencies or to complete critical construction activities. During the startup phase of the project, some activities would continue 7 days a week.

Project construction would generate noise from using heavy equipment. The following construction equipment is expected to be used to construct the project:

- Grader
- Backhoe
- Compactor
- Scraper
- Trencher
- Boom Truck
- Crane

Van Giezen, Robert W., Paid Leave in Private Industry Over the Past 20 Years, Beyond the Numbers, August 2013, Vol. 2, No. 18, Bureau of Labor Statistics, US Department of Labor (http://www.bls.gov/opub/btn/volume-2/paid-leave-in-private-industry-over-the-past-20-years.htm)

- Forklift
- Bobcat
- Pile Driver (vibrating and for panel pile driving)
- Pile Driver (impact style for water tank foundations)
- Air Compressor
- Concrete mixer
- Concrete vibrator
- Loader
- Generator
- Boom Truck/Small Crane (capable of lifting 2 tons)
- Ramper
- All-terrain Vehicle
- Pneumatic tools
- Trucks (water, light duty, off-highway, flatbed)

Table 3.12-3 lists noise levels from construction equipment that is commonly used at construction sites. Most individual pieces of construction equipment would generate noise levels of 80 to 85 dBA at 50 feet from the source. The noisiest piece of equipment anticipated for this project is the vibrating pile driver, which would emit a noise level of 95 dBA at 50 feet (FHWA, 2006).

Table 3.12-3: Noise Levels from Equipment Commonly Used at Construction Sites

Construction Equipment	Maximum Sound Pressure Level at 50 feet (dBA)	Maximum Sound Pressure Level at 300 feet (dBA)	Maximum Sound Pressure Level at 600 Feet (dBA)	Maximum Sound Pressure Level at 1, 200 feet (dBA)
Grader	85	69	63	57
Compactor	80	64	58	52
Backhoe	80	64	58	52
Crane	85	69	63	57
Vibrating pile driver	95	79	73	67
Compressor	80	64	58	52
Concrete mixer	85	69	63	57
Concrete vibrator	80	64	58	52
Front end loader	80	64	58	52
Generator	82	66	60	54
Pneumatic tools	85	68	62	56
Dump truck	84	69	63	57
Other equipment over 5 HP	85	69	63	57

Source: FHWA, 2006.

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. The nearest ~~residences~~ sensitive receptors are residential units located on NAS Lemoore ~~are located~~ approximately 300 ~~-~~feet north of the north boundary of the project site and north of SR 198. It should be noted that the nearest sensitive receptors are not within the jurisdiction of Kings County (as these sensitive receptors are located on NAS Lemoore) and would not be subject to noise exposure standards set forth by the County; however, for this analysis County standards have been used as a conservative approach to ensure the sensitive receptors are not exposed to noise exceeding ambient noise levels during project construction and operation. Table 3.12-3 presents the anticipated sound levels at 300, 600, and 1,200 feet from various pieces of equipment operating at their maximum levels. Noise levels decrease by approximately 6 dBA for each doubling of the distance between the fixed noise source and the receptor. During project construction, traffic noise along SR 198 would continue to be generated, and as project construction moves around the project site, it would progress away from the northern site boundary (i.e., further from the closest residences), and noise levels associated with project construction would decrease.

In accordance with Kings County's direction in circumstances where the ambient noise level exceeds the County's standards (as is the case for the average noise level at the nearest residences to the project site), the non-transportation noise level standard shall be increased at 5 dB increments to encompass the ambient noise level, given the existing noise levels near the NAS Lemoore residences were found to range between 51.1dBA L_{eq} to 69.2 dBA L_{eq} (CH2M HILL, 2008), resulting in a standard that would be 70 dBA L_{eq} at the nearest residences to the project site. The noise level from

construction activities may at times exceed the General Plan requirements for non-transportation sources when noise-producing construction equipment are operating near the northern boundary of the project site. As indicated above, the noise levels from construction equipment would decrease as the equipment moves away from the northern site boundary. Because construction activities are temporary (approximately ~~35~~ 15 to 18 months) and the applicant would implement noise attenuation techniques as part of its project description (see PDF NOI-1), this construction ~~phase~~ impact is considered less than significant with mitigation incorporated.

The noise-producing project features during project operation include the inverter/distributer transformers and the electrical substation. The inverter/distributer transformers would be located within the solar panel fields; this equipment generates noise levels of less than 65 dBA at the source (Ecology and Environment, 2010). Transformers within the proposed substations typically generate noise levels ranging from 45 dBA to 55 dBA at the source. The proposed substation would be located approximately 4,~~300~~ 500 feet from the ~~nearest residences~~residential units to the north of SR-198. The inverter/ distributer transformers and substations would operate only during daytime hours when the project is generating power. Therefore, there would be no noise during the evening and nighttime hours when receptors are more sensitive. These noise levels are lower than the 55/ 75 dB (average/ maximum L_{eq}) County daytime standard for residential land uses, resulting in a less than significant impact during project operation.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATION. Construction of the project would include temporary sources of noise and vibration that could be perceptible in the immediate vicinity of the activity due to operation of heavy equipment and I-beam driving. Pile driving would occur during project construction. The closest that pile driving could occur to the nearest residences is approximately 450 feet from them, and for most of project construction, pile driving activities would occur much farther from the residences than 450 feet. The impact/vibrating pile drivers for panel racking construction are expected to generate the highest noise levels of the proposed construction equipment for the project (approximately 79 dBA at the nearest residences). In addition to the noise, pile driving can produce vibration levels that may have the potential to damage some vibration sensitive structures if performed within 50 to 100 feet of the structure (Michael Minor & Associates, 2010). Because the closest that pile driving could occur to the nearest residences is 450 feet, and because the applicant would only perform pile driving activities between 8:00 a.m. and 5:00 p.m. on weekdays (see PDF NOI-1), this construction phase impact is considered less than significant with mitigation incorporation.

Operation of the solar PV panels would not result in groundborne vibration or noise being emitted, resulting in no impact.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

LESS THAN SIGNIFICANT IMPACT. As indicated in response to question a, the inverter/distributer transformers would be located within the solar panel fields, generating noise levels of less than 65 dBA at the source, and transformers within the proposed substations typically generate noise levels

ranging from 45 dBA to 55 dBA at the source , which is less than the County standard, and with the nearest residences being located approximately 4,~~300~~ 500 feet from the proposed substations, the transformer noise at the residences would be even less. The inverter/ distributer transformers and substations would operate only during daytime hours when the project is generating power. Therefore, there would be no noise during the evening and nighttime hours when receptors are more sensitive. These noise levels are lower than the 55/ 75 dB (average/ maximum L_{eq}) County daytime standard for residential land uses, resulting in a less than significant impact during project operation.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATION. As indicated in response to question b, construction of the project would include temporary sources of noise that could be perceptible in the immediate vicinity of the activity due to operation of heavy equipment and I-beam driving. Because the applicant would only perform pile driving activities between 8:00 a.m. and 5:00 p.m. on weekdays (see PDF NOI-1), this construction phase impact is considered less than significant with mitigation incorporation.

Operation of the solar PV panels would not result in periodic increases in ambient noise levels, resulting in no impact.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. The nearest public airport to the project site (Hanford Municipal Airport) is located approximately 16 miles away. Noise-generating land uses in the project vicinity include NAS Lemoore (naval aircraft facility); a state highway and local roads; and residential, agricultural, and industrial land uses. People who live or work in the project vicinity are, therefore, currently exposed to various levels of noise. The project (its construction and operation) would not expose people who live or work in the area to excessive noise levels, resulting in no impact.

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

NO IMPACT. The nearest private airstrip to the project site is located approximately 6.5 miles away. Similar to that described in response to question e, people who live or work in the project vicinity are currently exposed to various levels of noise. The project (its construction and operation) would not expose people who live or work in the area to excessive noise levels, resulting in no impact.

References

CH2M HILL. 2008. Petition for License Amendment. Henrietta Peaker Plant (01-AFC-18) License Amendment for Conversion to GWF Henrietta Combined-cycle Power Plant. Kings County, California. October. Pages cited: 3-59, 3-60.

Ecology and Environment, Inc. 2010. CEQA Initial Study/Mitigated Negative Declaration for the Avenal Photovoltaic Solar Farm. January. Pages cited: 3.12-5, 3.12-6, 3.12-7,

Kings County. 2010. 2035 Kings County General Plan. Noise Element. Adopted January 26. Pages cited: N-1, N-8, N-11, N-22, N-35, N-39.

Michael Minor & Associates. 2010. Vibration Primer. Page cited: 2.

New York Department of Environmental Conservation. 2001. Assessing and Mitigating Noise Impacts. February.

Tetra Tech, Inc. August 30, 2011. Naval Air Station Lemoore Joint Land Use Study prepared for Naval Air Station Lemoore. Section 5.

U.S. Department of Transportation, Federal Highway Administration (FHWA). 2006. FHWA Road way Construction Noise Model User's Guide. January. Page cited: 3.

3.13 POPULATION AND HOUSING

Table 3.13-1 Population and Housing Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.13.1 Setting

Population

The project site's northern border is adjacent to and on the south side of SR 198. The site is located approximately 10 miles southwest of the City of Lemoore and 12 miles northwest of the community of Stratford. Kings County has been experiencing population increases as evidenced by the 2000 population of 129,461 (U.S. Census Bureau, 2000) and the January 2010 County population estimate of 156,289 (California Department of Finance, 2010a). The County population is projected to continue to increase. The County's population projection for July 1, 2050 is 352,750 (California Department of Finance, 2007). The total populations of several of the communities within the County are projected to increase, as well as the population densities per acre (Kings County, 2010).

The Kings County regional economy is diversified. The top five industries in the county are government (including federal, state, and local); farm; trade, transportation, and utilities; manufacturing; and retail trade (Kings County, et al., 2010). Of the 890,784 acres of agricultural land within Kings County in 2006, 837,667 acres are farmland and grazing land (Kings County, 2009).

Housing

As of January 1, 2010, Kings County had 42,777 housing units, with a vacancy rate of 5.7 percent. Of the total housing units, approximately 77 percent are single-family structures (including both attached and detached units); approximately 18 percent are multiple-family units (including 2 to 4 structures and 5-unit or more structures); and approximately 5 percent are mobile homes (California Department of Finance, 2010a).

Employment

Table 3.13-2 presents U.S. Census information regarding labor statistics, total employment, major industry-specific employment, and the unemployment rate for Kings County.

Table 3.13-2: Kings County Employment

Total Employed[a]	In Construction Trades[a]	Unemployment Rate[b]
65,335 (2006-2008)	4,944 (2006-2008)	16.8 percent (April 2010)

[a]Source: U.S. Census Bureau, 2008
[b]Source: California Department of Finance, 2010b

Temporary Housing

There are many motels in Kings County. Within Lemoore, Hanford, and Corcoran, there are at least 16 motels (Delirious, 2010 and MapQuest, 2010).

Regulatory Setting

Federal. Federal regulations for population and housing are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. This project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Land Use Element (Land Use Element) lists goals and policies according to the land use environments within the County. Goals related to growth within the County follow:

- **LU Goal BS:** acknowledges the connection between agricultural conservation efforts and well planned orderly growth.
- **LU Goal Dl:** recognizes the link between community districts meeting the needs of existing residents and accommodating unincorporated urban growth.
- **LU Goal El:** discusses urban fringe areas and allowing existing uses while maintaining lands for probable future urban growth and expansion of cities (Kings County, 2010).

The Kings County General Plan Housing Element 2009-2014 describes population, household, and housing characteristics, employment trends, special needs groups, at-risk housing, and housing growth needs. It includes 5 goals, with policies to support each goal. The goals are:

- Improve and maintain the quality of housing and residential neighborhoods
- Facilitate and encourage the provision of a range of housing types and prices to meet the diverse needs of residents
- Remove or mitigate, to the extent feasible and appropriate, potential governmental constraints to the production, maintenance, improvement, and affordability of housing
- Provide housing assistance to extremely-low-, very-low-, low-, and moderate-income households and those with special housing needs
- Further equal housing opportunities for persons, regardless of status (Kings County, et al., 2010)

3.13.2 Environmental Impacts and Mitigation Measures

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid impacts on population and housing. Chapter 1 contains a complete list of the PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

LESS THAN SIGNIFICANT IMPACT. The intent of the proposed project is to increase the availability of renewable resources to the regional energy generation pool, and to help accommodate existing and planned growth that is projected to occur in Kings County. The availability of electrical capacity does not normally ensure or encourage growth, and the project would not induce population growth in the region, but instead it would aid in accommodating projected future growth. Other factors such as economic conditions, population trends, decisions by local and regional planning agencies, and increased availability of public services such as water and sewer have a more direct effect on growth in a given area. Consequently, growth is not expected to be induced by the proposed project.

Construction activities associated with the project are temporary. Construction of the PV panels, support structures, and electrical interconnection equipment would require a maximum of 1,200~~105~~ construction workers over a period of approximately ~~35~~ 15 to 18 months. Project construction work would provide short-term employment to the existing local and/ or regional population base located in surrounding cities and towns (i.e., Fresno, Hanford, Lemoore, Riverdale, etc.). If construction workers are traveling from outside the local area to the project site, there may be a need for temporary housing accommodations. This need could be met within the project vicinity (Lemoore and Hanford). Project operation would require approximately ~~1~~up to 3 staff to visit the site for visual inspections and minor repairs, and up to 10 staff to visit the site up to 4 times per year for panel washing and larger repairs. Local labor may not be used for these operational maintenance functions, which may result in the need for periodic temporary housing accommodations. This short-term periodic need could also be met within the project vicinity. Therefore, construction and operation of the project is not anticipated to induce substantial population growth in the area either directly or indirectly.

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

NO IMPACT. The project site would be located on farmland that is used for agricultural purposes. No residences currently exist at the project site. Project construction would occur entirely within the project site. Neither project construction, nor operation, would result in the displacement of existing housing, nor would it necessitate the construction of any replacement housing. Therefore, no impact would occur.

c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

NO IMPACT. The project would not result in the displacement of any housing or businesses because there are no such structures or entities currently located at the project site. Construction and operation of the project would not result in the displacement of people, nor would it necessitate the construction of replacement housing elsewhere. Therefore, no impact would occur.

References

California Department of Finance. 2010a. Table 2: E-5 City/County Population and Housing Estimates, 1/1/ 2010.

California Department of Finance. 2010b. Kings County Profile. Unemployment Rate and Labor Force (Not Seasonally Adjusted).

California Department of Finance. 2007. Population Projections for California and its Counties 2000-2050, by Age, Gender, and Race-Ethnicity. Sacramento, California. July.

Delirious. 2010. Online search of hotels and motels in Hanford, Kings County, CA. Hodges & Shutt. 1994. Kings County Airport Land Use Compatibility Plan. July 5.

Kings County, City of Avenal, City of Corcoran, City of Hanford, City of Lemoore (Kings County et al.). 2010. 2009 - 2014 Housing Element. Kings County, City of Avenal, City of Corcoran, City of Hanford, City of Lemoore. Revised Draft - March 2010 certified. Chapter 2, Pages 5-1 to 5-3.

Kings County. 2010. Kings County 2035 General Plan. Land Use Element. Adopted January 26. Pages cited: LU-22, LU-23, LU-36, LU-37, LU-40, LU-44.

Kings County. 2009. Kings County Agricultural Crop Report, 2008. Page 19.

Kings County. 2008. Zoning Ordinance. Article 4. Agricultural Districts. Last amended November 27. Pages cited: 4-1, 4-6, 4-9.

Kings County. 1964. Zone Plan. Index of Section 302 Zone Maps. County of Kings, Calif-ornia. Adopted by the Board of Supervisors April 7.

MapQuest. 2010. Online search for motels near Lemoore, CA.

U.S. Census Bureau. 2008. Kings County, California. 2006-2008 American Community Survey 3-Year Estimates.

U.S. Census Bureau. 2000. Kings County, California. Census 2000 Demographic Profile Highlights.

3.14 PUBLIC SERVICES

Table 3.14-1 Public Services Checklist

Would the project: result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

3.14.1 Setting

This section discusses public services in the project vicinity, including fire protection, police protection, schools, and other public facilities. These services and facilities are provided and maintained by local and county entities. The environmental setting and evaluation of impacts to parks and recreational facilities are discussed in Section 3.15 "Recreation".

Fire Protection

The Kings County Fire Department serves primarily the rural areas of Kings County and provides contracted services to the cities of Avenal and Corcoran. The Department is staffed by 60 professional Firefighters, 1 Fire Equipment Specialist, 1 Training Chief, 2 Battalion Chiefs, 1 Administrative Assistant/OES Coordinator, 1 Administration Chief, 1 Assistant Chief, 1 Fire Chief, and 1 Office Assistant. Assistance is received from 10 Volunteer companies within the County, consisting of nearly 100 active Volunteer Firefighters (Kings County Fire Department, 2010a).

The closest fire station to the project site is Station #10, located at 20200 Main Street in Stratford, California. Two fire stations in Lemoore (Stations 6 and 7) are also located in proximity to the project site (Kings County Fire Department, 2010b).

Kings County Fire Department has a mutual aid agreement with the NAS Lemoore Fire Department. NAS Lemoore Fire Department will respond to emergencies outside its jurisdiction if requested to by Kings County Fire Department (Virden, 2010).

Police Protection

The Kings County Sheriff's Department is headquartered in Hanford, California. Operation divisions include Patrol, K9 Unit, Special Weapons and Tactics, and Water Rescue. Other services include the County Coroner, detectives, fugitive warrants, rural crime, sex offender search, "Victim Information & Notification Everyday", alternative sentencing, jail ministries, civil section, communication

dispatch, "Are You Ok" Program, and records section (Kings County Sheriff's Department, 2010a). The Department's substations are located throughout the county; substations are currently located in Avenal, Corcoran, El Rancho, Kettleman City, and Stratford (Kings County Sheriff's Department, 2010b). The closest Sheriff's substation to the project site is the office located in Stratford.

Schools

The nearest schools to the project site are located within NAS Lemoore. They are Neutra Elementary School and Akers Elementary School, both located approximately 1.6 miles northeast of the project site (MapQuest, 2010).

Regulatory Setting

Federal. Federal regulations for population and housing are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. This project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Health and Safety Element includes the following policies related to fire protection and police protection:

- **HS Policy Bl.4.1:** Transport to hospitals and emergency medical care is supported by timely response from ambulance or emergency helicopter transport.
- **HS Policy Bl.4.3:** Ensure that County Fire Department personnel remain trained and equipped to provide emergency medical services to those in need of such services within the unincorporated areas of the County.
- **HS Policy C2.l.2:** Promote community safety by ensuring communities have sufficient sheriff coverage to provide 20 minute or faster response times to priority emergency calls.
- **HS Policy C2.2.1:** Community planning efforts should evaluate the projected need for Fire Department perso1mel and equipment and necessary funding support to maintain current levels of services as community growth occurs.
- **HS Policy C2.2.2:** Development proposals and code revisions shall be referred to the County Fire Department for review and comment.
- **HS Policy C2.2.3:** Use the 1997 Uniform Code for the abatement of Dangerous Buildings.
- All new structures to be occupied shall be built to current Fire Code standards (Kings County, 2010).

3.14.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated the following PDF~~s~~ (including PDF HAZ-1 identified above in Section 3.8.2) into the project to minimize or avoid impacts to public services as part of the Project Description. Chapter 1 contains a complete list of the PDFs, including those relevant to public services.

~~**PDF HAZ-1:** Fire Prevention Training and Measures~~

PDF PUB-1: __If sheriff and/ or fire protection services are required at the proposed project site during project construction or operation, the applicant shall pay to the County the cost of those services.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

a. Fire protection?

LESS THAN SIGNIFICANT IMPACT. Construction and operation of the project is not expected to increase the demand for fire protection services in the project area. During construction of the project, emergencies could occur at the project site; however, PDF HAZ-1 has been incorporated into the project for fire prevention and suppression purposes.

During project operation, the applicant would continue to implement the fire prevention measures outlined in PDF HAZ-1, and would continue to employ a maintenance crew who would provide ongoing inspections of the proposed facilities. The maintenance crew would routinely inspect project facilities for vandalism, safety, security, maintenance, and reliability issues at the project site.

The inclusion of PDF HAZ-1 and PDF PUB-1 into the project description would reduce the demand and associated costs for emergency fire services during project construction and operation, resulting in a less than significant impact.

b. Police protection?

LESS THAN SIGNIFICANT IMPACT. Construction and operation of the project is not expected to significantly increase the demand for police protection services in the project area. During both the project construction and operation periods, the proposed solar facility would be fenced and locked to prevent unauthorized entry. The proposed facility would be monitored by an applicant-contracted security company. If the security patrol detects a breach of security at the site, it would contact the applicant, and appropriate local authorities would be notified, if necessary. In addition, PDF PUB-1 is included in the project description to offset potential increased police protection costs. Impacts would, therefore, be considered less than significant.

c. Schools?

NO IMPACT. Construction of the proposed facility would require ~~up to~~a maximum of 1,200~~105~~ workers during peak project construction activity. These construction personnel are expected to commute from within nearby communities in Kings County, and possibly from towns and cities in other nearby counties, to the extent that specialized labor is required to construct the project. Because project construction is expected to last approximately ~~35~~ 15 to 18 months, these workers are not expected to result in a permanent change in the local population. A small local workforce, including

maintenance technicians, would be required to operate and maintain the project. Local or regional labor is anticipated to be used for these operations positions. As a result, the project is not expected to result in a permanent increase in population during project construction or operation; therefore, the project would not result in an increase in demand for school services.

d. Parks?

NO IMPACT. Park facilities in the project vicinity are described in Section 3.15 "Recreation." The project could temporarily increase the Kings County population during project construction, causing only a temporary increase in demand on existing parks. A small local workforce, including maintenance technicians, would be required to operate the project. Local or regional labor is anticipated to be used for these operations positions. As a result, the project is not expected to result in a permanent increase in population during project construction or operation; therefore, the project would not result in an increase in demand for parks.

e. Other public facilities?

NO IMPACT. The project would not result in an increase in population during project construction or operation; therefore, the project would not affect other government services or public facilities.

References

Kings County. 2010. 2035 Kings County General Plan. Health and Safety Element. Adopted January 26. Pages cited: HS-47, HS-49.

Kings County Fire Department. 2010a. Kings County Fire Department Information.

Kings County Fire Department. 2010b. Kings County Fire Department Station Information. Kings County Sheriff's Department, 2010a. Kings County Sheriff's Department Information.

Kings County Sheriff's Department, 2010b. Kings County Sheriff's Department Substation Information.

MapQuest. 2010. Schools near State Hwy 198 and 25th Avenue.

Virden, Mike. Assistant Fire Chief. Kings County Fire Department. 2010. Personal communication with Megan Sebra. June 28.

3.15 RECREATION

Table 3.15-1 Recreation Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.15.1 Setting

No parks are located near the project site. The Kings County Public Works Parks Division provides parks for the public within Kings County. It manages three parks: Hickey Park, located in Hanford, California, approximately 15 miles from the project site; Burris Park, located in Kingsburg, California, approximately 33 miles from the project site and Kingston Park, located in Hanford, California, approximately 23 miles from the project site. Two community parks also exist within the County, and are supported and maintained by the Community Services Districts of Kettleman City and Armona for each respective individual park. A Community Open Space is located north of Stratford, and fishing areas are located north of Avenal, near Kettleman City, and east of the project site south of SR 198 and west of SR 41 (Kings County, 2010).

Other parks and/ or recreational facilities are located within/ near the individual cities in Kings County, including Avenal, Hanford, Lemoore, and Corcoran. No parks or recreational facilities were identified in the community of Stratford or Lemoore Station (within NAS Lemoore), which are the two communities located closest to the project site.

Regulatory Setting

Federal. Federal regulations for population and housing are not relevant to this project because it is not a federal undertaking (the project site is not located on lands administered by a federal agency, and the project applicant is not requesting federal funding or a federal permit).

State. This project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Open Space Element identifies the following goal related to recreation:

- OS Goal Dl: Provide for parks, recreation, and open space that will serve the current and future needs of County residents and visitors (Kings County, 2010).

3.15.2 Environmental Impacts and Mitigation

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid impacts on recreational resources. Chapter 1 contains a complete list of the PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

LESS THAN SIGNIFICANT IMPACT. Construction of the proposed facility would require ~~up to~~a maximum of ~~105~~ 1,200 workers during peak project construction activity. These construction personnel are expected to commute from within nearby communities in Kings County, and possibly from towns and cities in other nearby counties, to the extent that specialized labor is required to construct the project. Because project construction is expected to last approximately ~~35~~ 15 to 18 months, these workers are not expected to result in a permanent change in the local population and would therefore, not result in a permanent increase in demand for parks or recreational facilities, although a temporary increase in the use of existing County and Community parks and recreational facilities in Kings County could occur during project construction. This potential temporary increase in the use of local parks is not expected to result in substantial physical deterioration of existing parks/ recreation facilities, resulting in a less than significant impact.

~~*NO IMPACT.* A small local workforce, including operation/ maintenance technicians, would be required to operate and maintain the project. Local or regional labor is anticipated to be used for these operations positions. As a result, the project is not expected to result in a permanent increase in population during project construction or operation. Therefore, the project would not result in an increase in demand for parks or other recreational facilities, and would result in no additional physical deterioration of existing parks/ recreation facilities, resulting in no impact.~~

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

NO IMPACT. The proposed project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

References

Kings County. 2010. Kings County 2035 General Plan. Open Space Element. Adopted January 26. Pages cited: OS-8, OS-9, OS-15.

3.16 TRANSPORTATION/TRAFFIC

Table 3.16-1 Transportation/Traffic Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☒	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Result in inadequate parking capacity?	☐	☐	☐	☒
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

3.16.1 Setting

State and Local Routes

The project site is located in an unincorporated area of Kings County. Regional access to the site is provided by SR 41 and Interstate 5 (I-5) from the west. In Fresno County, SR 269 is a major north-south regional highway that intersects with SR 198, which is the main east-west regional highway. SR 198 is adjacent to the project site's northern boundary. SR 43, via SR 198, provides regional access to the site from the east. These roadways and others are described below.

I-5. I-5 is a four-lane freeway in the vicinity of the project site. In 2008, there were up to 32,500 vehicles per day using I-5 near the SR 41 junction (KCAG, 2010).

SR 41. SR 41 is a two-lane road between the Kern County line and Hanford-Armona Road; past Hanford-Armona Road, SR 41 is a four-lane expressway, and then narrows to two lanes near the Fresno County line. In 2008, there were up to 6,400 vehicles per day using SR 41 between the Kern County line and Excelsior Avenue (KCAG, 2010).

SR 43. SR 43 is a two-lane expressway in the vicinity of the project site. In 2008, there were up to 10**,300** vehicles per day using SR 43 near the Fresno County line (KCAG, 2010).

SR 198. SR 198 is a four-lane freeway between the NAS Lemoore main gate and SR 43; otherwise SR 198 is a two-lane road. In 2008, there were up to 7,000 vehicles per day using SR 198 near the Fresno County line (KCAG, 2010).

SR 269/Avenal Cutoff Road. SR 269, also known as the Avenal Cutoff Road, is a two-lane roadway in the vicinity of the project site. In 2007, there were up to 3,400 vehicles per day using SR 269/ Avenal Cutoff Road near Nevada Avenue (CH2M HILL, 2008).

25th Avenue. 25th Avenue is a two-lane roadway in the vicinity of the project site. In 1999, there were up to 3,000 vehicles per day using 25th Avenue near the project site (CH2M HILL, 2008).

Jackson Avenue. Jackson Avenue is a two-lane roadway in the vicinity of the project site. In 2007, there were up to 500 vehicles per day using Jackson Avenue near SR 41 (CH2M HILL, 2008).

Table 3.16-2 provides a summary of the traffic characteristics of the interstate and state highways. The existing traffic volumes on the state highways in Kings County are relatively low, with many highway segments averaging less than 10,000 vehicles per day. The only highways that average more than 10,000 daily vehicles are I-5 and SR 198 from Hanford to the Tulare County line.

Table 3.16-2: Traffic Characteristics of Interstate Highways and State Routes in the Vicinity of the Project

Highway	Location	Annual Average Daily Traffic (AADT)[a]	Truck Traffic Percentage[b]	Peak Hour Highway Capacity[c]	Peak-Hour Traffic (both directions)[b]
I-5	SR 41 junction	32,500	32	7,440	4,300
SR 41	Jackson Avenue	7,600	16	3,800	980
SR 43	Fresno County line	10,300	20	3,600	920
SR 198	Fresno County line	3,400	14	3,800	950

Sources:
[a]KCAG, 2010
[b]Caltrans, 2010
[c]GWF Energy LLC, 2001

The Level of Service (LOS) is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort, and convenience (Kings County, 2002). A summary of each LOS volume-to-capacity (V/ C) ratio is provided in Table 3.16-3. All state highways in Kings County operate at acceptable conditions (i.e., LOS C or better).

Table 3.16-3: Level of Service Volume-to-Capacity Ratio and Definitions

Level of Service	V/C Ratio	Definition
A	0.00-0.60	Free flow, insignificant delays
B	0.61-0.70	Stable operations; minimal delays
C	0.71-0.80	Stable operations; acceptable delays
D	0.81-0.90	Approaching unstable; queues develop rapidly but no excessive delays
E	0.91-1.00	Unstable operation; significant delays
F	>1.00	Forced flow; jammed conditions

Sources:
Kings County, 2002.
GWF LLC, 2001

Table 3.16-4 provides a summary of the traffic characteristics of the local roadways in the vicinity of the project site. The existing traffic volumes on these roadways are relatively low. All County roadways are designated by Kings County as truck routes (Kings County, 2002).

Table 3.16-4: Traffic Characteristics of Local Roadways in the Vicinity of the Project

Roadway	Location	Roadway Classification[a]	AADT	Peak Hour Roadway Capacity	Estimated Peak-hour Traffic (Both Directions)
Avenal Cutoff Road	SR 198	Arterial	3,400	1,700	340
25th Avenue	Project Site	Arterial	3,000	n/a	300
Jackson Avenue	SR 41	Arterial	500	1,400	50

Note
n/a=not available
Sources:
[a]GWF Energy LLC, 2001
[b]Kings County defines the peak hour as that hour in which the maximum amount of travel occurs. The morning peak hour is defined as between 7:00a.m. and 9:00 a.m. The afternoon peak hour is defined as between 4:00 p.m. and 6:00 p.m. (Kings County, 2010).
[c]Peak hour traffic was estimated to be 10 percent of the AADT.

Waterways and Railroads

The closest natural waterway to the project site is the Kings River, located to the east of the site. Between the project site and the river, the Empire Westside Main Canal is aligned north-south, parallel to the river. The NAS Lemoore wastewater ponds are located between the project site's eastern boundary and the Empire Westside Main Canal.

In addition to passenger rail that is provided by Amtrak in Kings County, there are two freight rail companies that operate in Kings County. The Burlington Northern & Santa Fe (BN&SF) Mainline is the north-south rail line service, and the San Joaquin Valley Railroad is the east-west rail line (Kings County, 2010). Neither rail line provides direct access to the project site (GWF Energy LLC, 2001).

The California High Speed Rail Authority is currently in the process of developing a high speed rail system that would provide passenger transportation as well as goods movement services throughout

much of California. A study has been authorized that would evaluate a potential station in the Visalia-Tulare-Hanford area. This project is still in the planning stages (Kings County, 2010).

Aviation

NAS Lemoore is located immediately north of the project site on the opposite side of SR 198. NAS Lemoore is a restricted naval air training facility that is not open to commercial or general aviation. The nearest general aviation airport to the project site is the Hanford Municipal Airport, located approximately 16 miles to the east. The closest private airstrips are located approximately 6.5 miles to the southwest and southeast of the project site.

Alternate Modes of Transportation

Kings Area Rural Transit (KART) is the primary public transit provider in Kings County; it has seven fixed routes. The Hanford-Lemoore NAS route is served Monday-Saturday. On-demand service is available daily in Avenal. All KART bus routes begin and end at the Intermodal transfer facility west of Amtrak on 7th Street in downtown Hanford (KART, 2010).

Paratransit services are offered through the Agricultural Industries Transportation Services and the KART Vanpool. These services originate in Kings County and provide specialized public transport of individuals to work destinations through the Kings, Fresno, Tulare, Kern, and Madera County area (Kings County, 2010).

Non-motorized transportation systems that provide bicycle and pedestrian facilities within Kings County are limited due primarily to the rural nature of the County and the urban built environment centered within the cities. The majority of bicycle paths and pedestrian trails are located within the four incorporated cities of Avenal, Corcoran, Hanford, and Lemoore. The four unincorporated communities of Armona, Home Garden, Kettleman City, and Stratford also provide some opportunities to increase non-motorized accessibility within them (Kings County, 2010).

Regulatory Setting

Federal. Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
- 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.
- 14 CFR 77.13(2)(i) and 14 CFR 77.17 require an applicant to notify the Federal Aviation Administration (FAA) of the construction of structures within 20,000 feet of the nearest point of the nearest runway of an airport with at least one runway longer than 3,200 feet. Federal Aviation Regulation Part 77 - Objects Affecting Navigable Airspace requires that notice be given to the FAA if any kind of proposed construction or alteration is: (1)more than 200 feet in height above

the ground level at its site, or (2) of a greater height than an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from all edges of the runway surface if the runway is more than 3,200 feet in length.

- 14 CFR 77.21, 77.23, and 77.25 outlines the criteria used by the FAA to determine whether an obstruction would create an air navigation conflict.

State. According to California Vehicle Code 21960 and 21200, State Routes are open to bicycle travel as shared right-of-way excluding designated closed freeway sections of SR 198 and SR 41. Several improvements have been identified by Kings County as being necessary on local roads to accommodate bicycle travel. In the vicinity of the project site, Jackson Avenue (between Avenal Cutoff Road and 18th Avenue) is planned to be used as a Class III bicycle route (KCAG, 2005).

In addition, this project is being evaluated pursuant to CEQA.

Local. The Kings County General Plan Circulation Element establishes goals, objectives, and policies to guide the circulation system, network, and improvements throughout the County through 2035. Goals and associated objectives and policies that are relevant to the project are listed below:

- **C Goal Al:** Provide a coordinated countywide circulation system with a variety of safe and efficient transportation alternatives and modes that interconnect cities, community districts, adult education facilities, and adjoining cities in neighboring counties, and meets the growing needs of residents, visitors, and businesses.
- **C Objective Al.3:** Maintain an adequate LOS for County roadways and ensure proper maintenance occurs along critical routes for emergency response vehicles.
- **C Goal Cl:** Integrate through the County's regional transportation system, an efficient and coordinated goods, and people moving network of highways, railroads, public transit, and non-motorized options that reduce overall fuel consumption and associated air emissions.
- **C Objective Cl.3:** Promote public transit and vanpooling within the County urbanized areas to increase ridership and decrease traffic demand on County roadways.
- **C Goal Dl:** Continue to meet the needs of the County and of our nation's defense, with coordinated land use, environmental and safety hazard considerations taken into account to ensure long-term operational effectives of airports and military aircraft installations.
- **C Objective Dl.1:** Ensure compatible land uses surround existing airports and the naval airbase military installation (Kings County, 2010).

The Kings County ~~Zoning Ordinance~~Development Code, Article ~~15~~ 13 addresses parking. ~~Section 1502~~Table 13-1 indicates that for Utility Uses such as electric distribution substations, electric transmission substations, gas regulator stations, public utility pumping stations, reservoirs, water or gas storage tank farms, sewage treatment plants and other public utility buildings and uses - one (1) space for each three (3) employees of the maximum working shift, plus one (1) space for each three (3) company vehicles using the site. Where such facility is unmanned, no spaces need be provided (Kings County, 2008).

3.16.2 Environmental Impacts and Mitigation Measures

Project Design Features

There are no PDFs needed or incorporated into the project design to minimize or avoid impacts on transportation or traffic. See Chapter 1 for a complete list of PDFs that the applicant has incorporated into the project to avoid or minimize impacts on all resources.

a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

LESS THAN SIGNIFICANT IMPACT. Construction activities would temporarily generate additional traffic along roadways in the vicinity of the project site. Construction of the proposed project is anticipated to occur for a period of 15 to 18 months. Workers will be arriving to the project site from Hanford (east of the project site along SR-198), deliveries to the project site will come from Visalia (also east of the project site along SR-198), and aggregate base will come to the project site from Coalinga (southwest of the project site along Avenal Cutoff Road via Jayne Avenue).

In addition to the maximum of 1,200~~105~~ construction workers who would commute to the project site daily during peak construction activities, there would be ~~12~~ 3 daily construction equipment~~/ material~~ deliveries to the project site. A passenger car equivalent (PCE) factor of ~~1.5~~2.0 was applied to the ~~equipment/ material~~delivery truck trips because ~~these would be truck trips, and~~ truck trips are estimated to affect traffic operations more than a typical passenger vehicle.[8] ~~It was also assumed that 20 percent of workers would carpool at a rate of two workers per vehicle.~~

Daily LOS calculations were performed to assess the traffic impacts from project construction. The most likely travel routes for construction traffic are as follows:

- Bakersfield/ Kern County (15 percent of traffic is assumed to originate from Bakersfield/ Kern County): commuters would travel north on SR 43 and continue west on SR 198. From SR 198, workers would exit south onto 25th Avenue to access the project site. Workers commuting from the south may also travel north along I-5 and exit north onto Avenal Cutoff, then turn north onto 25th Avenue to access the project site.
- Fresno/ Fresno County (15 percent of traffic is assumed to originate from Fresno/ Fresno County): commuters traveling south would travel on either SR 41 or SR 43. They would then merge onto SR 198 and travel west. From SR 198, workers would exit south onto 25th Avenue, or Avenal Cutoff Road (and then turn onto 25th Avenue), to access the project site.
- Kings/ Tulare County (70 percent of traffic is assumed to originate from Kings/ Tulare County): commuters traveling west from Tulare County would travel on SR 198 westbound. From SR 198, they would exit south onto 25th Avenue, or Avenal Cutoff Road (and then turn onto 25th Avenue), to access the project site.

[8] Note that the maximums for construction workers, materials delivery, and equipment delivery all occur at different times. In the beginning of the project when the maximum daily truck deliveries (23 aggregate base deliveries and 16 construction equipment deliveries) will be required, the number of construction workers will be low. However, when the solar panel installation is occurring, 1,200 construction workers will be needed but truck deliveries will be lower. This is the part of construction that will create the most trips.

Existing traffic characteristics, as well as construction traffic, of the roadways expected to comprise travel routes to the project site are presented in Table 3.16-5. All roadways are projected to continue to operate at an acceptable LOS with project construction traffic. Therefore, the traffic impact associated with construction traffic is less than significant.

Table 3.16-5 Daily Roadway Segment Level of Service During Project Construction

Roadway	Location	Existing AADT	Existing V/C	Existing LOS*	Added Traffic	Existing Plus Construction V/C	Existing Plus Construction LOS*
I-5	Between SR 41 and Avenal Cutoff Road	32,500	0.51	~~B~~A	~~16~~0	0.51	~~B~~A
SR 41	Between Jackson Avenue and Fresno County Line	7,600	0.51	A	~~15~~0	0.51	A
SR 43	Between Fresno County Line and SR 198	10,300	0.69	B	~~15~~0	0.69	B
SR 198	Between Fresno County Line and Avenal Cutoff Road	3,400	0.23	A	2,412~~110~~	~~0.23~~0.39	A
Avenal Cutoff Road	Between SR 198 and Nevada Avenue	3,400	0.23	A	~~110~~0	0.23	A
25th Avenue	Between SR 198 and Avenal Cutoff Road	3,000	0.20	A	~~224~~ 2,412	~~0.21~~0.36	A
Jackson Avenue	Between SR 41 and Avenal Cutoff Road	500	0.03	A	0	0.03	A

*For daily LOS calculations, the daily capacity of a two-lane roadway is assumed to be 15,000 vehicles per day and the daily capacity of I-5 is assumed to be 64,000 vehicles per day (Kings County, 2002).
Note: During the peak construction activity on the Project site, a maximum of 1,200 construction workers would commute to the Project site and a maximum of 3 delivery trucks would be required on a daily basis, for a total of 2,412 daily trips.

Note that the maximums for construction workers, materials delivery, and equipment delivery all occur at different times. In the beginning of the project when the maximum daily truck deliveries (23 aggregate base deliveries and 16 construction equipment deliveries) will be required, the number of construction workers will be low. However, when the solar panel installation is occurring, 1,200 construction workers will be needed but truck deliveries will be lower. This is the part of construction that will create the most trips.

Workers will be coming from Hanford (east of the project site along SR-198) and deliveries will be coming from Visalia (also east of the project site along SR-198). Therefore, all Phase 3 (worker and delivery truck) trips will be to/from 25th Avenue and SR-198 east of the project site.
AADT = average annual daily trips
LOS = level of service
V/C = volume-to-capacity ratio

During project operation, very few staff would be required for operation and maintenance activities; i.e., ~~1~~ up to 3 workers would be onsite daily, with crews of up to 10 people needed for 2 weeks of

panel washing up to 4 times a year, along with 10 water trucks. Expected routine deliveries (consisting of 3 per week, 1 per month, 1 every 3 months, and 2 per year) during project operation would originate from Bakersfield, Fresno, Hanford-Lemoore, and Visalia. The projected traffic associated with project operation would be less than the additional traffic associated with project construction. Therefore, the traffic impact associated with project operation is also less than significant.

b. Exceed, either individually or cumulatively, a LOS standard established by the county congestion management agency for designated roads or highways?

LESS THAN SIGNIFICANT IMPACT. The roadways that would be used by project-related traffic are currently operating at an acceptable LOS pursuant to Kings County standards (LOS D or better). As shown in Table 3.16-5, construction traffic would not degrade the existing LOS on the roadways in the vicinity of the project. Because operation-related traffic is far less than construction traffic, it is expected that operation-related traffic also would not degrade the existing LOS of the roadways in the vicinity of the project, resulting in a less than significant impact on roadway and highway LOS.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

NO IMPACT. NAS Lemoore is located immediately north of the project site on the opposite side of SR 198. However, the distance from the northwest corner of the project site to the southernmost point of the NAS Lemoore runway is approximately 19,640 feet. These are the closest points of the project site to the runway. Proposed project features would not affect air traffic patterns; all project features would be substantially shorter than the FAA regulation height limit of 200 feet in height above the ground or of the imaginary surface height limit at 20,000 feet from the runway (200 feet at that distance when calculated at the 100:1 slope). The tallest project related feature would be the PG&E transmission~~/distribution~~ line poles (~~55~~ 140 feet tall) that connect the Project to the Henrietta Substation, with the buildings and tanks being approximately 22 feet tall, ~~and~~ the PV panels being approximately ~~10~~ 13 feet tall, and the meteorological towers approximately 20 feet tall. Therefore, the project would result in no impact on air traffic patterns.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

NO IM PACT. The project does not include design features that would increase hazards nor would it introduce an incompatible use to the area. It would not include the construction of any roads beyond private access ~~roads~~ driveways that would be included within the project site. Therefore, the project would not substantially affect public safety, resulting in no impact.

e. Result in inadequate emergency access?

NO IMPACT. The project would not require roadway closures during either its construction or operation. Emergency vehicles would not need to modify their travel routes. Access to the interior of the project site would be provided by roads that are designed to accommodate onsite circulation for emergency vehicles. Therefore, the project would not result in inadequate emergency access, and no impact would result.

f. Result in inadequate parking capacity?

NO IMPACT. Parking and construction laydown areas for the proposed project would be designated within the project site so that no on-street parking would be required during project operation. Project operation would require few employees at the project site at any given time. The proposed project would provide approximately six parking spaces near the Control Building. The project has planned for adequate onsite parking for operations employees, in accordance with Kings County ~~Zoning Ordinance~~ Development Code Article ~~15~~13, so that no on-street parking would be required during project operation. Therefore, no impact to parking capacity would occur as a result of the proposed project.

g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

NO IMPACT. The project requires limited use of local public services and/ or infrastructures, and would require no alternative transportation, during both construction and operation phases. The project would not conflict with any applicable land use plan, policy or regulation supporting alternative transportation of an agency with jurisdiction over the project, resulting in no impact.

References

California Department of Transportation (Caltrans). 2010. Traffic Volumes.
CH2M HILL. 2008. Petition for License Amendment. Henrietta Peaker Plant (Ol-AFC-18) License Amendment for Conversion to GWF Henrietta Combined-cycle Power Plant. Kings County, California. October. Page cited: 3-87.

GWF Energy LLC. 2001. Application for Certification Henrietta Peaker Project - Kings County, California. August. Pages cited: 8.10-2, 8.10-22.

Kings County. 2010. 2035 Kings County General Plan. Circulation Element. Adopted January 26. Pages cited: C-4, C-31, C-39, C-40, C-43, C-45, C-57, C-59, C-61, C-62, C-63.

Kings County. 2008. Kings County Zoning Ordinance. Article 15 Off-Street Parking & Loading Facilities. Section 1502.

Kings County. 2002. Final Program Environmental Impact Report Revised Draft Dairy Element of the Kings County General Plan. March. Pages cited: 4.9-3 through 4.9-5.

Kings County Association of Governments (KCAG). 2010. Draft 2011 Kings County Regional Transportation Plan. April 30. Chapter 4. Page cited: 4-19.

Kings County Association of Governments (KCAG). 2005. 2005 Kings County Regional Bicycle Plan. June. Page cited: 28.

Kings Area Rural Transit (KART). 2010. Service Routes. Accessed online on June 15, 2010 at http://www.mykartbus.com/hanlemonas.htrn

3.17 UTILITIES AND SERVICE SYSTEMS

Table 3.17-1 Utilities and Service Systems Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

3.17.1 Setting

Wastewater

Wastewater collection and treatment service is not provided in the rural area of Kings County where the project site is located. Instead, development outside of incorporated cities and community service districts rely on individual septic systems for wastewater disposal and treatment (Kinney, 2010). The nearest public wastewater treatment facility is the City of Lemoore Wastewater Treatment Plant, which serves only the area within city boundaries (LAFCO, 2007).

Water and Stormwater

The project site has no natural surface water features. It has an existing onsite drainage pipe. Storm water drainage facilities throughout the unincorporated area of Kings County are maintained by the Kings County Public Works Department (Kings County, 2010).

Solid Waste
The Kings Waste and Recycling Authority was formed in September 1998 by agreement between the cities of Lemoore, Hanford, Corcoran, and the County of Kings to provide a regional approach to all waste management activities in Kings County. Solid waste from the City of Lemoore (which would include the project site even though the site is located outside the City limits) is transported to the Kings Waste and Recycling Authority Materials Recovery Facility in Hanford for sorting and then recycled or sent to the Chemical Waste Management Land fill site in Kettleman Hills, which is approximately 45 miles from Hanford (LAFCO, 2007).

Commercial solid waste collection services throughout Kings County are provided by several different licensed haulers (Kinney, 2010). Materials from the project area are also delivered to the Kings Waste and Recycling Authority Materials Recovery Facility, located in Hanford, for eventual recycling or disposal at the Chemical Waste Management Landfill, located in Kettleman Hills. The Chemical Waste Management Landfill was recently expanded and can accept 2,000 tons per day of municipal solid waste. The current intake is an average of 300 to 350 tons per day (Turek, 2010).

Hazardous Wastes

Hazardous wastes generated in the area that includes the project site are transported directly to the Chemical Waste Management Landfill site located in Kettleman Hills.

Regulatory Setting

Federal. The federal CWA, Section 402 effectively prohibits discharges of storm water from construction sites unless the discharge is in compliance with an NPDES permit. The State Water Resources Control Board (SWRCB) is the permitting authority in California and implements and regulates CWA Section 402.

State. The SWRCB regulates storm water discharge from construction sites through each RWQCB pursuant to the federal CWA and the state Porter-Cologne Water Quality Control Act. California has adopted the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (General Permit), (SWRCB Order No. 2009-0009-DWQ; SWRCB 2009) that applies to projects resulting in 1 acre or more of soil disturbance. The proposed project would result in disturbance of more than 1 acre of soil. Therefore, the project would require the preparation of a construction SWPPP that would specify site management activities to be implemented during site development. These management activities would include construction storm water BMPs, dewatering runoff controls, and construction equipment decontamination. The RWQCB requires an application packet including a NOI and a SWPPP to be filed with ~~and approved by~~ the RWQCB prior to any storm water discharge from construction activities, and that the SWPPP be implemented and maintained onsite. The Water Boards also regulate discharges from irrigated agriculture; dredge and fill activities; the alteration of any federal water body pursuant to the Section 401 certification program; and several other activities with practices that could degrade water quality (SWRCB, 2010).

To implement the federal NPDES permit program, the SWRCB has adopted a statewide General Permit for Stormwater Discharges Associates with Construction Activity (SWRCB Water Quality Order No. 2009-0009-DWQ; SWRCB, 2009) that applies to projects resulting in one or more acres of soil disturbance (effective July 1, 2010).

The SWRCB requires that new industrial facilities develop a SWPPP to prevent the offsite migration of sediment and other pollutants, and to reduce the effects of runoff from construction sites to offsite areas. In addition, the project site would be graded and a site perimeter berm would be constructed to enable the site to become a retention/percolation basin, thus preventing offsite migration of sediment and pollutants.

The California Integrated Waste Management Act of 1989 (also known as AB 939) requires each city and county in California to prepare plans for solid waste management that demonstrate a reduction in the amount of solid waste sent to landfill, as well as a long-term plan to ensure implementation of diversion programs and adequate disposal capacity.

In addition, this project is being evaluated pursuant to CEQA.

Local. The Kings County Countywide Integrated Waste Management Plan includes the mandatory elements of a Source Reduction and Recycling Element as required by AB 939 and a Household Hazardous Waste Element (Kings County, 1995).

3.17.2 Environmental Impacts and Mitigation Measures

Project Design Features

The applicant has incorporated ~~the following~~ PDF GEO-1 identified above in Section 3.6.2 into the project to minimize or avoid impacts to utilities and service systems as part of the Project Description. Chapter 1 contains a complete list of PDFs, including those relevant to utilities and service systems.

~~**PDF GEO-1**: Prepare and implement a SWPPP for the project.~~

a. Exceed wastewater treatment requirements of the applicable RWQCB?

NO IMPACT. During construction, water would be required primarily for dust suppression, but would also be used for concrete washout and soil compaction. This water percolates into the ground after use, requiring no wastewater treatment.

An ongoing engineered septic system would be installed for the wastewater from the ~~control~~ Control ~~and operation b~~Building that could be constructed. The septic system would require a permit from the Kings County Building Inspection Division and must also be approved by the Kings County Environmental Health Department (Kinney, 2010). The RWQCB does not regulate private septic systems; therefore, no wastewater treatment requirements apply, and no impact would result.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

LESS THAN SIGNIFICANT IMPACT. Portable mobile toilets would be delivered to the project site for the construction period. They would be pumped out periodically and wastes would be disposed of offsite in an appropriate manner by the portable restroom supply contractor. No new or expanded

wastewater treatment facilities would be required during project construction.

Water for project construction would require no treatment. Therefore, no new or expanded water treatment facilities would be required during project construction.

Water obtained from an onsite well and/or ~~the existing~~ WWD ~~supply~~and/or other offsite sources would be used for general project operational purposes (such as washing the solar panels) and would be captured onsite and allowed to percolate into the soil. In addition, an onsite septic system would be constructed to handle the wastewater that is generated from the toile facility in the ~~control~~ Control ~~and operation b~~Building. The toilet facility would contain one hand wash sink, and a sign would be posted above the sink stating that the water is nonpotable. No other sinks would be installed onsite. Permits for the related septic system would be obtained through Kings County Building Department.

Wastewater generated during project operation would be treated onsite by the proposed project's septic system (requiring no expansion of existing wastewater treatment facilities). Water used during project operation would require no treatment. Therefore, no new or expanded water treatment facilities would be required during project operation.

As a result, project construction and operation would result in a less than significant impact.

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

LESS THAN SIGNIFICANT IMPACT. As required by the SWRCB for new industrial facilities that may generate storm water runoff the applicant would develop a SWPPP, as part of PDF GEO-1, to prevent the offsite migration of sediment and other pollutants, and to reduce the effects of runoff from the construction site to offsite areas. These management activities would include construction storm water BMPs, dewatering runoff controls, and construction equipment decontamination. Water used for dust control and soil compaction during construction would not result in discharge.

~~The project site would also be designed to contain all runoff from storm water onsite by retaining a dirt surface at the proposed solar field, and by the development of a perimeter road that would be higher in elevation than the interior of the facility. Water within the site would then evaporate or percolate into the ground.~~ The applicant would develop onsite storm water drainage facilities including retention ponds and would not require the construction of new storm water drainage facilities or expansion of existing facilities. Therefore the project would result in a less than significant impact.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

NO IMPACT. The proposed project site currently demands 1,603 acre feet of water per year to sustain current agricultural production that is occurring on the site (according to 2013 crop data received by the current owner of the parcel, the agricultural uses on site include: 43 acres of cotton [annual average water demand of 3.16 acre feet per acre of crop]; 342 acres of wheat [annual water demand of 2.0 acre feet per acre of crop]; 166 acres of tomatoes [annual water demand of 2.54 acre feet per acre of crop] and, 80 acre of alfalfa [annual water demand of 4.51 acre feet per acre of crop]). Between

2008 and 2013 the project site was receiving both surface water and groundwater from Westlands Water District (WWD) and two on-site groundwater wells, respectively, to sustain agricultural production. WWD allocated an average of 656 acre feet of water per year to the project site between 2008 and 2013; therefore, the remaining water demanded by the existing uses on the project site (946 acre feet of water per year) were received through groundwater sources. Beginning in 2014, WWD stopped allocating surface water to the proposed project site; therefore, the only source of water to sustain on-site agricultural production was groundwater supplied by the two on-site wells (1,603 acre feet of water received by the project site in 2014 from groundwater resources).

Implementation of the proposed Project would require approximately 250 acre feet of water during the 15 to 18 month construction period and 2.3 acre feet of water per year during project operation. The project applicant has indicated that water for construction and operation of the proposed project would be received from the existing WWD supply and/or groundwater and/or offsite sources. The amount of water that would be required for project construction and operational activities is substantially less than what is currently being demanded on the project site. Based on this information, the proposed project would be served by sufficient water supplies during construction and operational activities. No impacts would occur.
~~During construction, water would be required primarily for dust suppression, and would also be used for concrete washout and soil compaction. Water required for construction will be obtained from the WWD.~~

~~During project operation, water requirements would be approximately 2.3 AFY (750,000 gallons) to be served by WWD. The applicant would not use groundwater resources for the proposed project. There are sufficient water supplies available from existing entitlements and resources. No new or expanded entitlements would be required to construct or operate the proposed project. Therefore, the project would result in not impact to water supply.~~

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

LESS THAN SIGNIFICANT IMPACT. The proposed project site would not be served by a wastewater treatment provider. During project construction, portable mobile toilets would be used, requiring regular pumping and offsite disposal and treatment of a minimal amount of wastewater. An onsite septic system would collect and treat wastewater generated during project operation. Therefore, the project would require temporary and minimal offsite wastewater treatment, would result in a temporary and minimal impact on wastewater treatment providers, and would require only temporary and minimal additional wastewater treatment capacity during project construction, resulting in a less than significant impact.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

LESS THAN SIGNIFICANT IMPACT. During construction of the proposed project, a small amount of construction waste would be generated, which would be recycled to the extent possible. During project operation, the proposed project would generate maintenance and plant wastes, including oily rags, broken and rusted metal, and machine parts, defective or broken electrical materials, empty containers, and other solid wastes, including the typical refuse generated by workers. Although the

project site is located outside of the Lemoore City limits, the contracted franchised commercial waste removal service for that area of the County would transport the waste to the Kings County Waste and Recycling Authority Materials Recovery Facility for sorting and/or recycling, or transport it to the Chemical Waste Management Landfill site (LAFCO, 2007). The Chemical Waste Management Landfill was recently expanded and has the capacity to accommodate project-generated waste.

All waste would be disposed of in accordance with federal, state, and local regulations. The project would not require the development of new landfills, nor would it require existing landfills to be expanded. In addition, construction waste would be recycled to the extent possible. Therefore, the proposed project would have a less than significant impact on landfills.

g. Comply with federal, state and local statutes and regulations related to solid waste?

NO IMPACT. The project would comply with the 1989 California Integrated Waste Management Act (AB 939) because the project applicant would contract with a franchised waste hauler that would follow the disposal and diversion requirements of the Kings County Integrated Waste Management Plan and Hazardous Waste Management Plan.

References

California Department of Water Resources (DWR). 2006. California's Groundwater Bulletin 118.

California Department of Resources Recycling and Recovery. 2010. List of Statutes.

Kings County. 2010. 2035 General Plan. Health and Safety Element. Adopted January 26. Page cited: HS-14.

Kings County. 1995. Kings County Countywide Integrated Waste Management Plan.

Kinney, Jeremy. 2010. Senior Planner. Kings County. Personal communication with Jessica Brandt/CH2M HILL. June 30.

Local Agency Formation Commission of Kings County (LAFCO). 2007. Municipal Service Reviews for Cities and Community Districts. Adopted October 24.

State Water Resources Control Board (SWRCB). 2009. State Water Resources Control Board National Pollutant Discharge Elimination System General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities.
Order No. 2009-0009-DWQ. NPDES No. CAS 000002.

State Water Resources Control Board (SWRCB). 2010. Storm Water and Wastewater Information.

Turek, Paul. 2010. Chemical Waste Management, Environmental Health Department, Kettleman Hills Facility. Personal communication with Jessica Brandt/ CH2M HILL. June 23.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

Table 3.18-1 Mandatory Findings of Significance Checklist

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?	☐	☒	☐	☐
c. Does the project have environmental effect which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animals or eliminate important examples of the major periods of California history or prehistory?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. The proposed project has the potential to affect biological resources; therefore, PDFs have been included in the Project Description (BIO-1, BIO-2, BIO-3, and BIO-4) to minimize and/or otherwise avoid those impacts. The literature searches and site surveys conducted for cultural and paleontological resources indicated that no such resources exist the project site. However, subsurface resources may be present and undetected. To minimize the potential for impacts to these resources, the applicant has included PDFs in the Project Description (CUL-1, CUL-2, CUL-3, and PALEO-1). Implementation of these measures would result in a less than significant impact with mitigation incorporation.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. The proposed project is located on an agricultural parcel of land with a variety of land uses surrounding it. The applicant has included PDF GEO-1 (the preparation and implementation of a SWPPP with BMPs) to minimize and/or avoid potential runoff and erosion hazards. The applicant has also included PDF GEO-2 (determining the presence of expansive soils onsite and the steps to take if found). In addition, the applicant has included PDF HAZ-1 ~~(fire prevention training and measures)~~ to minimize and/or avoid potential fires hazards onsite.

Of all of the environmental resources evaluated in this Initial Study, the development of the proposed project and other projects in the region, such as new housing and electricity generation projects (including other solar PV developments) would contribute to cumulative impacts with regard to only biological resources, as described below.

Biological Resources. The proposed project may contribute to a cumulative impact to biological resources, such as the San Joaquin kit fox, in the vicinity of the project site. As discussed in Section 3.4 Biological Resources and with the implementation of PDFs BIO-1, BIO-2, BIO-3, and BIO-4, the impacts to the Swainson's hawk, burrowing owl, San Joaquin kit fox, and nesting bird species that are protected by the MBTA would be reduced to a less than significant impact, and therefore, the proposed project's contribution to this cumulative impact is considered less than considerable, resulting in a less than significant impact with mitigation incorporation.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATION. As indicated throughout the Initial Study, impacts on all environmental resources were deemed to result in either "no impact," a "less than significant impact," or a "less than significant with mitigation incorporation." The applicant has included PDFs for all identified significant impacts. As a result, the proposed project would not create environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, and the preparation of an Environmental Impact Report (EIR) is not required.

4.0 MITIGATION MONITORING AND REPORTING PLAN

The purpose of this Mitigation Monitoring and Reporting plan (MMRP) is to ensure effective implementation of the Project PDFs that are required by the Kings County Community Development Agency and that ~~GWF Energy~~ American Kings Solar, LLC c/o First Solar (the applicant) has agreed to implement as part of project construction and/or operation. The MMRP, which is outlined in Table 4-1, includes the:

- PDFs that the applicant is required to implement as part of the project
- CEQA checklist questions to which the PDFs apply
- Responsibility for compliance
- Timing for implementation of the PDFs

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
~~**3.1 Aesthetics**~~			
~~**c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**~~	No applicable PDFs or mitigation measures. ~~**PDF AES-1:** Plant a row of screening vegetation along the north boundary of the project site (along the south side of SR 198) to screen views of the project from SR 198 and the residences on the north side of SR 198.~~	N/A~~Applicant~~	N/A~~Prior to start of project operation.~~
3.2 Agriculture and Forest Resources			
b. Would the project conflict with existing zoning for agricultural use or a Williamson Act Contract? ~~**a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use?**~~ **e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use?**	**PDF AG-1:** Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by the County. Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil. The Plan shall provide that all driveways and other areas compacted during original construction or by	Applicant	~~Upon direction by CDFG; prior to starting project operation of Phase 1~~Prior to issuance of building permit.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding, has occurred. Additional seedlings and applications of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project. The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. It is anticipated that waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of decommissioning, the Plan		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	shall be revised to provide that another equivalent facility will be utilized. Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights. The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months). ~~**PDF BIO-1:** Mitigate the loss of up to 978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX).~~ ~~Conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake.~~		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	PDF AG-2: Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated cost estimate.	Applicant	Prior to issuance of building permit.
	PDF AG-3: The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be	Applicant	Prior to issuance of building permit.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	submitted to the Kings County Community Development Agency for approval prior to the issuance of a building permit.		
3.3 Air Quality			
a. Would the project conflict with or obstruct implementation of the applicable air quality plan?	**PDF AQ-1:** Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD. ~~ISR (District Rule 9510) to determine the potential mitigation for NO_x emissions~~	Applicant	During project environmental review.
b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	**PDF AQ-2:** Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.	Applicant	During project environmental review.
c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	**PDF AQ-3:** Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.	Applicant	During project environmental review.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
3.4 Biological Resources			
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? **d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?** **e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**	**PDF BIO-1:** ~~Mitigate the loss of up~~ The project applicant shall retain a qualified biologist to ~~978 acres of agricultural land (it is also Swainson's Hawk foraging habitat) by providing a permanent easement of 489 acres of co-managed land for agricultural production and foraging habitat. The habitat management land shall be located within 10 miles of a known nest site, and shall be located on land that is designated by Kings County as Priority Ag Land or is zoned by Kings County as Exclusive Ag (AX).~~ ~~C~~conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake. The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar	Biologist and Applicant	Prior to the start of project construction

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat. To update this report and adapt it to the proposed project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted. If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines. If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	known nest site. **PDF BIO-2:** Conduct a preconstruction survey for burrowing owls no more than 30 days prior to the start of construction to determine if owls are occupying areas on or within 250 feet of the project site. The survey shall be performed during the burrowing owl breeding season (February 1 through August 31) to determine whether nearby ground squirrel or other appropriate sized burrows or cavities are occupied by burrowing owls. Implement mitigation measures to protect burrowing owls by restricting construction activities within 150 feet of occupied burrows during the non-breeding season or 250 feet of active burrowing owl nest sites during the breeding season (February 1 through August 31). Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through noninvasive methods that either (1) the birds have not begun egg laying and incubation, or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. When destruction of occupied burrows is unavoidable, existing unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1 ~~on the protected land site~~. If owls must be moved away from the disturbance area,	Biologist and Applicant	Prior to the start of project construction and throughout the project construction period.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	passive relocation techniques (as described below) shall be used rather than trapping. Passive relocation shall begin at least 1 or more weeks prior to the start of construction activities to allow the owls to acclimate to alternate burrows. If avoidance is possible, no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the non-breeding season (September 1 through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31).Owls in non-active nests shall be excluded from burrows in the immediate impact zone and within a 50-meter (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) shall be left in place 48 hours to insure owls have left the burrow before excavation. Two natural or artificial burrows shall be provided for each burrow in the project site that would be rendered biologically unsuitable. The project site shall be monitored daily for 1 week to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.		
	PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall	Biologist and Applicant	Prior to the start of project construction

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	adhere to the monitoring and excavation provisions in the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County. The bottom of the perimeter fence will either have a 4 to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). ~~Incorporate openings in fencing design to facilitate passage of San Joaquin kit fox through the project site (Figure 1-9).~~ Implement and maintain a weed control program around the perimeter fence. **PDF BIO-4:** A qualified biologist will conduct a preconstruction survey for nesting bird species that are protected by the MBTA not more than 30 days prior to commencement of construction.	Biologist and Applicant	Prior to the start of project construction.
3.5 Cultural Resources			
a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	**PDF CUL-1:** The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources. The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to	Archaeologists and Applicant	Throughout the project construction period

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? **c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?** **d. Would the project disturb any human remains, including those interred outside of formal cemeteries?**	supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team. The project proponent shall retain a professional archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified ~~If any~~ cultural resources~~, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains are encountered during any project development activities,~~ be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, ~~shall be suspended~~ and ~~the~~ Kings County Community Development Agency (CDA) shall be notified immediately ~~notified~~. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.~~At that time, Kings County shall coordinate any necessary investigations of the site with appropriate specialists, as needed. The applicant shall be required to implement any mitigation deemed necessary for the protection of cultural resources.~~		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	PDF CUL-2: If the professional archaeologist determines that any cultural ~~Native American archaeological, ethnographic, or spiritual~~ resources ~~are unearthed~~ exposed during ~~excavation activities~~construction~~, all identification and treatment shall be conducted by qualified archaeologists who meet the federal standards as stated in the Code of Federal Regulations (CFR) (36 CFR 61), and Native American representatives who are approved by the local Native American community as keepers of their cultural traditions. In the event that no such Native American is available, persons who represent tribal governments and/organizations in the locale in which resources could be affected shall be consulted.~~ constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County Community Development Agency. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation	Archaeologists and Applicant	Throughout the project construction period

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.		
	PDF PALEO -1: If paleontological resources ~~(fossils)~~ are ~~uncovered~~ discovered during ~~project~~ excavation activities at the project site~~construction~~, work in the vicinity of the find (a 50-foot radius) shall ~~stop~~cease, and a qualified professional paleontologist shall be ~~contacted~~retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any significant paleontological resources shall be undertaken with the approval of the Kings County CDA.~~. The paleontologist shall examine the find and assess its significance in accordance with the CEQA resource significance criteria for archaeological sites, with appropriate modifications. If the resource is determined to be significant, impacts that cannot be avoided shall be mitigated through data recovery or other means, in a consultation with Kings County. The applicant shall ensure the preparation of a Paleontological Resources Report by the paleontologist if significant fossils are fund and recovered during project construction activity~~	Paleontologist and Applicant	Throughout the project construction period.
	PDF CUL-3: Pursuant to ~~Section 5097.98 of the California Public Resources Code and Section 7050.5 of the California~~ State Health and Safety Code Section	Archaeologist and Applicant	Throughout the project construction

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	7070.5(e) and Public Resources Code Section 5097.98, if human remains or ~~bone~~ remains of unknown origin ~~is~~ are found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the C~~c~~oroner shall notify the Native American Heritage Commission (NAHC) who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance." The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development		period.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center. ~~Treatment of the remains shall be conducted in accordance with the direction of the County Coroner or the NAHC, as appropriate. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been implemented~~		
3.6 Geology and Soils			
b. Would the project result in substantial soil erosion or the loss of topsoil? **d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?** **e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**	**PDF GEO-1:** Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), designed to reduce potential impacts related to erosion and surface water quality during project construction activities and through the life of the project. The SWPPP shall include measures to address erosion, such as a construction period monitoring program to be implemented by the construction supervisor, and shall include Best Management Practices (BMPs) to address erosion, such as watering for dust control and the construction of perimeter silt fences, as needed. The SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board for review ~~and approval~~. Documentation of the submittal shall be provided to Kings County prior to issuance of any building permits. Implementation of the SWPPP shall comply with state and federal water quality regulations.	Engineer and/or Erosion Control Specialist, Construction Contractor, and Applicant	Prior to the start of project construction, throughout the project construction period, and throughout project operation.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	PDF GEO-2: E~~If e~~xpansive soils ~~are~~ have been determined to be present onsite and pose a structural issue;~~,~~ ~~treat the soil according to the site~~ therefore ~~geotechnical~~a geotechnical report ~~recommendations~~is required prior to issuance of a building permit. **PDF GEO-3:** Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.	Engineer and/or Soil Scientist and Applicant Applicant	Throughout the project construction period. Prior to the start of project construction.
3.7 Greenhouse Gas Emissions			
	No applicable PDFs or mitigation measures.	N/A	N/A
3.8 Hazards and Hazardous Materials			
a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **~~b~~h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wild/and fires, including where wild/ands are**	**Please see PDF GEO-1 above.~~:~~** ~~Implement a SWPPP~~ **PDF HAZ-1:** ~~The applicant shall implement the following measures to address potential fire hazards in the project area:~~ ~~**Fire Prevention Training.** The applicant shall coordinate with the California Office of the State Fire Marshall to provide PV training to County fire responders, construction, operational, maintenance staff. The intent of this training shall be to familiarize both responders and workers of the codes, regulations, associated hazards, and mitigation processes related to~~	Construction Contractor and Applicant ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~	Prior to the start of project construction , throughout the project construction period, and throughout project operation ~~Prior to the start of project construction , throughout the~~

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
adjacent to urbanized areas or where residences are intermixed with wild/ands?	~~solar electricity. This training shall include techniques for proper system shutdown and fire suppression procedures for PV systems. The training shall include procedures for coordination with local fire department, sheriff department, and emergency medical services.~~ ~~**Fire Prevention Measures.**~~ The applicant shall implement the following measures during project construction and operation : The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e. fire engines) to the main entrance, to the Control Building and the substation. Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site. The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards. ~~Agricultural vegetation shall be maintained to reduce potential fire hazards at the project site.~~ Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment	~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~	~~project construction period, and throughout project operation~~ ~~Throughout the project construction period and throughout project operation.~~ ~~Throughout the project construction period.~~ ~~Throughout the project construction period and throughout project operation~~ ~~Throughout the project construction period and throughout project operation~~ ~~Throughout the project construction period and throughout project operation~~

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire. Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers. Smoking shall be prohibited at the project site except in designated areas.		
3.9 Hydrology and Water Quality			
a. Would the project violate any water quality standards or waste discharge requirements? **c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?** **d. Would the project**	Please see **PDF GEO-1** above.~~: Implement a SWPPP~~ ~~**PDF GEO-1:** Implement a SWPPP~~ ~~**PDF GEO-1:** Implement a SWPPP~~ ~~**PDF GEO-1:** Implement a SWPPP~~ ~~**PDF GEO-1:** Implement a SWPPP~~	Construction Contractor and Applicant ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~	Throughout the project construction period and throughout project operation ~~Throughout the project construction period and throughout project operation~~ ~~Throughout the project construction period and throughout project operation~~ ~~Throughout the~~

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite? **e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?** **f. Would the project otherwise substantially degrade water quality?**			~~project construction period and throughout project operation~~ ~~Throughout the project construction period and throughout project operation~~
3.10 Land Use and Planning			
	No applicable PDFs or mitigation measures	N/A	N/A
3.11 Mineral Resources			

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	No applicable PDFs or mitigation measures	N/A	N/A
3.12 Noise			
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above	**PDF NOI~~SE~~-1:** Limit noise-generating construction activities to between the hours of 6:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday and Sunday if additional hours are needed to make up schedule deficiencies or to complete critical construction activities. Prohibit construction activities on major federal- and state-recognized holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). [9] Equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and maintain it in good working order. Locate stationary construction equipment (i.e., portable power generators and compressors) the furthest	Construction Contractor and Applicant ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Applicant~~	During development of project construction bid documents and ~~T~~throughout the project construction period. ~~Throughout the project construction period.~~ ~~Throughout the project construction period.~~ ~~Throughout the project construction period.~~

[9] Of the list of federal and state recognized holidays, a United States Department of Labor, Bureau of Labor Statistics article (and supporting study) identifies the most common six holidays provided to workers are those six holidays listed above, with 95 percent of employers recognizing these holidays. NOI-1 is provided to prohibit construction on those holidays that local residents are most likely to be at home. Because of the high percentage of employers that recognize these holidays, avoiding construction activities on these holidays should reduce construction-related noise impacts to local residents.

Van Giezen, Robert W., Paid Leave in Private Industry Over the Past 20 Years, Beyond the Numbers, August 2013, Vol. 2, No. 18, Bureau of Labor Statistics, US Department of Labor (http://www.bls.gov/opub/btn/volume-2/paid-leave-in-private-industry-over-the-past-20-years.htm)

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
levels existing without the project?	distance possible from nearby residences. Park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible. Notify nearby residents whenever extremely noisy work would be occurring. Shut off idling equipment. Include these noise PDFs in construction bid documents.		~~Throughout the project construction period.~~ ~~During development of project construction bid documents.~~
3.13 Population and Housing			
	No applicable PDFs or mitigation measures	N/A	N/A
3.14 Public Services			
Would the project result in substantial adverse physical impacts associated with the provision of new and physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:	Please see **PDF HAZ-1** above. ~~: The applicant shall implement the following measures to address potential fire hazards in the project area:~~ ~~**Fire Prevention Training.** The applicant shall coordinate with the California Office of the State Fire Marshall to provide PV training to County fire responders, construction, operational, maintenance staff. The intent of this training shall be to familiarize both responders and workers of the codes, regulations, associated hazards, and mitigation processes related to solar electricity. This training shall include techniques for proper system shutdown and fire suppression procedures for PV systems. The training shall include procedures for coordination with local fire department,~~	Construction Contractor and Applicant	Prior to the start of project construction, throughout the project construction period, and throughout project operation

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
a. Fire protection **b. Police protection** ~~**Would the project result in substantial adverse physical impacts associated with the provision of new and physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:**~~ ~~**a. Fire protection**~~ ~~**b. Police protection**~~	~~sheriff department, and emergency medical services.~~ ~~**Fire Prevention Measures.** The applicant shall implement the following measures during project construction and operation:~~ ~~The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e. fire engines).~~ ~~The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards.~~ ~~Agricultural vegetation shall be maintained to reduce potential fire hazards at the project site.~~ ~~Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire.~~ ~~Fire suppression equipment (i.e., fire extinguishers) shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arresters or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers.~~		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	~~Smoking shall be prohibited at the project site except in designated areas.~~		
	PDF PUB-1: If sheriff and/or fire protection services are required at the proposed project site during project construction or operation, the applicant shall pay to the County the cost of those services.	Construction Contractor and Applicant ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Construction Contractor and Applicant~~ ~~Applicant~~	W~~W~~hen billed by the County. ~~Throughout the project construction period and throughout project operation.~~ ~~Throughout the project construction period and throughout project operation.~~ ~~Throughout the project construction period and throughout project operation.~~ ~~Throughout the project construction~~

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
			~~period and throughout project operation.~~ ~~Throughout the project construction period and throughout project operation.~~ ~~Throughout the project construction period and throughout project operation.~~ ~~When billed by the County~~
3.15 Recreation			
	No applicable PDFs or mitigation measures.	N/A	N/A
3.16 Transportation/Traffic			
	No applicable PDFs or mitigation measures	N/A	N/A
3.17 Utilities and Service Systems			
c. Require or result in the construction of new storm water drainage facilities or expansion	Please see **PDF GEO-1** above. ~~: Implement a SWPPP~~	Construction Contractor and Applicant	Throughout the project construction period and

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
of existing facilities, the construction of which would cause significant environmental effects?			throughout project operation.
3.18 Mandatory Findings of Significance			
	No PDFs in addition to those described in the preceding sections.	N/A	N/A

5.0 LIST OF PREPARERS

5.1 KINGS COUNTY

~~Chuck Kinney, Deputy Director - Senior Reviewer~~
~~Jeremy Kinney, Senior Planner Project Manager~~ Sandy Roper, Principal Planner

Erik Kaeding, Deputy County Counsel

5.2 FIRST SOLAR

Roy Skinner, Director of Project Execution
James Cook, Director of Project Development
Sandra Pellegrino, Project Development Engineer
Lien Dinh, Manager of Real Estate
David Watkins, Consultant

5.3 LSA ASSOCIATES, INC.

Frank Haselton, Principal-in-Charge
Edward Heming, Senior Environmental Planner
Chris Graham, Environmental Planner
Allison Ferrini, Assistant Environmental Planner

~~GWF Energy, LLC~~

~~Peter Lai, Senior Project Manager - Project Manager~~
~~Mark Kehoe, Director Environmental, and Safety - Senior Reviewer~~
~~Hal Moore, Director Engineering - Senior Reviewer~~
~~Doug Wheeler, Vice President - Senior Reviewer~~
~~Benjamin Zane, Project Engineer - Project Engineer~~

~~ch2m hill~~
~~Dave Stein, Senior Project Manager - Senior Reviewer~~
~~John Carrier, Program Manager - Senior Reviewer~~
~~Christine Roberts, Environmental Planner - Senior Reviewer~~
~~Karen Parker, Senior Project Manager - Project Manager~~
~~Wendy Haydon, Environmental Planner - Assistant Project Manager; Aesthetics, Agriculture and Forest Resources, Land Use, Minerals, Noise, Population and Housing, Public Services, Recreation~~
~~Curt Bagnall, Electric Utility Engineer - Construction Estimates~~
~~Mark Bastasch, Environmental Engineer - Noise Senior Reviewer~~
~~Maly Bory, Traffic Engineer - Transportation/ Traffic~~
~~Erica Bowyer, Air Quality Engineer - Air Quality, Greenhouse Gas Emissions~~
~~Jessica Brandt, Environmental Planner - Utilities and Service Systems~~

~~Louise Brown, Environmental Compliance Specialist - Noise Senior Reviewer~~
~~Amy Clymo, Air Quality Specialist - Air Quality, Greenhouse Gas Emissions Senior Reviewer~~
~~Marjorie Eisert, Biologist - Biological Resources~~
~~Matt Franck, Environmental Planner - Hydrology and Water Quality Senior Reviewer~~
~~Clint Helton, Archaeologist - Cultural Resources~~
~~John Hoffner, Project Manager - Construction Estimates~~
~~Peggie King, Environmental Planner - Hydrology and Water Quality~~
~~Tom Lae, Geologist - Geology and Soils~~
~~Jim Roldan, Traffic Engineer - Transportation/ Traffic Senior Reviewer~~
~~Megan Sebra, Geologist - Hazards and Hazardous Materials~~
~~James Verhoff, Paleontologist - Paleontology~~
~~Tyson Daus, Graphic Designer - Graphic Design~~
~~Nancy Michaelis-Rambin, Document Designer - Document Design~~

6.0 APPENDICES

6.1 AIR QUALITY CALCULATIONS (ATTACHED)

American Kings Solar Facility

San Joaquin Valley Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	12.00	1000sqft	0.28	12,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Small maintenance building.

Construction Phase - Project plans.

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per Project Plans

Trips and VMT - Per project plans. Assuming 1,200 workers during module installation phase.

On-road Fugitive Dust -

Grading - Per Project Plans

Vehicle Trips - No traffic.

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation - Assume Clean Fleet per SJVAPCD Rules (Tier III or better engines) and standard dust control measures.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	50
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	1.00	40.00
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tblConstructionPhase	PhaseEndDate	3/16/2016	12/23/2015
tblConstructionPhase	PhaseEndDate	7/4/2016	9/12/2016
tblConstructionPhase	PhaseEndDate	12/5/2016	12/23/2016
tblConstructionPhase	PhaseEndDate	2/17/2016	12/21/2015
tblConstructionPhase	PhaseEndDate	3/14/2016	2/17/2016
tblConstructionPhase	PhaseStartDate	2/18/2016	10/1/2015
tblConstructionPhase	PhaseStartDate	12/24/2015	10/1/2015
tblConstructionPhase	PhaseStartDate	12/22/2015	3/1/2016
tblConstructionPhase	PhaseStartDate	9/13/2016	10/1/2016
tblConstructionPhase	PhaseStartDate	12/24/2015	10/27/2015
tblConstructionPhase	PhaseStartDate	10/27/2015	10/1/2015
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tblGrading	MaterialImported	0.00	3,600.00
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tblOffRoadEquipment	HorsePower	226.00	400.00
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tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00

tblOffRoadEquipment	UsageHours	1.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
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tblTripsAndVMT	HaulingTripNumber	0.00	40.00
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tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	2.00	8.00
tblTripsAndVMT	VendorTripNumber	2.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00

tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	8.00
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tblTripsAndVMT	WorkerTripNumber	5.00	130.00
tblTripsAndVMT	WorkerTripNumber	28.00	100.00
tblTripsAndVMT	WorkerTripNumber	5.00	2,400.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	16.2122	153.4745	119.8880	0.2212	14.1648	7.0823	21.2470	4.5047	6.5236	11.0283	0.0000	21,824.4814	21,824.4814	3.8578	0.0000	21,905.4961
2016	17.4778	58.0487	188.5280	0.3516	23.0550	3.1508	26.2058	6.1196	2.9084	9.0279	0.0000	29,987.5088	29,987.5088	2.7529	0.0000	30,045.3186
Total	**33.6900**	**211.5233**	**308.4160**	**0.5728**	**37.2198**	**10.2330**	**47.4528**	**10.6243**	**9.4320**	**20.0563**	**0.0000**	**51,811.9902**	**51,811.9902**	**6.6107**	**0.0000**	**51,950.8147**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	6.1649	74.3359	114.9904	0.2212	9.2183	0.4878	9.5225	2.7533	0.4801	3.0718	0.0000	21,824.4814	21,824.4814	3.8578	0.0000	21,905.4961
2016	12.6495	40.2743	177.8858	0.3516	23.0550	0.4550	23.5100	6.1196	0.4376	6.5572	0.0000	29,987.5088	29,987.5088	2.7529	0.0000	30,045.3186
Total	**18.8143**	**114.6102**	**292.8762**	**0.5728**	**32.2733**	**0.9428**	**33.0325**	**8.8729**	**0.9177**	**9.6290**	**0.0000**	**51,811.9902**	**51,811.9902**	**6.6107**	**0.0000**	**51,950.8147**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**44.15**	**45.82**	**5.04**	**0.00**	**13.29**	**90.79**	**30.39**	**16.48**	**90.27**	**51.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Energy	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Mobile	0.4803	1.5877	5.1213	9.5500e-003	0.5238	0.0231	0.5469	0.1404	0.0212	0.1616		857.9742	857.9742	0.0280		858.5625
Total	**0.7907**	**1.6579**	**5.1815**	**9.9700e-003**	**0.5238**	**0.0284**	**0.5522**	**0.1404**	**0.0265**	**0.1669**		**942.1412**	**942.1412**	**0.0296**	**1.5400e-003**	**943.2419**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Energy	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Mobile	0.4803	1.5877	5.1213	9.5500e-003	0.5238	0.0231	0.5469	0.1404	0.0212	0.1616		857.9742	857.9742	0.0280		858.5625
Total	**0.7907**	**1.6579**	**5.1815**	**9.9700e-003**	**0.5238**	**0.0284**	**0.5522**	**0.1404**	**0.0265**	**0.1669**		**942.1412**	**942.1412**	**0.0296**	**1.5400e-003**	**943.2419**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1a - Site Preparation	Site Preparation	9/1/2015	10/26/2015	5	40	
2	2 - Trenching - Underground work	Trenching	10/1/2015	2/17/2016	5	100	
3	4 - Building Construction - substation	Building Construction	10/1/2015	12/23/2015	5	60	
4	5 - Building Construction - Tie Line	Building Construction	10/1/2015	12/23/2015	5	60	
5	1b - Grading	Grading	10/27/2015	12/21/2015	5	40	
6	3 - Construction - System Installation	Building Construction	3/1/2016	9/12/2016	5	140	
7	6 - Building Construction - testing/cleanup/restoration	Building Construction	10/1/2016	12/23/2016	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1a - Site Preparation	Crawler Tractors	2	6.00	120	0.42
1a - Site Preparation	Crushing/Proc. Equipment	2	6.00	300	0.42
1a - Site Preparation	Tractors/Loaders/Backhoes	2	6.00	190	0.36
2 - Trenching - Underground work	Excavators	1	4.00	90	0.37
2 - Trenching - Underground work	Other Construction Equipment	3	6.00	180	0.42
2 - Trenching - Underground work	Plate Compactors	1	4.00	180	0.43
2 - Trenching - Underground work	Rollers	3	6.00	95	0.38
2 - Trenching - Underground work	Tractors/Loaders/Backhoes	3	4.00	90	0.37
2 - Trenching - Underground work	Trenchers	5	6.00	42	0.50
4 - Building Construction - substation	Aerial Lifts	1	4.00	60	0.31
4 - Building Construction - substation	Bore/Drill Rigs	1	4.00	238	0.50
4 - Building Construction - substation	Cranes	1	5.00	400	0.29
4 - Building Construction - substation	Excavators	1	6.00	42	0.50
4 - Building Construction - substation	Forklifts	2	4.00	90	0.20
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	4.00	90	0.37
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	6.00	190	0.36
5 - Building Construction - Tie Line	Cranes	1	4.00	400	0.29
5 - Building Construction - Tie Line	Crawler Tractors	1	4.00	147	0.44
5 - Building Construction - Tie Line	Forklifts	1	4.00	145	0.20
5 - Building Construction - Tie Line	Generator Sets	1	4.00	45	0.74
5 - Building Construction - Tie Line	Other Construction Equipment	1	4.00	238	0.42
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	90	0.37
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	190	0.42
1b - Grading	Graders	3	6.00	185	0.41

1b - Grading	Rollers	1	6.00	160	0.38
1b - Grading	Rubber Tired Dozers	1	6.00	158	0.40
1b - Grading	Scrapers	3	6.00	365	0.40
1b - Grading	Skid Steer Loaders	3	6.00	83	0.37
3 - Construction - System Installation	Aerial Lifts	5	4.00	110	0.31
3 - Construction - System Installation	Air compressors	1	6.00	49	0.48
3 - Construction - System Installation	Bore/Drill Rigs	7	6.00	49	0.40
3 - Construction - System Installation	Cranes	1	2.00	400	0.29
3 - Construction - System Installation	Forklifts	5	4.00	67	0.20
3 - Construction - System Installation	Other Construction Equipment	20	4.00	24	0.40
3 - Construction - System Installation	Skid Steer Loaders	12	4.00	80	0.40
6 - Building Construction - testing/cleanup/restoration	Graders	1	6.00	185	0.41
6 - Building Construction - testing/cleanup/restoration	Scrapers	2	6.00	365	0.40
6 - Building Construction - testing/cleanup/restoration	Tractors/Loaders/Backhoes	1	4.00	90	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1a - Site Preparation	6	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
2 - Trenching - Underground work	16	130.00	0.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
4 - Building Construction -	8	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
5 - Building Construction - Tie Line -	7	130.00	10.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
1b - Grading	11	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
3 - Construction - System Installation	51	2,400.00	6.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
6 - Building Construction -	4	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 1a - Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3256	0.0000	1.3256	0.1431	0.0000	0.1431			0.0000			0.0000
Off-Road	2.9624	29.6607	12.0180	0.0320		1.4845	1.4845		1.3948	1.3948		3,505.6954	3,505.6954	0.5877		3,518.0375
Total	**2.9624**	**29.6607**	**12.0180**	**0.0320**	**1.3256**	**1.4845**	**2.8101**	**0.1431**	**1.3948**	**1.5379**		**3,505.6954**	**3,505.6954**	**0.5877**		**3,518.0375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0195	0.2916	0.1727	7.4000e-004	0.0176	5.0400e-003	0.0227	4.8300e-003	4.6400e-003	9.4700e-003		75.8549	75.8549	6.0000e-004		75.8675
Vendor	0.5907	8.8856	4.4075	0.0214	0.6398	0.1909	0.8308	0.1825	0.1756	0.3581		2,181.2560	2,181.2560	0.0187		2,181.6496
Worker	0.5283	0.5687	6.9178	0.0122	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		1,036.7128	1,036.7128	0.0544		1,037.8550
Total	**1.1386**	**9.7459**	**11.4981**	**0.0344**	**1.6081**	**0.2035**	**1.8116**	**0.4394**	**0.1872**	**0.6266**		**3,293.8238**	**3,293.8238**	**0.0737**		**3,295.3721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5170	0.0000	0.5170	0.0558	0.0000	0.0558			0.0000			0.0000
Off-Road	0.9747	15.5877	19.4144	0.0320		0.2653	0.2653		0.2515	0.2515	0.0000	3,505.6954	3,505.6954	0.5877		3,518.0375
Total	**0.9747**	**15.5877**	**19.4144**	**0.0320**	**0.5170**	**0.2653**	**0.7823**	**0.0558**	**0.2515**	**0.3073**	**0.0000**	**3,505.6954**	**3,505.6954**	**0.5877**		**3,518.0375**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0195	0.2916	0.1727	7.4000e-004	0.0176	5.0400e-003	0.0227	4.8300e-003	4.6400e-003	9.4700e-003		75.8549	75.8549	6.0000e-004		75.8675
Vendor	0.5907	8.8856	4.4075	0.0214	0.6398	0.1909	0.8308	0.1825	0.1756	0.3581		2,181.2560	2,181.2560	0.0187		2,181.6496
Worker	0.5283	0.5687	6.9178	0.0122	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		1,036.7128	1,036.7128	0.0544		1,037.8550
Total	**1.1386**	**9.7459**	**11.4981**	**0.0344**	**1.6081**	**0.2035**	**1.8116**	**0.4394**	**0.1872**	**0.6266**		**3,293.8238**	**3,293.8238**	**0.0737**		**3,295.3721**

3.3 2 - Trenching - Underground work - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	3.3777	22.7430	17.3067	0.0203		1.8384	1.8384		1.6913	1.6913		2,134.0471	2,134.0471	0.6371		2,147.4262
Total	**3.3777**	**22.7430**	**17.3067**	**0.0203**		**1.8384**	**1.8384**		**1.6913**	**1.6913**		**2,134.0471**	**2,134.0471**	**0.6371**		**2,147.4262**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**0.6868**	**0.7393**	**8.9932**	**0.0159**	**1.2358**	**9.8100e-003**	**1.2456**	**0.3278**	**8.9500e-003**	**0.3367**		**1,347.7267**	**1,347.7267**	**0.0707**		**1,349.2115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5573	12.6292	15.2946	0.0203		-0.0060	-0.0060		5.9800e-003	5.9800e-003	0.0000	2,134.0471	2,134.0471	0.6371		2,147.4262
Total	**0.5573**	**12.6292**	**15.2946**	**0.0203**		**-0.0060**	**-0.0060**		**5.9800e-003**	**5.9800e-003**	**0.0000**	**2,134.0471**	**2,134.0471**	**0.6371**		**2,147.4262**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**0.6868**	**0.7393**	**8.9932**	**0.0159**	**1.2358**	**9.8100e-003**	**1.2456**	**0.3278**	**8.9500e-003**	**0.3367**		**1,347.7267**	**1,347.7267**	**0.0707**		**1,349.2115**

3.3 2 - Trenching - Underground work - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2064	21.5884	17.1529	0.0203		1.7216	1.7216		1.5839	1.5839		2,111.7335	2,111.7335	0.6370		2,125.1100
Total	**3.2064**	**21.5884**	**17.1529**	**0.0203**		**1.7216**	**1.7216**		**1.5839**	**1.5839**		**2,111.7335**	**2,111.7335**	**0.6370**		**2,125.1100**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6061	0.6540	7.9367	0.0159	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,297.7285	1,297.7285	0.0638		1,299.0688
Total	**0.6061**	**0.6540**	**7.9367**	**0.0159**	**1.2358**	**9.2400e-003**	**1.2451**	**0.3278**	**8.4700e-003**	**0.3362**		**1,297.7285**	**1,297.7285**	**0.0638**		**1,299.0688**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5683	12.7278	15.3019	0.0203		4.0500e-003	4.0500e-003		0.0152	0.0152	0.0000	2,111.7335	2,111.7335	0.6370		2,125.1100
Total	**0.5683**	**12.7278**	**15.3019**	**0.0203**		**4.0500e-003**	**4.0500e-003**		**0.0152**	**0.0152**	**0.0000**	**2,111.7335**	**2,111.7335**	**0.6370**		**2,125.1100**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6061	0.6540	7.9367	0.0159	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,297.7285	1,297.7285	0.0638		1,299.0688

Total	**0.6061**	**0.6540**	**7.9367**	**0.0159**	**1.2358**	**9.2400e-003**	**1.2451**	**0.3278**	**8.4700e-003**	**0.3362**		**1,297.7285**	**1,297.7285**	**0.0638**		**1,299.0688**

3.4 4 - Building Construction - substation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7998	21.2117	12.0455	0.0210		0.9973	0.9973		0.9175	0.9175		2,202.4705	2,202.4705	0.6575		2,216.2787
Total	**1.7998**	**21.2117**	**12.0455**	**0.0210**		**0.9973**	**0.9973**		**0.9175**	**0.9175**		**2,202.4705**	**2,202.4705**	**0.6575**		**2,216.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.3381	0.2002	8.6000e-004	0.0204	5.8400e-003	0.0263	5.6000e-003	5.3700e-003	0.0110		87.9478	87.9478	6.9000e-004		87.9623
Vendor	0.2954	4.4428	2.2038	0.0107	0.3199	0.0955	0.4154	0.0912	0.0878	0.1790		1,090.6280	1,090.6280	9.3700e-003		1,090.8248
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**1.0048**	**5.5202**	**11.3972**	**0.0275**	**1.5762**	**0.1111**	**1.6873**	**0.4246**	**0.1021**	**0.5267**		**2,526.3024**	**2,526.3024**	**0.0808**		**2,527.9986**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2330	7.7922	12.1749	0.0210		-0.1643	-0.1643		-0.1438	-0.1438	0.0000	2,202.4705	2,202.4705	0.6575		2,216.2787
Total	**0.2330**	**7.7922**	**12.1749**	**0.0210**		**-0.1643**	**-0.1643**		**-0.1438**	**-0.1438**	**0.0000**	**2,202.4705**	**2,202.4705**	**0.6575**		**2,216.2787**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.3381	0.2002	8.6000e-004	0.0204	5.8400e-003	0.0263	5.6000e-003	5.3700e-003	0.0110		87.9478	87.9478	6.9000e-004		87.9623
Vendor	0.2954	4.4428	2.2038	0.0107	0.3199	0.0955	0.4154	0.0912	0.0878	0.1790		1,090.6280	1,090.6280	9.3700e-003		1,090.8248
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**1.0048**	**5.5202**	**11.3972**	**0.0275**	**1.5762**	**0.1111**	**1.6873**	**0.4246**	**0.1021**	**0.5267**		**2,526.3024**	**2,526.3024**	**0.0808**		**2,527.9986**

3.5 5 - Building Construction - Tie Line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	1.7635	18.1249	10.5131	0.0159		0.8968	0.8968		0.8333	0.8333		1,622.8050	1,622.8050	0.4684		1,632.6418
Total	**1.7635**	**18.1249**	**10.5131**	**0.0159**		**0.8968**	**0.8968**		**0.8333**	**0.8333**		**1,622.8050**	**1,622.8050**	**0.4684**		**1,632.6418**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3692	5.5535	2.7547	0.0134	0.3999	0.1193	0.5192	0.1140	0.1098	0.2238		1,363.2850	1,363.2850	0.0117		1,363.5310
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**1.0560**	**6.2928**	**11.7479**	**0.0293**	**1.6357**	**0.1291**	**1.7649**	**0.4418**	**0.1187**	**0.5605**		**2,711.0117**	**2,711.0117**	**0.0824**		**2,712.7425**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2669	6.4287	9.6253	0.0159		-0.0608	-0.0608		-0.0506	-0.0506	0.0000	1,622.8050	1,622.8050	0.4684		1,632.6418
Total	**0.2669**	**6.4287**	**9.6253**	**0.0159**		**-0.0608**	**-0.0608**		**-0.0506**	**-0.0506**	**0.0000**	**1,622.8050**	**1,622.8050**	**0.4684**		**1,632.6418**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3692	5.5535	2.7547	0.0134	0.3999	0.1193	0.5192	0.1140	0.1098	0.2238		1,363.2850	1,363.2850	0.0117		1,363.5310
Worker	0.6868	0.7393	8.9932	0.0159	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,347.7267	1,347.7267	0.0707		1,349.2115
Total	**1.0560**	**6.2928**	**11.7479**	**0.0293**	**1.6357**	**0.1291**	**1.7649**	**0.4418**	**0.1187**	**0.5605**		**2,711.0117**	**2,711.0117**	**0.0824**		**2,712.7425**

3.6 1b - Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1090	0.0000	8.1090	2.8712	0.0000	2.8712			0.0000			0.0000
Off-Road	5.3851	69.0967	36.3864	0.0570		2.8963	2.8963		2.6646	2.6646		5,986.2944	5,986.2944	1.7872		6,023.8247
Total	**5.3851**	**69.0967**	**36.3864**	**0.0570**	**8.1090**	**2.8963**	**11.0053**	**2.8712**	**2.6646**	**5.5357**		**5,986.2944**	**5,986.2944**	**1.7872**		**6,023.8247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0195	0.2916	0.1727	7.4000e-004	0.0176	5.0400e-003	0.0227	4.8300e-003	4.6400e-003	9.4700e-003		75.8549	75.8549	6.0000e-004		75.8675
Vendor	0.5907	8.8856	4.4075	0.0214	0.6398	0.1909	0.8308	0.1825	0.1756	0.3581		2,181.2560	2,181.2560	0.0187		2,181.6496
Worker	0.5283	0.5687	6.9178	0.0122	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		1,036.7128	1,036.7128	0.0544		1,037.8550
Total	**1.1386**	**9.7459**	**11.4981**	**0.0344**	**1.6081**	**0.2035**	**1.8116**	**0.4394**	**0.1872**	**0.6266**		**3,293.8238**	**3,293.8238**	**0.0737**		**3,295.3721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1625	0.0000	3.1625	1.1198	0.0000	1.1198			0.0000			0.0000
Off-Road	1.2215	25.1877	34.2593	0.0570		0.0818	0.0818		0.0899	0.0899	0.0000	5,986.2944	5,986.2944	1.7872		6,023.8247
Total	**1.2215**	**25.1877**	**34.2593**	**0.0570**	**3.1625**	**0.0818**	**3.2443**	**1.1198**	**0.0899**	**1.2097**	**0.0000**	**5,986.2944**	**5,986.2944**	**1.7872**		**6,023.8247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0195	0.2916	0.1727	7.4000e-004	0.0176	5.0400e-003	0.0227	4.8300e-003	4.6400e-003	9.4700e-003		75.8549	75.8549	6.0000e-004		75.8675
Vendor	0.5907	8.8856	4.4075	0.0214	0.6398	0.1909	0.8308	0.1825	0.1756	0.3581		2,181.2560	2,181.2560	0.0187		2,181.6496
Worker	0.5283	0.5687	6.9178	0.0122	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		1,036.7128	1,036.7128	0.0544		1,037.8550

Total	**1.1386**	**9.7459**	**11.4981**	**0.0344**	**1.6081**	**0.2035**	**1.8116**	**0.4394**	**0.1872**	**0.6266**		**3,293.8238**	**3,293.8238**	**0.0737**		**3,295.3721**

3.7 3 - Construction - System Installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0930	43.1218	40.5345	0.0507		2.9199	2.9199		2.6966	2.6966		5,221.3317	5,221.3317	1.5683		5,254.2655
Total	**6.0930**	**43.1218**	**40.5345**	**0.0507**		**2.9199**	**2.9199**		**2.6966**	**2.6966**		**5,221.3317**	**5,221.3317**	**1.5683**		**5,254.2655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1954	2.8539	1.4693	8.0200e-003	0.2400	0.0603	0.3002	0.0684	0.0554	0.1239		808.1133	808.1133	6.2800e-003		808.2452
Worker	11.1895	12.0731	146.5242	0.2929	22.8151	0.1706	22.9857	6.0511	0.1563	6.2074		23,958.0637	23,958.0637	1.1783		23,982.8079
Total	**11.3848**	**14.9269**	**147.9936**	**0.3009**	**23.0550**	**0.2309**	**23.2859**	**6.1196**	**0.2117**	**6.3313**		**24,766.1771**	**24,766.1771**	**1.1846**		**24,791.0531**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2646	25.3474	29.8922	0.0507		0.2241	0.2241		0.2259	0.2259	0.0000	5,221.3317	5,221.3317	1.5683		5,254.2655
Total	**1.2646**	**25.3474**	**29.8922**	**0.0507**		**0.2241**	**0.2241**		**0.2259**	**0.2259**	**0.0000**	**5,221.3317**	**5,221.3317**	**1.5683**		**5,254.2655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1954	2.8539	1.4693	8.0200e-003	0.2400	0.0603	0.3002	0.0684	0.0554	0.1239		808.1133	808.1133	6.2800e-003		808.2452
Worker	11.1895	12.0731	146.5242	0.2929	22.8151	0.1706	22.9857	6.0511	0.1563	6.2074		23,958.0637	23,958.0637	1.1783		23,982.8079
Total	**11.3848**	**14.9269**	**147.9936**	**0.3009**	**23.0550**	**0.2309**	**23.2859**	**6.1196**	**0.2117**	**6.3313**		**24,766.1771**	**24,766.1771**	**1.1846**		**24,791.0531**

3.8 6 - Building Construction - testing/cleanup/restoration -

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3049	29.4300	16.5127	0.0252		1.1972	1.1972		1.1014	1.1014		2,619.3338	2,619.3338	0.7901		2,635.9255
Total	**2.3049**	**29.4300**	**16.5127**	**0.0252**		**1.1972**	**1.1972**		**1.1014**	**1.1014**		**2,619.3338**	**2,619.3338**	**0.7901**		**2,635.9255**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0202	0.2863	0.1826	8.6000e-004	0.0204	4.7800e-003	0.0252	5.6000e-003	4.4000e-003	0.0100		86.8462	86.8462	6.2000e-004		86.8593
Vendor	0.2605	3.8051	1.9591	0.0107	0.3199	0.0804	0.4003	0.0912	0.0739	0.1652		1,077.4845	1,077.4845	8.3700e-003		1,077.6603
Worker	0.6061	0.6540	7.9367	0.0159	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,297.7285	1,297.7285	0.0638		1,299.0688
Total	**0.8868**	**4.7454**	**10.0785**	**0.0274**	**1.5762**	**0.0944**	**1.6706**	**0.4246**	**0.0868**	**0.5114**		**2,462.0592**	**2,462.0592**	**0.0728**		**2,463.5883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5002	10.9727	14.0107	0.0252		-0.0133	-0.0133		-0.0059	-0.0059	0.0000	2,619.3337	2,619.3337	0.7901		2,635.9255
Total	**0.5002**	**10.9727**	**14.0107**	**0.0252**		**-0.0133**	**-0.0133**		**-0.0059**	**-0.0059**	**0.0000**	**2,619.3337**	**2,619.3337**	**0.7901**		**2,635.9255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0202	0.2863	0.1826	8.6000e-004	0.0204	4.7800e-003	0.0252	5.6000e-003	4.4000e-003	0.0100		86.8462	86.8462	6.2000e-004		86.8593
Vendor	0.2605	3.8051	1.9591	0.0107	0.3199	0.0804	0.4003	0.0912	0.0739	0.1652		1,077.4845	1,077.4845	8.3700e-003		1,077.6603
Worker	0.6061	0.6540	7.9367	0.0159	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,297.7285	1,297.7285	0.0638		1,299.0688
Total	**0.8868**	**4.7454**	**10.0785**	**0.0274**	**1.5762**	**0.0944**	**1.6706**	**0.4246**	**0.0868**	**0.5114**		**2,462.0592**	**2,462.0592**	**0.0728**		**2,463.5883**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4803	1.5877	5.1213	9.5500e-003	0.5238	0.0231	0.5469	0.1404	0.0212	0.1616		857.9742	857.9742	0.0280		858.5625
Unmitigated	0.4803	1.5877	5.1213	9.5500e-003	0.5238	0.0231	0.5469	0.1404	0.0212	0.1616		857.9742	857.9742	0.0280		858.5625

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

General Light Industry	83.64	15.84	8.16	184,430	184,430
Total	83.64	15.84	8.16	184,430	184,430

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.413014	0.062673	0.156172	0.176687	0.051255	0.007895	0.018867	0.100331	0.001803	0.001598	0.006448	0.000946	0.002310

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
NaturalGas Unmitigated	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	715.397	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Total		**7.7200e-003**	**0.0701**	**0.0589**	**4.2000e-004**		**5.3300e-003**	**5.3300e-003**		**5.3300e-003**	**5.3300e-003**		**84.1644**	**84.1644**	**1.6100e-003**	**1.5400e-003**	**84.6766**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0.715397	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Total		**7.7200e-003**	**0.0701**	**0.0589**	**4.2000e-004**		**5.3300e-003**	**5.3300e-003**		**5.3300e-003**	**5.3300e-003**		**84.1644**	**84.1644**	**1.6100e-003**	**1.5400e-003**	**84.6766**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003

Unmitigated	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0457					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2568					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Total	**0.3026**	**1.0000e-005**	**1.2600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.6300e-003**	**2.6300e-003**	**1.0000e-005**		**2.7800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0457					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2568					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Total	**0.3026**	**1.0000e-005**	**1.2600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.6300e-003**	**2.6300e-003**	**1.0000e-005**		**2.7800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

American Kings Solar Facility

San Joaquin Valley Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	12.00	1000sqft	0.28	12,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Small maintenance building.

Construction Phase - Project plans.

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per Project Plans

Trips and VMT - Per project plans. Assuming 1,200 workers during module installation phase.

On-road Fugitive Dust -

Grading - Per Project Plans

Vehicle Trips - No traffic.

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation - Assume Clean Fleet per SJVAPCD Rules (Tier III or better engines) and standard dust control measures.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	250
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	250
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	150	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	150	50
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	24.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	100.00	60.00
tblConstructionPhase	NumDays	100.00	60.00
tblConstructionPhase	NumDays	100.00	140.00
tblConstructionPhase	NumDays	100.00	60.00
tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	1.00	40.00
tblConstructionPhase	PhaseEndDate	5/11/2016	12/23/2015
tblConstructionPhase	PhaseEndDate	3/16/2016	12/23/2015
tblConstructionPhase	PhaseEndDate	7/4/2016	9/12/2016
tblConstructionPhase	PhaseEndDate	12/5/2016	12/23/2016
tblConstructionPhase	PhaseEndDate	2/17/2016	12/21/2015
tblConstructionPhase	PhaseEndDate	3/14/2016	2/17/2016
tblConstructionPhase	PhaseStartDate	2/18/2016	10/1/2015
tblConstructionPhase	PhaseStartDate	12/24/2015	10/1/2015
tblConstructionPhase	PhaseStartDate	12/22/2015	3/1/2016
tblConstructionPhase	PhaseStartDate	9/13/2016	10/1/2016
tblConstructionPhase	PhaseStartDate	12/24/2015	10/27/2015
tblConstructionPhase	PhaseStartDate	10/27/2015	10/1/2015
tblGrading	AcresOfGrading	30.00	50.00
tblGrading	MaterialImported	0.00	3,600.00
tblOffRoadEquipment	HorsePower	226.00	400.00
tblOffRoadEquipment	HorsePower	226.00	400.00
tblOffRoadEquipment	HorsePower	226.00	400.00
tblOffRoadEquipment	HorsePower	89.00	90.00

tblOffRoadEquipment	HorsePower	89.00	145.00
tblOffRoadEquipment	HorsePower	89.00	67.00
tblOffRoadEquipment	HorsePower	255.00	158.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	190.00
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tblOffRoadEquipment	HorsePower	174.00	185.00
tblOffRoadEquipment	HorsePower	174.00	185.00
tblOffRoadEquipment	HorsePower	171.00	180.00
tblOffRoadEquipment	HorsePower	171.00	238.00
tblOffRoadEquipment	HorsePower	171.00	24.00
tblOffRoadEquipment	HorsePower	8.00	180.00
tblOffRoadEquipment	HorsePower	80.00	95.00
tblOffRoadEquipment	HorsePower	80.00	160.00
tblOffRoadEquipment	HorsePower	361.00	365.00
tblOffRoadEquipment	HorsePower	361.00	365.00

tblOffRoadEquipment	HorsePower	64.00	83.00
tblOffRoadEquipment	HorsePower	64.00	80.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	80.00	42.00
tblOffRoadEquipment	LoadFactor	0.37	0.36
tblOffRoadEquipment	LoadFactor	0.37	0.42
tblOffRoadEquipment	LoadFactor	0.37	0.36
tblOffRoadEquipment	LoadFactor	0.50	0.40
tblOffRoadEquipment	LoadFactor	0.43	0.42
tblOffRoadEquipment	LoadFactor	0.43	0.44
tblOffRoadEquipment	LoadFactor	0.78	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.50
tblOffRoadEquipment	LoadFactor	0.42	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	LoadFactor	0.48	0.40
tblOffRoadEquipment	LoadFactor	0.37	0.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	4.00	5.00
tblOffRoadEquipment	UsageHours	4.00	2.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00

tblOffRoadEquipment	UsageHours	1.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripLength	20.00	35.00
tblTripsAndVMT	HaulingTripNumber	0.00	23.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	HaulingTripNumber	450.00	23.00
tblTripsAndVMT	HaulingTripNumber	0.00	40.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripLength	7.30	44.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	2.00	8.00
tblTripsAndVMT	VendorTripNumber	2.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00

tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	8.00
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripLength	10.80	12.50
tblTripsAndVMT	WorkerTripNumber	15.00	100.00
tblTripsAndVMT	WorkerTripNumber	40.00	130.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00
tblTripsAndVMT	WorkerTripNumber	28.00	100.00
tblTripsAndVMT	WorkerTripNumber	5.00	2,400.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	16.0432	155.3726	118.6075	0.2139	14.1648	7.0833	21.2481	4.5047	6.5246	11.0293	0.0000	21,205.9728	21,205.9728	3.8580	0.0000	21,286.9914
2016	16.0954	60.5548	171.4995	0.3159	23.0550	3.1509	26.2060	6.1196	2.9085	9.0281	0.0000	27,094.3733	27,094.3733	2.7529	0.0000	27,152.1838
Total	**32.1386**	**215.9274**	**290.1070**	**0.5298**	**37.2198**	**10.2342**	**47.4540**	**10.6243**	**9.4331**	**20.0574**	**0.0000**	**48,300.3461**	**48,300.3461**	**6.6109**	**0.0000**	**48,439.1752**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.9958	76.2340	113.7099	0.2139	9.2183	0.4889	9.5235	2.7533	0.4810	3.0728	0.0000	21,205.9727	21,205.9727	3.8580	0.0000	21,286.9914
2016	11.2671	42.7804	160.8573	0.3159	23.0550	0.4551	23.5101	6.1196	0.4378	6.5573	0.0000	27,094.3733	27,094.3733	2.7529	0.0000	27,152.1838
Total	**17.2629**	**119.0144**	**274.5672**	**0.5298**	**32.2733**	**0.9440**	**33.0337**	**8.8729**	**0.9188**	**9.6301**	**0.0000**	**48,300.3461**	**48,300.3461**	**6.6109**	**0.0000**	**48,439.1752**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**46.29**	**44.88**	**5.36**	**0.00**	**13.29**	**90.78**	**30.39**	**16.48**	**90.26**	**51.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Energy	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Mobile	0.4914	1.7244	5.9158	8.8500e-003	0.5238	0.0232	0.5470	0.1404	0.0213	0.1617		797.6722	797.6722	0.0281		798.2619
Total	**0.8018**	**1.7945**	**5.9760**	**9.2700e-003**	**0.5238**	**0.0286**	**0.5524**	**0.1404**	**0.0267**	**0.1671**		**881.8392**	**881.8392**	**0.0297**	**1.5400e-003**	**882.9413**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Energy	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Mobile	0.4914	1.7244	5.9158	8.8500e-003	0.5238	0.0232	0.5470	0.1404	0.0213	0.1617		797.6722	797.6722	0.0281		798.2619
Total	**0.8018**	**1.7945**	**5.9760**	**9.2700e-003**	**0.5238**	**0.0286**	**0.5524**	**0.1404**	**0.0267**	**0.1671**		**881.8392**	**881.8392**	**0.0297**	**1.5400e-003**	**882.9413**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1a - Site Preparation	Site Preparation	9/1/2015	10/26/2015	5	40	
2	2 - Trenching - Underground work	Trenching	10/1/2015	2/17/2016	5	100	
3	4 - Building Construction - substation	Building Construction	10/1/2015	12/23/2015	5	60	
4	5 - Building Construction - Tie Line	Building Construction	10/1/2015	12/23/2015	5	60	
5	1b - Grading	Grading	10/27/2015	12/21/2015	5	40	
6	3 - Construction - System Installation	Building Construction	3/1/2016	9/12/2016	5	140	
7	6 - Building Construction - testing/cleanup/restoration	Building Construction	10/1/2016	12/23/2016	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1a - Site Preparation	Crawler Tractors	2	6.00	120	0.42
1a - Site Preparation	Crushing/Proc. Equipment	2	6.00	300	0.42
1a - Site Preparation	Tractors/Loaders/Backhoes	2	6.00	190	0.36
2 - Trenching - Underground work	Excavators	1	4.00	90	0.37
2 - Trenching - Underground work	Other Construction Equipment	3	6.00	180	0.42
2 - Trenching - Underground work	Plate Compactors	1	4.00	180	0.43
2 - Trenching - Underground work	Rollers	3	6.00	95	0.38
2 - Trenching - Underground work	Tractors/Loaders/Backhoes	3	4.00	90	0.37
2 - Trenching - Underground work	Trenchers	5	6.00	42	0.50
4 - Building Construction - substation	Aerial Lifts	1	4.00	60	0.31
4 - Building Construction - substation	Bore/Drill Rigs	1	4.00	238	0.50
4 - Building Construction - substation	Cranes	1	5.00	400	0.29
4 - Building Construction - substation	Excavators	1	6.00	42	0.50
4 - Building Construction - substation	Forklifts	2	4.00	90	0.20
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	4.00	90	0.37
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	6.00	190	0.36
5 - Building Construction - Tie Line	Cranes	1	4.00	400	0.29
5 - Building Construction - Tie Line	Crawler Tractors	1	4.00	147	0.44
5 - Building Construction - Tie Line	Forklifts	1	4.00	145	0.20
5 - Building Construction - Tie Line	Generator Sets	1	4.00	45	0.74
5 - Building Construction - Tie Line	Other Construction Equipment	1	4.00	238	0.42
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	90	0.37
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	190	0.42
1b - Grading	Graders	3	6.00	185	0.41

1b - Grading	Rollers	1	6.00	160	0.38
1b - Grading	Rubber Tired Dozers	1	6.00	158	0.40
1b - Grading	Scrapers	3	6.00	365	0.40
1b - Grading	Skid Steer Loaders	3	6.00	83	0.37
3 - Construction - System Installation	Aerial Lifts	5	4.00	110	0.31
3 - Construction - System Installation	Air compressors	1	6.00	49	0.48
3 - Construction - System Installation	Bore/Drill Rigs	7	6.00	49	0.40
3 - Construction - System Installation	Cranes	1	2.00	400	0.29
3 - Construction - System Installation	Forklifts	5	4.00	67	0.20
3 - Construction - System Installation	Other Construction Equipment	20	4.00	24	0.40
3 - Construction - System Installation	Skid Steer Loaders	12	4.00	80	0.40
6 - Building Construction - testing/cleanup/restoration	Graders	1	6.00	185	0.41
6 - Building Construction - testing/cleanup/restoration	Scrapers	2	6.00	365	0.40
6 - Building Construction - testing/cleanup/restoration	Tractors/Loaders/Backhoes	1	4.00	90	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1a - Site Preparation	6	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
2 - Trenching - Underground work	16	130.00	0.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
4 - Building Construction -	8	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
5 - Building Construction - Tie Line -	7	130.00	10.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
1b - Grading	11	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
3 - Construction - System Installation	51	2,400.00	6.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
6 - Building Construction -	4	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 1a - Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3256	0.0000	1.3256	0.1431	0.0000	0.1431			0.0000			0.0000
Off-Road	2.9624	29.6607	12.0180	0.0320		1.4845	1.4845		1.3948	1.3948		3,505.6954	3,505.6954	0.5877		3,518.0375
Total	**2.9624**	**29.6607**	**12.0180**	**0.0320**	**1.3256**	**1.4845**	**2.8101**	**0.1431**	**1.3948**	**1.5379**		**3,505.6954**	**3,505.6954**	**0.5877**		**3,518.0375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.3116	0.2349	7.4000e-004	0.0176	5.0500e-003	0.0227	4.8300e-003	4.6400e-003	9.4800e-003		75.7524	75.7524	6.0000e-004		75.7650
Vendor	0.6511	9.5062	5.5384	0.0214	0.6398	0.1914	0.8312	0.1825	0.1761	0.3585		2,178.3332	2,178.3332	0.0188		2,178.7285
Worker	0.4663	0.6781	6.1387	0.0107	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		911.7993	911.7993	0.0544		912.9415
Total	**1.1400**	**10.4959**	**11.9119**	**0.0329**	**1.6081**	**0.2040**	**1.8121**	**0.4394**	**0.1876**	**0.6270**		**3,165.8849**	**3,165.8849**	**0.0738**		**3,167.4350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5170	0.0000	0.5170	0.0558	0.0000	0.0558			0.0000			0.0000
Off-Road	0.9747	15.5877	19.4144	0.0320		0.2653	0.2653		0.2515	0.2515	0.0000	3,505.6954	3,505.6954	0.5877		3,518.0375
Total	**0.9747**	**15.5877**	**19.4144**	**0.0320**	**0.5170**	**0.2653**	**0.7823**	**0.0558**	**0.2515**	**0.3073**	**0.0000**	**3,505.6954**	**3,505.6954**	**0.5877**		**3,518.0375**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.3116	0.2349	7.4000e-004	0.0176	5.0500e-003	0.0227	4.8300e-003	4.6400e-003	9.4800e-003		75.7524	75.7524	6.0000e-004		75.7650
Vendor	0.6511	9.5062	5.5384	0.0214	0.6398	0.1914	0.8312	0.1825	0.1761	0.3585		2,178.3332	2,178.3332	0.0188		2,178.7285
Worker	0.4663	0.6781	6.1387	0.0107	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		911.7993	911.7993	0.0544		912.9415
Total	**1.1400**	**10.4959**	**11.9119**	**0.0329**	**1.6081**	**0.2040**	**1.8121**	**0.4394**	**0.1876**	**0.6270**		**3,165.8849**	**3,165.8849**	**0.0738**		**3,167.4350**

3.3 2 - Trenching - Underground work - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	3.3777	22.7430	17.3067	0.0203		1.8384	1.8384		1.6913	1.6913		2,134.0471	2,134.0471	0.6371		2,147.4262
Total	**3.3777**	**22.7430**	**17.3067**	**0.0203**		**1.8384**	**1.8384**		**1.6913**	**1.6913**		**2,134.0471**	**2,134.0471**	**0.6371**		**2,147.4262**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**0.6062**	**0.8815**	**7.9803**	**0.0140**	**1.2358**	**9.8100e-003**	**1.2456**	**0.3278**	**8.9500e-003**	**0.3367**		**1,185.3391**	**1,185.3391**	**0.0707**		**1,186.8240**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5573	12.6292	15.2946	0.0203		-0.0060	-0.0060		5.9800e-003	5.9800e-003	0.0000	2,134.0471	2,134.0471	0.6371		2,147.4262
Total	**0.5573**	**12.6292**	**15.2946**	**0.0203**		**-0.0060**	**-0.0060**		**5.9800e-003**	**5.9800e-003**	**0.0000**	**2,134.0471**	**2,134.0471**	**0.6371**		**2,147.4262**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**0.6062**	**0.8815**	**7.9803**	**0.0140**	**1.2358**	**9.8100e-003**	**1.2456**	**0.3278**	**8.9500e-003**	**0.3367**		**1,185.3391**	**1,185.3391**	**0.0707**		**1,186.8240**

3.3 2 - Trenching - Underground work - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2064	21.5884	17.1529	0.0203		1.7216	1.7216		1.5839	1.5839		2,111.7335	2,111.7335	0.6370		2,125.1100
Total	**3.2064**	**21.5884**	**17.1529**	**0.0203**		**1.7216**	**1.7216**		**1.5839**	**1.5839**		**2,111.7335**	**2,111.7335**	**0.6370**		**2,125.1100**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5302	0.7789	6.9920	0.0139	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,141.0760	1,141.0760	0.0638		1,142.4163
Total	**0.5302**	**0.7789**	**6.9920**	**0.0139**	**1.2358**	**9.2400e-003**	**1.2451**	**0.3278**	**8.4700e-003**	**0.3362**		**1,141.0760**	**1,141.0760**	**0.0638**		**1,142.4163**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5683	12.7278	15.3019	0.0203		4.0500e-003	4.0500e-003		0.0152	0.0152	0.0000	2,111.7335	2,111.7335	0.6370		2,125.1100
Total	**0.5683**	**12.7278**	**15.3019**	**0.0203**		**4.0500e-003**	**4.0500e-003**		**0.0152**	**0.0152**	**0.0000**	**2,111.7335**	**2,111.7335**	**0.6370**		**2,125.1100**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5302	0.7789	6.9920	0.0139	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,141.0760	1,141.0760	0.0638		1,142.4163

Total	**0.5302**	**0.7789**	**6.9920**	**0.0139**	**1.2358**	**9.2400e-003**	**1.2451**	**0.3278**	**8.4700e-003**	**0.3362**		**1,141.0760**	**1,141.0760**	**0.0638**		**1,142.4163**

3.4 4 - Building Construction - substation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7998	21.2117	12.0455	0.0210		0.9973	0.9973		0.9175	0.9175		2,202.4705	2,202.4705	0.6575		2,216.2787
Total	**1.7998**	**21.2117**	**12.0455**	**0.0210**		**0.9973**	**0.9973**		**0.9175**	**0.9175**		**2,202.4705**	**2,202.4705**	**0.6575**		**2,216.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0262	0.3613	0.2723	8.6000e-004	0.0204	5.8600e-003	0.0263	5.6000e-003	5.3900e-003	0.0110		87.8289	87.8289	7.0000e-004		87.8435
Vendor	0.3255	4.7531	2.7692	0.0107	0.3199	0.0957	0.4156	0.0912	0.0880	0.1793		1,089.1666	1,089.1666	9.4100e-003		1,089.3643
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**0.9580**	**5.9959**	**11.0218**	**0.0255**	**1.5762**	**0.1114**	**1.6875**	**0.4246**	**0.1024**	**0.5270**		**2,362.3345**	**2,362.3345**	**0.0808**		**2,364.0317**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2330	7.7922	12.1749	0.0210		-0.1643	-0.1643		-0.1438	-0.1438	0.0000	2,202.4705	2,202.4705	0.6575		2,216.2787
Total	**0.2330**	**7.7922**	**12.1749**	**0.0210**		**-0.1643**	**-0.1643**		**-0.1438**	**-0.1438**	**0.0000**	**2,202.4705**	**2,202.4705**	**0.6575**		**2,216.2787**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0262	0.3613	0.2723	8.6000e-004	0.0204	5.8600e-003	0.0263	5.6000e-003	5.3900e-003	0.0110		87.8289	87.8289	7.0000e-004		87.8435
Vendor	0.3255	4.7531	2.7692	0.0107	0.3199	0.0957	0.4156	0.0912	0.0880	0.1793		1,089.1666	1,089.1666	9.4100e-003		1,089.3643
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**0.9580**	**5.9959**	**11.0218**	**0.0255**	**1.5762**	**0.1114**	**1.6875**	**0.4246**	**0.1024**	**0.5270**		**2,362.3345**	**2,362.3345**	**0.0808**		**2,364.0317**

3.5 5 - Building Construction - Tie Line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	1.7635	18.1249	10.5131	0.0159		0.8968	0.8968		0.8333	0.8333		1,622.8050	1,622.8050	0.4684		1,632.6418
Total	**1.7635**	**18.1249**	**10.5131**	**0.0159**		**0.8968**	**0.8968**		**0.8333**	**0.8333**		**1,622.8050**	**1,622.8050**	**0.4684**		**1,632.6418**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4069	5.9414	3.4615	0.0134	0.3999	0.1196	0.5195	0.1140	0.1100	0.2241		1,361.4582	1,361.4582	0.0118		1,361.7053
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**1.0131**	**6.8229**	**11.4418**	**0.0273**	**1.6357**	**0.1294**	**1.7652**	**0.4418**	**0.1190**	**0.5608**		**2,546.7973**	**2,546.7973**	**0.0825**		**2,548.5293**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2669	6.4287	9.6253	0.0159		-0.0608	-0.0608		-0.0506	-0.0506	0.0000	1,622.8050	1,622.8050	0.4684		1,632.6418
Total	**0.2669**	**6.4287**	**9.6253**	**0.0159**		**-0.0608**	**-0.0608**		**-0.0506**	**-0.0506**	**0.0000**	**1,622.8050**	**1,622.8050**	**0.4684**		**1,632.6418**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4069	5.9414	3.4615	0.0134	0.3999	0.1196	0.5195	0.1140	0.1100	0.2241		1,361.4582	1,361.4582	0.0118		1,361.7053
Worker	0.6062	0.8815	7.9803	0.0140	1.2358	9.8100e-003	1.2456	0.3278	8.9500e-003	0.3367		1,185.3391	1,185.3391	0.0707		1,186.8240
Total	**1.0131**	**6.8229**	**11.4418**	**0.0273**	**1.6357**	**0.1294**	**1.7652**	**0.4418**	**0.1190**	**0.5608**		**2,546.7973**	**2,546.7973**	**0.0825**		**2,548.5293**

3.6 1b - Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1090	0.0000	8.1090	2.8712	0.0000	2.8712			0.0000			0.0000
Off-Road	5.3851	69.0967	36.3864	0.0570		2.8963	2.8963		2.6646	2.6646		5,986.2944	5,986.2944	1.7872		6,023.8247
Total	**5.3851**	**69.0967**	**36.3864**	**0.0570**	**8.1090**	**2.8963**	**11.0053**	**2.8712**	**2.6646**	**5.5357**		**5,986.2944**	**5,986.2944**	**1.7872**		**6,023.8247**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0226	0.3116	0.2349	7.4000e-004	0.0176	5.0500e-003	0.0227	4.8300e-003	4.6400e-003	9.4800e-003		75.7524	75.7524	6.0000e-004		75.7650
Vendor	0.6511	9.5062	5.5384	0.0214	0.6398	0.1914	0.8312	0.1825	0.1761	0.3585		2,178.3332	2,178.3332	0.0188		2,178.7285
Worker	0.4663	0.6781	6.1387	0.0107	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		911.7993	911.7993	0.0544		912.9415
Total	**1.1400**	**10.4959**	**11.9119**	**0.0329**	**1.6081**	**0.2040**	**1.8121**	**0.4394**	**0.1876**	**0.6270**		**3,165.8849**	**3,165.8849**	**0.0738**		**3,167.4350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1625	0.0000	3.1625	1.1198	0.0000	1.1198			0.0000			0.0000
Off-Road	1.2215	25.1877	34.2593	0.0570		0.0818	0.0818		0.0899	0.0899	0.0000	5,986.2944	5,986.2944	1.7872		6,023.8247
Total	**1.2215**	**25.1877**	**34.2593**	**0.0570**	**3.1625**	**0.0818**	**3.2443**	**1.1198**	**0.0899**	**1.2097**	**0.0000**	**5,986.2944**	**5,986.2944**	**1.7872**		**6,023.8247**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.3116	0.2349	7.4000e-004	0.0176	5.0500e-003	0.0227	4.8300e-003	4.6400e-003	9.4800e-003		75.7524	75.7524	6.0000e-004		75.7650
Vendor	0.6511	9.5062	5.5384	0.0214	0.6398	0.1914	0.8312	0.1825	0.1761	0.3585		2,178.3332	2,178.3332	0.0188		2,178.7285
Worker	0.4663	0.6781	6.1387	0.0107	0.9506	7.5500e-003	0.9582	0.2521	6.8900e-003	0.2590		911.7993	911.7993	0.0544		912.9415

Total	**1.1400**	**10.4959**	**11.9119**	**0.0329**	**1.6081**	**0.2040**	**1.8121**	**0.4394**	**0.1876**	**0.6270**		**3,165.8849**	**3,165.8849**	**0.0738**		**3,167.4350**

3.7 3 - Construction - System Installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0930	43.1218	40.5345	0.0507		2.9199	2.9199		2.6966	2.6966		5,221.3317	5,221.3317	1.5683		5,254.2655
Total	**6.0930**	**43.1218**	**40.5345**	**0.0507**		**2.9199**	**2.9199**		**2.6966**	**2.6966**		**5,221.3317**	**5,221.3317**	**1.5683**		**5,254.2655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2149	3.0526	1.8817	8.0200e-003	0.2400	0.0604	0.3004	0.0684	0.0556	0.1240		807.0241	807.0241	6.3100e-003		807.1566
Worker	9.7876	14.3804	129.0834	0.2572	22.8151	0.1706	22.9857	6.0511	0.1563	6.2074		21,066.0175	21,066.0175	1.1783		21,090.7617
Total	**10.0025**	**17.4330**	**130.9651**	**0.2653**	**23.0550**	**0.2310**	**23.2860**	**6.1196**	**0.2119**	**6.3314**		**21,873.0416**	**21,873.0416**	**1.1846**		**21,897.9183**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2646	25.3474	29.8922	0.0507		0.2241	0.2241		0.2259	0.2259	0.0000	5,221.3317	5,221.3317	1.5683		5,254.2655
Total	**1.2646**	**25.3474**	**29.8922**	**0.0507**		**0.2241**	**0.2241**		**0.2259**	**0.2259**	**0.0000**	**5,221.3317**	**5,221.3317**	**1.5683**		**5,254.2655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2149	3.0526	1.8817	8.0200e-003	0.2400	0.0604	0.3004	0.0684	0.0556	0.1240		807.0241	807.0241	6.3100e-003		807.1566
Worker	9.7876	14.3804	129.0834	0.2572	22.8151	0.1706	22.9857	6.0511	0.1563	6.2074		21,066.0175	21,066.0175	1.1783		21,090.7617
Total	**10.0025**	**17.4330**	**130.9651**	**0.2653**	**23.0550**	**0.2310**	**23.2860**	**6.1196**	**0.2119**	**6.3314**		**21,873.0416**	**21,873.0416**	**1.1846**		**21,897.9183**

3.8 6 - Building Construction - testing/cleanup/restoration -

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	2.3049	29.4300	16.5127	0.0252		1.1972	1.1972		1.1014	1.1014		2,619.3338	2,619.3338	0.7901		2,635.9255
Total	**2.3049**	**29.4300**	**16.5127**	**0.0252**		**1.1972**	**1.1972**		**1.1014**	**1.1014**		**2,619.3338**	**2,619.3338**	**0.7901**		**2,635.9255**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0233	0.3059	0.2537	8.6000e-004	0.0204	4.7900e-003	0.0252	5.6000e-003	4.4000e-003	0.0100		86.7285	86.7285	6.3000e-004		86.7416
Vendor	0.2865	4.0701	2.5089	0.0107	0.3199	0.0806	0.4005	0.0912	0.0741	0.1653		1,076.0321	1,076.0321	8.4100e-003		1,076.2088
Worker	0.5302	0.7789	6.9920	0.0139	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,141.0760	1,141.0760	0.0638		1,142.4163
Total	**0.8399**	**5.1550**	**9.7546**	**0.0255**	**1.5762**	**0.0946**	**1.6708**	**0.4246**	**0.0870**	**0.5116**		**2,303.8365**	**2,303.8365**	**0.0729**		**2,305.3667**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5002	10.9727	14.0107	0.0252		-0.0133	-0.0133		-0.0059	-0.0059	0.0000	2,619.3337	2,619.3337	0.7901		2,635.9255
Total	**0.5002**	**10.9727**	**14.0107**	**0.0252**		**-0.0133**	**-0.0133**		**-0.0059**	**-0.0059**	**0.0000**	**2,619.3337**	**2,619.3337**	**0.7901**		**2,635.9255**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0233	0.3059	0.2537	8.6000e-004	0.0204	4.7900e-003	0.0252	5.6000e-003	4.4000e-003	0.0100		86.7285	86.7285	6.3000e-004		86.7416
Vendor	0.2865	4.0701	2.5089	0.0107	0.3199	0.0806	0.4005	0.0912	0.0741	0.1653		1,076.0321	1,076.0321	8.4100e-003		1,076.2088
Worker	0.5302	0.7789	6.9920	0.0139	1.2358	9.2400e-003	1.2451	0.3278	8.4700e-003	0.3362		1,141.0760	1,141.0760	0.0638		1,142.4163
Total	**0.8399**	**5.1550**	**9.7546**	**0.0255**	**1.5762**	**0.0946**	**1.6708**	**0.4246**	**0.0870**	**0.5116**		**2,303.8365**	**2,303.8365**	**0.0729**		**2,305.3667**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4914	1.7244	5.9158	8.8500e-003	0.5238	0.0232	0.5470	0.1404	0.0213	0.1617		797.6722	797.6722	0.0281		798.2619
Unmitigated	0.4914	1.7244	5.9158	8.8500e-003	0.5238	0.0232	0.5470	0.1404	0.0213	0.1617		797.6722	797.6722	0.0281		798.2619

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

General Light Industry	83.64	15.84	8.16	184,430	184,430
Total	83.64	15.84	8.16	184,430	184,430

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.413014	0.062673	0.156172	0.176687	0.051255	0.007895	0.018867	0.100331	0.001803	0.001598	0.006448	0.000946	0.002310

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
NaturalGas Unmitigated	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	715.397	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Total		**7.7200e-003**	**0.0701**	**0.0589**	**4.2000e-004**		**5.3300e-003**	**5.3300e-003**		**5.3300e-003**	**5.3300e-003**		**84.1644**	**84.1644**	**1.6100e-003**	**1.5400e-003**	**84.6766**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0.715397	7.7200e-003	0.0701	0.0589	4.2000e-004		5.3300e-003	5.3300e-003		5.3300e-003	5.3300e-003		84.1644	84.1644	1.6100e-003	1.5400e-003	84.6766
Total		**7.7200e-003**	**0.0701**	**0.0589**	**4.2000e-004**		**5.3300e-003**	**5.3300e-003**		**5.3300e-003**	**5.3300e-003**		**84.1644**	**84.1644**	**1.6100e-003**	**1.5400e-003**	**84.6766**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003

Unmitigated	0.3026	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0457					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2568					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Total	**0.3026**	**1.0000e-005**	**1.2600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.6300e-003**	**2.6300e-003**	**1.0000e-005**		**2.7800e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0457					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2568					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2600e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.6300e-003	2.6300e-003	1.0000e-005		2.7800e-003
Total	**0.3026**	**1.0000e-005**	**1.2600e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.6300e-003**	**2.6300e-003**	**1.0000e-005**		**2.7800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

American Kings Solar Facility

San Joaquin Valley Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	12.00	1000sqft	0.28	12,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Small maintenance building.

Construction Phase - Project plans.

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per project plans

Off-road Equipment - Per Project Plans

Trips and VMT - Per project plans. Assuming 1,200 workers during module installation phase.

On-road Fugitive Dust -

Grading - Per Project Plans

Vehicle Trips - No traffic.

Consumer Products -

Area Coating -

Construction Off-road Equipment Mitigation - Assume Clean Fleet per SJVAPCD Rules (Tier III or better engines) and standard dust control measures.

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	150	250
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tblTripsAndVMT	WorkerTripNumber	5.00	130.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00
tblTripsAndVMT	WorkerTripNumber	28.00	100.00
tblTripsAndVMT	WorkerTripNumber	5.00	2,400.00
tblTripsAndVMT	WorkerTripNumber	5.00	130.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.5051	4.7165	3.5689	6.9800e-003	0.3850	0.2208	0.6058	0.1134	0.2039	0.3173	0.0000	629.2734	629.2734	0.1020	0.0000	631.4163
2016	1.2664	5.5585	13.1308	0.0249	1.6372	0.2887	1.9259	0.4357	0.2663	0.7020	0.0000	1,956.6692	1,956.6692	0.2091	0.0000	1,961.0605
Total	**1.7714**	**10.2750**	**16.6997**	**0.0319**	**2.0222**	**0.5095**	**2.5317**	**0.5491**	**0.4703**	**1.0193**	**0.0000**	**2,585.9426**	**2,585.9426**	**0.3112**	**0.0000**	**2,592.4768**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1971	2.4696	3.5851	6.9800e-003	0.2699	0.0157	0.2855	0.0766	0.0156	0.0922	0.0000	629.2730	629.2730	0.1020	0.0000	631.4159
2016	0.8294	3.6099	12.2794	0.0249	1.6372	0.0345	1.6717	0.4357	0.0335	0.4691	0.0000	1,956.6687	1,956.6687	0.2091	0.0000	1,961.0600
Total	**1.0265**	**6.0795**	**15.8644**	**0.0319**	**1.9071**	**0.0502**	**1.9573**	**0.5123**	**0.0491**	**0.5614**	**0.0000**	**2,585.9417**	**2,585.9417**	**0.3112**	**0.0000**	**2,592.4758**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**42.05**	**40.83**	**5.00**	**0.00**	**5.69**	**90.15**	**22.69**	**6.70**	**89.56**	**44.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0552	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004
Energy	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	47.6568	47.6568	1.7900e-003	5.7000e-004	47.8714
Mobile	0.0629	0.2295	0.7215	1.2400e-003	0.0701	3.1700e-003	0.0733	0.0188	2.9200e-003	0.0218	0.0000	101.4713	101.4713	3.4900e-003	0.0000	101.5446
Waste						0.0000	0.0000		0.0000	0.0000	3.0205	0.0000	3.0205	0.1785	0.0000	6.7692
Water						0.0000	0.0000		0.0000	0.0000	0.8804	4.3682	5.2486	0.0906	2.1800e-003	7.8262

Total	**0.1195**	**0.2423**	**0.7323**	**1.3200e-003**	**0.0701**	**4.1400e-003**	**0.0743**	**0.0188**	**3.8900e-003**	**0.0227**	**3.9009**	**153.4965**	**157.3974**	**0.2744**	**2.7500e-003**	**164.0116**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0552	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004
Energy	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	47.6568	47.6568	1.7900e-003	5.7000e-004	47.8714
Mobile	0.0629	0.2295	0.7215	1.2400e-003	0.0701	3.1700e-003	0.0733	0.0188	2.9200e-003	0.0218	0.0000	101.4713	101.4713	3.4900e-003	0.0000	101.5446
Waste						0.0000	0.0000		0.0000	0.0000	3.0205	0.0000	3.0205	0.1785	0.0000	6.7692
Water						0.0000	0.0000		0.0000	0.0000	0.8804	4.3682	5.2486	0.0906	2.1700e-003	7.8248
Total	**0.1195**	**0.2423**	**0.7323**	**1.3200e-003**	**0.0701**	**4.1400e-003**	**0.0743**	**0.0188**	**3.8900e-003**	**0.0227**	**3.9009**	**153.4965**	**157.3974**	**0.2744**	**2.7400e-003**	**164.0102**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.36**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1a - Site Preparation	Site Preparation	9/1/2015	10/26/2015	5	40	
2	2 - Trenching - Underground work	Trenching	10/1/2015	2/17/2016	5	100	
3	4 - Building Construction - substation	Building Construction	10/1/2015	12/23/2015	5	60	
4	5 - Building Construction - Tie Line	Building Construction	10/1/2015	12/23/2015	5	60	

5	1b - Grading	Grading	10/27/2015	12/21/2015	5	40	
6	3 - Construction - System Installation	Building Construction	3/1/2016	9/12/2016	5	140	
7	6 - Building Construction - testing/cleanup/restoration	Building Construction	10/1/2016	12/23/2016	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1a - Site Preparation	Crawler Tractors	2	6.00	120	0.42
1a - Site Preparation	Crushing/Proc. Equipment	2	6.00	300	0.42
1a - Site Preparation	Tractors/Loaders/Backhoes	2	6.00	190	0.36
2 - Trenching - Underground work	Excavators	1	4.00	90	0.37
2 - Trenching - Underground work	Other Construction Equipment	3	6.00	180	0.42
2 - Trenching - Underground work	Plate Compactors	1	4.00	180	0.43
2 - Trenching - Underground work	Rollers	3	6.00	95	0.38
2 - Trenching - Underground work	Tractors/Loaders/Backhoes	3	4.00	90	0.37
2 - Trenching - Underground work	Trenchers	5	6.00	42	0.50
4 - Building Construction - substation	Aerial Lifts	1	4.00	60	0.31
4 - Building Construction - substation	Bore/Drill Rigs	1	4.00	238	0.50
4 - Building Construction - substation	Cranes	1	5.00	400	0.29
4 - Building Construction - substation	Excavators	1	6.00	42	0.50
4 - Building Construction - substation	Forklifts	2	4.00	90	0.20
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	4.00	90	0.37
4 - Building Construction - substation	Tractors/Loaders/Backhoes	1	6.00	190	0.36
5 - Building Construction - Tie Line	Cranes	1	4.00	400	0.29
5 - Building Construction - Tie Line	Crawler Tractors	1	4.00	147	0.44
5 - Building Construction - Tie Line	Forklifts	1	4.00	145	0.20

5 - Building Construction - Tie Line	Generator Sets	1	4.00	45	0.74
5 - Building Construction - Tie Line	Other Construction Equipment	1	4.00	238	0.42
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	90	0.37
5 - Building Construction - Tie Line	Tractors/Loaders/Backhoes	1	4.00	190	0.42
1b - Grading	Graders	3	6.00	185	0.41
1b - Grading	Rollers	1	6.00	160	0.38
1b - Grading	Rubber Tired Dozers	1	6.00	158	0.40
1b - Grading	Scrapers	3	6.00	365	0.40
1b - Grading	Skid Steer Loaders	3	6.00	83	0.37
3 - Construction - System Installation	Aerial Lifts	5	4.00	110	0.31
3 - Construction - System Installation	Air compressors	1	6.00	49	0.48
3 - Construction - System Installation	Bore/Drill Rigs	7	6.00	49	0.40
3 - Construction - System Installation	Cranes	1	2.00	400	0.29
3 - Construction - System Installation	Forklifts	5	4.00	67	0.20
3 - Construction - System Installation	Other Construction Equipment	20	4.00	24	0.40
3 - Construction - System Installation	Skid Steer Loaders	12	4.00	80	0.40
6 - Building Construction - testing/cleanup/restoration	Graders	1	6.00	185	0.41
6 - Building Construction - testing/cleanup/restoration	Scrapers	2	6.00	365	0.40
6 - Building Construction - testing/cleanup/restoration	Tractors/Loaders/Backhoes	1	4.00	90	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1a - Site Preparation	6	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
2 - Trenching - Underground work	16	130.00	0.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
4 - Building Construction -	8	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
5 - Building Construction - Tie Line	7	130.00	10.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
1b - Grading	11	100.00	16.00	23.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
3 - Construction - System Installation	51	2,400.00	6.00	0.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT
6 - Building Construction -	4	130.00	8.00	40.00	12.50	44.00	35.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 1a - Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0265	0.0000	0.0265	2.8600e-003	0.0000	2.8600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0593	0.5932	0.2404	6.4000e-004		0.0297	0.0297		0.0279	0.0279	0.0000	63.6063	63.6063	0.0107	0.0000	63.8302
Total	**0.0593**	**0.5932**	**0.2404**	**6.4000e-004**	**0.0265**	**0.0297**	**0.0562**	**2.8600e-003**	**0.0279**	**0.0308**	**0.0000**	**63.6063**	**63.6063**	**0.0107**	**0.0000**	**63.8302**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1000e-004	6.1200e-003	3.9800e-003	1.0000e-005	3.4000e-004	1.0000e-004	4.5000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3755	1.3755	1.0000e-005	0.0000	1.3757
Vendor	0.0123	0.1867	0.0973	4.3000e-004	0.0125	3.8200e-003	0.0163	3.5800e-003	3.5200e-003	7.0900e-003	0.0000	39.5538	39.5538	3.4000e-004	0.0000	39.5609
Worker	9.0700e-003	0.0124	0.1217	2.2000e-004	0.0185	1.5000e-004	0.0187	4.9200e-003	1.4000e-004	5.0600e-003	0.0000	17.1612	17.1612	9.9000e-004	0.0000	17.1819

Total	**0.0217**	**0.2052**	**0.2230**	**6.6000e-004**	**0.0314**	**4.0700e-003**	**0.0354**	**8.5900e-003**	**3.7500e-003**	**0.0123**	**0.0000**	**58.0905**	**58.0905**	**1.3400e-003**	**0.0000**	**58.1186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0103	0.0000	0.0103	1.1200e-003	0.0000	1.1200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.3118	0.3883	6.4000e-004		5.3100e-003	5.3100e-003		5.0300e-003	5.0300e-003	0.0000	63.6062	63.6062	0.0107	0.0000	63.8301
Total	**0.0195**	**0.3118**	**0.3883**	**6.4000e-004**	**0.0103**	**5.3100e-003**	**0.0157**	**1.1200e-003**	**5.0300e-003**	**6.1500e-003**	**0.0000**	**63.6062**	**63.6062**	**0.0107**	**0.0000**	**63.8301**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1000e-004	6.1200e-003	3.9800e-003	1.0000e-005	3.4000e-004	1.0000e-004	4.5000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3755	1.3755	1.0000e-005	0.0000	1.3757
Vendor	0.0123	0.1867	0.0973	4.3000e-004	0.0125	3.8200e-003	0.0163	3.5800e-003	3.5200e-003	7.0900e-003	0.0000	39.5538	39.5538	3.4000e-004	0.0000	39.5609
Worker	9.0700e-003	0.0124	0.1217	2.2000e-004	0.0185	1.5000e-004	0.0187	4.9200e-003	1.4000e-004	5.0600e-003	0.0000	17.1612	17.1612	9.9000e-004	0.0000	17.1819
Total	**0.0217**	**0.2052**	**0.2230**	**6.6000e-004**	**0.0314**	**4.0700e-003**	**0.0354**	**8.5900e-003**	**3.7500e-003**	**0.0123**	**0.0000**	**58.0905**	**58.0905**	**1.3400e-003**	**0.0000**	**58.1186**

3.3 2 - Trenching - Underground work - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1115	0.7505	0.5711	6.7000e-004		0.0607	0.0607		0.0558	0.0558	0.0000	63.8872	63.8872	0.0191	0.0000	64.2877
Total	**0.1115**	**0.7505**	**0.5711**	**6.7000e-004**		**0.0607**	**0.0607**		**0.0558**	**0.0558**	**0.0000**	**63.8872**	**63.8872**	**0.0191**	**0.0000**	**64.2877**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0195	0.0265	0.2611	4.8000e-004	0.0397	3.2000e-004	0.0400	0.0106	3.0000e-004	0.0108	0.0000	36.8108	36.8108	2.1200e-003	0.0000	36.8552
Total	**0.0195**	**0.0265**	**0.2611**	**4.8000e-004**	**0.0397**	**3.2000e-004**	**0.0400**	**0.0106**	**3.0000e-004**	**0.0108**	**0.0000**	**36.8108**	**36.8108**	**2.1200e-003**	**0.0000**	**36.8552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0184	0.4168	0.5047	6.7000e-004		-0.0002	-0.0002		2.0000e-004	2.0000e-004	0.0000	63.8871	63.8871	0.0191	0.0000	64.2876
Total	**0.0184**	**0.4168**	**0.5047**	**6.7000e-004**		**-0.0002**	**-0.0002**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**63.8871**	**63.8871**	**0.0191**	**0.0000**	**64.2876**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0195	0.0265	0.2611	4.8000e-004	0.0397	3.2000e-004	0.0400	0.0106	3.0000e-004	0.0108	0.0000	36.8108	36.8108	2.1200e-003	0.0000	36.8552
Total	**0.0195**	**0.0265**	**0.2611**	**4.8000e-004**	**0.0397**	**3.2000e-004**	**0.0400**	**0.0106**	**3.0000e-004**	**0.0108**	**0.0000**	**36.8108**	**36.8108**	**2.1200e-003**	**0.0000**	**36.8552**

3.3 2 - Trenching - Underground work - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0545	0.3670	0.2916	3.4000e-004		0.0293	0.0293		0.0269	0.0269	0.0000	32.5675	32.5675	9.8200e-003	0.0000	32.7737
Total	**0.0545**	**0.3670**	**0.2916**	**3.4000e-004**		**0.0293**	**0.0293**		**0.0269**	**0.0269**	**0.0000**	**32.5675**	**32.5675**	**9.8200e-003**	**0.0000**	**32.7737**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8000e-003	0.0121	0.1183	2.5000e-004	0.0205	1.6000e-004	0.0206	5.4300e-003	1.4000e-004	5.5800e-003	0.0000	18.2564	18.2564	9.8000e-004	0.0000	18.2770
Total	**8.8000e-003**	**0.0121**	**0.1183**	**2.5000e-004**	**0.0205**	**1.6000e-004**	**0.0206**	**5.4300e-003**	**1.4000e-004**	**5.5800e-003**	**0.0000**	**18.2564**	**18.2564**	**9.8000e-004**	**0.0000**	**18.2770**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.6600e-003	0.2164	0.2601	3.4000e-004		7.0000e-005	7.0000e-005		2.6000e-004	2.6000e-004	0.0000	32.5674	32.5674	9.8200e-003	0.0000	32.7737
Total	**9.6600e-003**	**0.2164**	**0.2601**	**3.4000e-004**		**7.0000e-005**	**7.0000e-005**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**32.5674**	**32.5674**	**9.8200e-003**	**0.0000**	**32.7737**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8000e-003	0.0121	0.1183	2.5000e-004	0.0205	1.6000e-004	0.0206	5.4300e-003	1.4000e-004	5.5800e-003	0.0000	18.2564	18.2564	9.8000e-004	0.0000	18.2770
Total	**8.8000e-003**	**0.0121**	**0.1183**	**2.5000e-004**	**0.0205**	**1.6000e-004**	**0.0206**	**5.4300e-003**	**1.4000e-004**	**5.5800e-003**	**0.0000**	**18.2564**	**18.2564**	**9.8000e-004**	**0.0000**	**18.2770**

3.4 4 - Building Construction - substation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0540	0.6364	0.3614	6.3000e-004		0.0299	0.0299		0.0275	0.0275	0.0000	59.9414	59.9414	0.0179	0.0000	60.3172
Total	**0.0540**	**0.6364**	**0.3614**	**6.3000e-004**		**0.0299**	**0.0299**		**0.0275**	**0.0275**	**0.0000**	**59.9414**	**59.9414**	**0.0179**	**0.0000**	**60.3172**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.2000e-004	0.0106	6.9100e-003	3.0000e-005	6.0000e-004	1.8000e-004	7.7000e-004	1.6000e-004	1.6000e-004	3.3000e-004	0.0000	2.3922	2.3922	2.0000e-005	0.0000	2.3926
Vendor	9.1900e-003	0.1400	0.0730	3.2000e-004	9.3800e-003	2.8700e-003	0.0123	2.6800e-003	2.6400e-003	5.3200e-003	0.0000	29.6653	29.6653	2.6000e-004	0.0000	29.6707
Worker	0.0177	0.0241	0.2374	4.3000e-004	0.0361	2.9000e-004	0.0364	9.5900e-003	2.7000e-004	9.8600e-003	0.0000	33.4643	33.4643	1.9200e-003	0.0000	33.5047

Total	**0.0276**	**0.1748**	**0.3172**	**7.8000e-004**	**0.0461**	**3.3400e-003**	**0.0494**	**0.0124**	**3.0700e-003**	**0.0155**	**0.0000**	**65.5218**	**65.5218**	**2.2000e-003**	**0.0000**	**65.5680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9900e-003	0.2338	0.3652	6.3000e-004		-0.0049	-0.0049		-0.0043	-0.0043	0.0000	59.9414	59.9414	0.0179	0.0000	60.3172
Total	**6.9900e-003**	**0.2338**	**0.3652**	**6.3000e-004**		**-0.0049**	**-0.0049**		**-0.0043**	**-0.0043**	**0.0000**	**59.9414**	**59.9414**	**0.0179**	**0.0000**	**60.3172**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.2000e-004	0.0106	6.9100e-003	3.0000e-005	6.0000e-004	1.8000e-004	7.7000e-004	1.6000e-004	1.6000e-004	3.3000e-004	0.0000	2.3922	2.3922	2.0000e-005	0.0000	2.3926
Vendor	9.1900e-003	0.1400	0.0730	3.2000e-004	9.3800e-003	2.8700e-003	0.0123	2.6800e-003	2.6400e-003	5.3200e-003	0.0000	29.6653	29.6653	2.6000e-004	0.0000	29.6707
Worker	0.0177	0.0241	0.2374	4.3000e-004	0.0361	2.9000e-004	0.0364	9.5900e-003	2.7000e-004	9.8600e-003	0.0000	33.4643	33.4643	1.9200e-003	0.0000	33.5047
Total	**0.0276**	**0.1748**	**0.3172**	**7.8000e-004**	**0.0461**	**3.3400e-003**	**0.0494**	**0.0124**	**3.0700e-003**	**0.0155**	**0.0000**	**65.5218**	**65.5218**	**2.2000e-003**	**0.0000**	**65.5680**

3.5 5 - Building Construction - Tie Line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0529	0.5438	0.3154	4.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	44.1655	44.1655	0.0128	0.0000	44.4332
Total	**0.0529**	**0.5438**	**0.3154**	**4.8000e-004**		**0.0269**	**0.0269**		**0.0250**	**0.0250**	**0.0000**	**44.1655**	**44.1655**	**0.0128**	**0.0000**	**44.4332**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.1750	0.0912	4.0000e-004	0.0117	3.5800e-003	0.0153	3.3500e-003	3.3000e-003	6.6500e-003	0.0000	37.0817	37.0817	3.2000e-004	0.0000	37.0884
Worker	0.0177	0.0241	0.2374	4.3000e-004	0.0361	2.9000e-004	0.0364	9.5900e-003	2.7000e-004	9.8600e-003	0.0000	33.4643	33.4643	1.9200e-003	0.0000	33.5047
Total	**0.0292**	**0.1991**	**0.3286**	**8.3000e-004**	**0.0478**	**3.8700e-003**	**0.0517**	**0.0129**	**3.5700e-003**	**0.0165**	**0.0000**	**70.5460**	**70.5460**	**2.2400e-003**	**0.0000**	**70.5931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	8.0100e-003	0.1929	0.2888	4.8000e-004		-0.0018	-0.0018		-0.0015	-0.0015	0.0000	44.1655	44.1655	0.0128	0.0000	44.4332
Total	**8.0100e-003**	**0.1929**	**0.2888**	**4.8000e-004**		**-0.0018**	**-0.0018**		**-0.0015**	**-0.0015**	**0.0000**	**44.1655**	**44.1655**	**0.0128**	**0.0000**	**44.4332**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0115	0.1750	0.0912	4.0000e-004	0.0117	3.5800e-003	0.0153	3.3500e-003	3.3000e-003	6.6500e-003	0.0000	37.0817	37.0817	3.2000e-004	0.0000	37.0884
Worker	0.0177	0.0241	0.2374	4.3000e-004	0.0361	2.9000e-004	0.0364	9.5900e-003	2.7000e-004	9.8600e-003	0.0000	33.4643	33.4643	1.9200e-003	0.0000	33.5047
Total	**0.0292**	**0.1991**	**0.3286**	**8.3000e-004**	**0.0478**	**3.8700e-003**	**0.0517**	**0.0129**	**3.5700e-003**	**0.0165**	**0.0000**	**70.5460**	**70.5460**	**2.2400e-003**	**0.0000**	**70.5931**

3.6 1b - Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1622	0.0000	0.1622	0.0574	0.0000	0.0574	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1077	1.3819	0.7277	1.1400e-003		0.0579	0.0579		0.0533	0.0533	0.0000	108.6135	108.6135	0.0324	0.0000	109.2944
Total	**0.1077**	**1.3819**	**0.7277**	**1.1400e-003**	**0.1622**	**0.0579**	**0.2201**	**0.0574**	**0.0533**	**0.1107**	**0.0000**	**108.6135**	**108.6135**	**0.0324**	**0.0000**	**109.2944**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1000e-004	6.1200e-003	3.9800e-003	1.0000e-005	3.4000e-004	1.0000e-004	4.5000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3755	1.3755	1.0000e-005	0.0000	1.3757
Vendor	0.0123	0.1867	0.0973	4.3000e-004	0.0125	3.8200e-003	0.0163	3.5800e-003	3.5200e-003	7.0900e-003	0.0000	39.5538	39.5538	3.4000e-004	0.0000	39.5609
Worker	9.0700e-003	0.0124	0.1217	2.2000e-004	0.0185	1.5000e-004	0.0187	4.9200e-003	1.4000e-004	5.0600e-003	0.0000	17.1612	17.1612	9.9000e-004	0.0000	17.1819
Total	**0.0217**	**0.2052**	**0.2230**	**6.6000e-004**	**0.0314**	**4.0700e-003**	**0.0354**	**8.5900e-003**	**3.7500e-003**	**0.0123**	**0.0000**	**58.0905**	**58.0905**	**1.3400e-003**	**0.0000**	**58.1186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0633	0.0000	0.0633	0.0224	0.0000	0.0224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0244	0.5038	0.6852	1.1400e-003		1.6400e-003	1.6400e-003		1.8000e-003	1.8000e-003	0.0000	108.6134	108.6134	0.0324	0.0000	109.2943
Total	**0.0244**	**0.5038**	**0.6852**	**1.1400e-003**	**0.0633**	**1.6400e-003**	**0.0649**	**0.0224**	**1.8000e-003**	**0.0242**	**0.0000**	**108.6134**	**108.6134**	**0.0324**	**0.0000**	**109.2943**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Hauling	4.1000e-004	6.1200e-003	3.9800e-003	1.0000e-005	3.4000e-004	1.0000e-004	4.5000e-004	9.0000e-005	9.0000e-005	1.9000e-004	0.0000	1.3755	1.3755	1.0000e-005	0.0000	1.3757
Vendor	0.0123	0.1867	0.0973	4.3000e-004	0.0125	3.8200e-003	0.0163	3.5800e-003	3.5200e-003	7.0900e-003	0.0000	39.5538	39.5538	3.4000e-004	0.0000	39.5609
Worker	9.0700e-003	0.0124	0.1217	2.2000e-004	0.0185	1.5000e-004	0.0187	4.9200e-003	1.4000e-004	5.0600e-003	0.0000	17.1612	17.1612	9.9000e-004	0.0000	17.1819
Total	**0.0217**	**0.2052**	**0.2230**	**6.6000e-004**	**0.0314**	**4.0700e-003**	**0.0354**	**8.5900e-003**	**3.7500e-003**	**0.0123**	**0.0000**	**58.0905**	**58.0905**	**1.3400e-003**	**0.0000**	**58.1186**

3.7 3 - Construction - System Installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4265	3.0185	2.8374	3.5500e-003		0.2044	0.2044		0.1888	0.1888	0.0000	331.5699	331.5699	0.0996	0.0000	333.6613
Total	**0.4265**	**3.0185**	**2.8374**	**3.5500e-003**		**0.2044**	**0.2044**		**0.1888**	**0.1888**	**0.0000**	**331.5699**	**331.5699**	**0.0996**	**0.0000**	**333.6613**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0142	0.2098	0.1148	5.6000e-004	0.0164	4.2200e-003	0.0206	4.7000e-003	3.8800e-003	8.5800e-003	0.0000	51.2885	51.2885	4.0000e-004	0.0000	51.2969
Worker	0.6690	0.9180	8.9926	0.0187	1.5543	0.0119	1.5662	0.4131	0.0109	0.4240	0.0000	1,387.8134	1,387.8134	0.0748	0.0000	1,389.3847

Total	**0.6831**	**1.1278**	**9.1074**	**0.0192**	**1.5707**	**0.0162**	**1.5869**	**0.4178**	**0.0148**	**0.4326**	**0.0000**	**1,439.1019**	**1,439.1019**	**0.0752**	**0.0000**	**1,440.6817**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0885	1.7743	2.0925	3.5500e-003		0.0157	0.0157		0.0158	0.0158	0.0000	331.5695	331.5695	0.0996	0.0000	333.6609
Total	**0.0885**	**1.7743**	**2.0925**	**3.5500e-003**		**0.0157**	**0.0157**		**0.0158**	**0.0158**	**0.0000**	**331.5695**	**331.5695**	**0.0996**	**0.0000**	**333.6609**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0142	0.2098	0.1148	5.6000e-004	0.0164	4.2200e-003	0.0206	4.7000e-003	3.8800e-003	8.5800e-003	0.0000	51.2885	51.2885	4.0000e-004	0.0000	51.2969
Worker	0.6690	0.9180	8.9926	0.0187	1.5543	0.0119	1.5662	0.4131	0.0109	0.4240	0.0000	1,387.8134	1,387.8134	0.0748	0.0000	1,389.3847
Total	**0.6831**	**1.1278**	**9.1074**	**0.0192**	**1.5707**	**0.0162**	**1.5869**	**0.4178**	**0.0148**	**0.4326**	**0.0000**	**1,439.1019**	**1,439.1019**	**0.0752**	**0.0000**	**1,440.6817**

3.8 6 - Building Construction - testing/cleanup/restoration -

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0692	0.8829	0.4954	7.6000e-004		0.0359	0.0359		0.0330	0.0330	0.0000	71.2866	71.2866	0.0215	0.0000	71.7381
Total	**0.0692**	**0.8829**	**0.4954**	**7.6000e-004**		**0.0359**	**0.0359**		**0.0330**	**0.0330**	**0.0000**	**71.2866**	**71.2866**	**0.0215**	**0.0000**	**71.7381**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.4000e-004	9.0100e-003	6.3900e-003	3.0000e-005	6.0000e-004	1.4000e-004	7.4000e-004	1.6000e-004	1.3000e-004	3.0000e-004	0.0000	2.3622	2.3622	2.0000e-005	0.0000	2.3626
Vendor	8.1000e-003	0.1199	0.0656	3.2000e-004	9.3800e-003	2.4100e-003	0.0118	2.6800e-003	2.2200e-003	4.9000e-003	0.0000	29.3077	29.3077	2.3000e-004	0.0000	29.3125
Worker	0.0155	0.0213	0.2088	4.3000e-004	0.0361	2.8000e-004	0.0364	9.5900e-003	2.5000e-004	9.8400e-003	0.0000	32.2171	32.2171	1.7400e-003	0.0000	32.2536
Total	**0.0243**	**0.1502**	**0.2808**	**7.8000e-004**	**0.0461**	**2.8300e-003**	**0.0489**	**0.0124**	**2.6000e-003**	**0.0150**	**0.0000**	**63.8870**	**63.8870**	**1.9900e-003**	**0.0000**	**63.9287**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.0150	0.3292	0.4203	7.6000e-004		-0.0004	-0.0004		-0.0002	-0.0002	0.0000	71.2865	71.2865	0.0215	0.0000	71.7381
Total	**0.0150**	**0.3292**	**0.4203**	**7.6000e-004**		**-0.0004**	**-0.0004**		**-0.0002**	**-0.0002**	**0.0000**	**71.2865**	**71.2865**	**0.0215**	**0.0000**	**71.7381**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.4000e-004	9.0100e-003	6.3900e-003	3.0000e-005	6.0000e-004	1.4000e-004	7.4000e-004	1.6000e-004	1.3000e-004	3.0000e-004	0.0000	2.3622	2.3622	2.0000e-005	0.0000	2.3626
Vendor	8.1000e-003	0.1199	0.0656	3.2000e-004	9.3800e-003	2.4100e-003	0.0118	2.6800e-003	2.2200e-003	4.9000e-003	0.0000	29.3077	29.3077	2.3000e-004	0.0000	29.3125
Worker	0.0155	0.0213	0.2088	4.3000e-004	0.0361	2.8000e-004	0.0364	9.5900e-003	2.5000e-004	9.8400e-003	0.0000	32.2171	32.2171	1.7400e-003	0.0000	32.2536
Total	**0.0243**	**0.1502**	**0.2808**	**7.8000e-004**	**0.0461**	**2.8300e-003**	**0.0489**	**0.0124**	**2.6000e-003**	**0.0150**	**0.0000**	**63.8870**	**63.8870**	**1.9900e-003**	**0.0000**	**63.9287**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0629	0.2295	0.7215	1.2400e-003	0.0701	3.1700e-003	0.0733	0.0188	2.9200e-003	0.0218	0.0000	101.4713	101.4713	3.4900e-003	0.0000	101.5446
Unmitigated	0.0629	0.2295	0.7215	1.2400e-003	0.0701	3.1700e-003	0.0733	0.0188	2.9200e-003	0.0218	0.0000	101.4713	101.4713	3.4900e-003	0.0000	101.5446

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	83.64	15.84	8.16	184,430	184,430
Total	83.64	15.84	8.16	184,430	184,430

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.413014	0.062673	0.156172	0.176687	0.051255	0.007895	0.018867	0.100331	0.001803	0.001598	0.006448	0.000946	0.002310

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.7225	33.7225	1.5200e-003	3.2000e-004	33.8523
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	33.7225	33.7225	1.5200e-003	3.2000e-004	33.8523
NaturalGas Mitigated	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9344	13.9344	2.7000e-004	2.6000e-004	14.0192

NaturalGas Unmitigated	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9344	13.9344	2.7000e-004	2.6000e-004	14.0192

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	261120	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9344	13.9344	2.7000e-004	2.6000e-004	14.0192
Total		**1.4100e-003**	**0.0128**	**0.0108**	**8.0000e-005**		**9.7000e-004**	**9.7000e-004**		**9.7000e-004**	**9.7000e-004**	**0.0000**	**13.9344**	**13.9344**	**2.7000e-004**	**2.6000e-004**	**14.0192**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	261120	1.4100e-003	0.0128	0.0108	8.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	13.9344	13.9344	2.7000e-004	2.6000e-004	14.0192
Total		**1.4100e-003**	**0.0128**	**0.0108**	**8.0000e-005**		**9.7000e-004**	**9.7000e-004**		**9.7000e-004**	**9.7000e-004**	**0.0000**	**13.9344**	**13.9344**	**2.7000e-004**	**2.6000e-004**	**14.0192**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	115920	33.7225	1.5200e-003	3.2000e-004	33.8523
Total		**33.7225**	**1.5200e-003**	**3.2000e-004**	**33.8523**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	115920	33.7225	1.5200e-003	3.2000e-004	33.8523
Total		**33.7225**	**1.5200e-003**	**3.2000e-004**	**33.8523**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.0552	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004
Unmitigated	0.0552	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004
Total	**0.0552**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.1000e-004	2.1000e-004	0.0000	0.0000	2.3000e-004

Total	**0.0552**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.1000e-004**	**2.1000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.2486	0.0906	2.1700e-003	7.8248
Unmitigated	5.2486	0.0906	2.1800e-003	7.8262

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	2.775 / 0	5.2486	0.0906	2.1800e-003	7.8262
Total		**5.2486**	**0.0906**	**2.1800e-003**	**7.8262**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	2.775 / 0	5.2486	0.0906	2.1700e-003	7.8248
Total		**5.2486**	**0.0906**	**2.1700e-003**	**7.8248**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.0205	0.1785	0.0000	6.7692
Unmitigated	3.0205	0.1785	0.0000	6.7692

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
General Light Industry	14.88	3.0205	0.1785	0.0000	6.7692
Total		**3.0205**	**0.1785**	**0.0000**	**6.7692**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	14.88	3.0205	0.1785	0.0000	6.7692
Total		**3.0205**	**0.1785**	**0.0000**	**6.7692**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX B
SOIL AND WATER ANALYSIS REPORT FOR AMERICAN KINGS SOLAR PROJECT

SOIL & WATER ANALYSIS REPORT

for

AMERICAN KINGS SOLAR PROJECT

Site Location

Southeast Corner of Highway 198 and 25th Avenue
Lemoore, California

County of Kings

Prepared for
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AMERICAN KINGS SOLAR PROJECT
SOIL & WATER ANALYSIS REPORT

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A. PROJECT SUMMARY

1. The proposed American Kings Solar Project (**Project**) is a solar energy generation facility to be located in Kings County, California. The Project site consists of approximately 978 acres subject to a Farmland Security Zone (**FSZ**) contract. The Project is located west of State Route 41 and south of State Route 198 along 25th Avenue, as depicted in **Exhibit 1 – Vicinity Map**.

2. As of June 2014, the majority of the property is unplanted cropland with some fields planted to tomatoes, alfalfa and cotton. **Exhibit 2 – Parcel Map** depicts the Kings County parcels drawn over an aerial photo.

3. This report provides an analysis of soil and water conditions at the proposed American Kings Solar Project site. A review of publicly available information and field samples collected from the project site was performed to determine the existing and reasonably foreseeable quality of the site for sustaining agricultural production. Factors considered include surface water availability, groundwater availability and quality, and soil conditions.

B. REPORT SUMMARY

1. On November 26, 2013, the Kings County Board of Supervisors adopted Resolution No. 13-058, recognizing that:

   - Due to reduced surface water deliveries, poor groundwater quality and severe groundwater overdrafts, impaired soil conditions, and regulatory burdens, circumstances exist on agricultural preserves located within a portion of Kings County south of State Route 198 and west of State Route 41 that limit the use of much of the land within that territory for agricultural activities.
   - It is reasonably foreseeable that certain parcels located there that currently are used for more intensive agricultural activities will be used in the near future for less intensive uses, including dry farm seasonal grazing.

2. Kings County can determine that solar energy generation facilities located within this region that maintain a reasonably foreseeable agricultural use on the site in addition to the commercial solar generation facility may be compatible with a Farmland Security Zone Contract pursuant to Government Code 51238.1(a) if a finding can be made, based upon substantial evidence, and taking into account surface water availability, ground water quality and availability, and soil conditions, that the proposed agricultural operation is a reasonably foreseeable use of the land.

3. Provost and Pritchard Consulting Group and Dellavalle Laboratory, Inc. evaluated the existing, historic, and reasonably foreseeable soil, water quality, and water availability conditions of the Project site and determined that adverse soil conditions and water quality and availability conditions make dry farm seasonal sheep grazing a reasonably foreseeable agricultural activity to occur on the Project site. While beef or dairy cattle prefer a diet based primarily on grass, sheep prefer forbs (broad leaf plants) and other vegetation found in areas where the soil and water conditions are similar to the project site. Sheep grazing is typically dry land farmed, where the pasture is irrigated only with rainwater and no additional water is applied to the land.

C. METHODOLOGY

1. The following methodology and information was used to determine the agricultural resources for the facility:

   - Soil classifications were derived from the USDA Natural Resources Conservation Service (**NRCS**).
   - Soil samples were collected from multiple locations at the project site and analyzed for agricultural suitability.
   - A groundwater sample from one site well was collected and tested.
   - Water supply and quality data available from surface water sources serving the site.

2. Site specific information was analyzed and interpreted to determine conclusions.

D. NRCS SOIL INFORMATION

1. According to the Natural Resources Conservation Service (Soil Survey Area: Kings County, California, Survey Area Data: Version 8, Aug 27, 2009) soils on the property consist entirely of Lethent clay loam (map unit 139) and is depicted in **Exhibit 3 – NRCS Soil Survey Map**. In their native conditions, these soils would have been neutral to alkaline.

2. As mapped, the property is subject to saline-sodic conditions (8.0 to 16.00 mmhos/cm) and has drainage limitations. The capacity of the most limiting layer to transmit water (Ksat) is low (0.00 to 0.06 in/hr).

3. The Lethent Clay Loam unit is relatively level and generally used for agriculture. The Land Capability Class designation is 7s (non-irrigated) and 3s (irrigated).

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to pasture, grazing, forestland, or wildlife habitat. Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both. The letter "s" indicates that the soil is limited mainly because it is shallow, droughty, or stony.

4. Saline conditions are native in the Lethent clay loam and have been exacerbated by poor natural drainage and the application of insufficient water to leach salt from the root zone.

E. SOIL SAMPLING RESULTS

1. On June 13th and June 18th of 2014, 50 soil samples were collected from 25 boring locations (a total of two samples from each soil boring hole) from the proposed Project site, representing approximately one boring location per 38 acres. Samples were obtained in one-foot increments to depths of two feet. Approximate sampling locations (from GPS coordinates) are depicted on **Exhibit 4 – Soil Borings Location Map**. Detailed laboratory results are included in **Exhibit 5 – Soil Sample Results**.

2. The following soil interpretations are defined:

   - **Electrical Conductivity** - Soils are considered saline when the electrical conductivity of saturation extracts (**EC**) are above 4 decisiemens per meter (**dS/m**). High soil salinity reduces the amount of water available to plants because as salinity increases above a threshold amount, the plant has to expend more energy to extract the water from the soil and thus plant growth slows. At sufficiently high salinity levels, the plant can no longer extract water and the plant wilts.
   - **Sodium** - Sodium (**Na**) levels above 10 milliequivalents per liter (**meq/l**) are considered high. Excess sodium disperses clay particles creating a soil structure that severely limits movement of water through the soil. Soil salinity offsets sodicity so permeability is maintained until salinity drops to about 4 dS/m. At that point gypsum or another source of soluble calcium must be added to displace the sodium and maintain permeability. The resulting sodium salts must then be leached from the root zone for the soil to sustain acceptable crop yields.
   - **Exchangeable Sodium Percentage** - Soils are considered sodic when the exchangeable sodium percentage (**ESP**) is above 15%. Sodic soils tend to develop poor drainage over time because sodium ions on clay particles cause the soil particles to disperse. Sodic soils are hard and cloddy when dry and tend to crust. Water intake is usually poor, especially those high in silt and

clay. Poor plant growth and germination are also common. The soil's pH is usually high, and plant nutritional imbalances may occur.

- **Boron** - Boron (**B**) levels above 2.0 mg/l are considered high. Boron toxicity often starts with a browning, yellowing and drying of leaf tips. These symptoms may progress to the entire leaf. Overall growth is often stunted and crop yields are reduced.

3. **Table 1 – Soil Sampling Results Summary** and **Exhibit 5 – Soil Sample Results** provide the results from the soil sample borings. Of the 25 soil sampling locations, all 25 locations showed significant limitations related to salinity. Soil salinity is the limiting factor and it is related to poor drainage conditions.

Table 1
Soil Sampling Results Summary

Sample Description	Sample Depth	EC dS/m >4	Na meq/l >10	ESP % >15	B mg/l >2	Interpretation
Field 206 N NCW	0-1'	**4.12**	**21.1**	7.6	1.8	Saline with excessive sodium
Field 206 N NCW	1-2'	**6.16**	**34.0**	9.7	**2.7**	Saline with excessive sodium & boron
Field 206 N NEC	0-1'	**5.19**	**19.9**	5.2	1.6	Saline with excessive sodium
Field 206 N NEC	1-2'	**4.58**	**20.2**	6.2	**2.0**	Saline with excessive sodium & boron
Field 206 N SW	0-1'	3.56	**15.2**	5.4	1.2	Excessive sodium
Field 206 N SW	1-2'	2.25	**16.8**	10.7	**2.4**	Excessive sodium and boron
Field 206 N SE	0-1'	2.54	**14.6**	6.7	1.6	Excessive sodium
Field 206 N SE	1-2'	3.52	**18.9**	7.7	1.9	Excessive sodium
Field 206 S NW	0-1'	1.15	7.5	5.7	**2.0**	Excessive boron
Field 206 S NW	1-2'	**8.78**	**63.7**	**16.6**	**7.8**	Saline-sodic with excessive sodium & boron
Field 206 S NE	0-1'	**12.30**	**83.6**	**20.0**	**10.8**	Saline-sodic with excessive sodium & boron
Field 206 S NE	1-2'	**14.20**	**104.0**	**24.6**	**14.0**	Saline-sodic with excessive sodium & boron
Field 206 S SE NWC	0-1'	1.38	6.4	3.8	1.9	Acceptable but high for sensitive crops
Field 206 S SE NWC	1-2'	**15.20**	**115.0**	**25.8**	**11.2**	Saline-sodic with excessive sodium & boron
Field 206 S SE SEC	0-1'	1.66	**11.4**	7.9	**2.7**	Excessive sodium and boron
Field 206 S SE SEC	1-2'	1.60	**13.6**	11.0	**3.5**	Excessive sodium and boron
Field 208 W NW	0-1'	2.85	**21.0**	10.5	**4.7**	Excessive sodium and boron
Field 208 W NW	1-2'	2.75	**19.6**	9.9	**4.2**	Excessive sodium and boron
Field 208 W NE	0-1'	1.74	**13.2**	8.6	**3.0**	Excessive sodium and boron
Field 208 W NE	1-2'	**4.85**	**27.5**	8.6	**4.0**	Saline with excessive sodium & boron
Field 208 W SW	0-1'	**6.18**	**40.0**	12.2	**7.0**	Saline with excessive sodium & boron
Field 208 W SW	1-2'	**7.62**	**51.9**	13.6	**9.6**	Saline with excessive sodium & boron
Field 208 W SE	0-1'	**4.48**	**27.3**	9.4	**6.1**	Saline with excessive sodium & boron

Sample Description	Sample Depth	EC dS/m >4	Na meq/l >10	ESP % >15	B mg/l >2	Interpretation
Field 208 W SE	1-2'	**7.53**	**41.4**	11.1	**9.6**	Saline with excessive sodium & boron
Field 208 E NC	0-1'	**13.40**	**86.8**	**20.6**	**26.3**	Saline-sodic with excessive sodium & boron
Field 208 E NC	1-2'	**18.60**	**129.0**	**28.2**	**36.5**	Saline-sodic with excessive sodium & boron
Field 208 E SE	0-1'	**17.40**	**118.0**	**25.0**	**28.8**	Saline-sodic with excessive sodium & boron
Field 208 E SE	1-2'	**18.30**	**134.0**	**27.8**	**30.7**	Saline-sodic with excessive sodium & boron
Field 207 NW	0-1'	3.42	**16.9**	6.7	**2.3**	Excessive sodium and boron
Field 207 NW	1-2'	3.49	**17.6**	6.7	**2.1**	Excessive sodium and boron
Field 207 NE	0-1'	1.40	7.4	4.5	1.2	Acceptable but high for sensitive crops
Field 207 NE	1-2'	2.04	**10.3**	4.9	1.3	Excessive sodium
Field 207 SW	0-1'	**5.60**	**23.8**	6.2	**3.7**	Saline with excessive sodium & boron
Field 207 SW	1-2'	2.50	**14.6**	7.1	**2.8**	Excessive sodium and boron
Field 207 SE	0-1'	**4.40**	**26.2**	10.5	**3.9**	Saline with excessive sodium & boron
Field 207 SE	1-2'	**4.75**	**26.7**	9.9	**3.9**	Saline with excessive sodium & boron
Tri 60 SWC	0-1'	**10.40**	**55.7**	**15.5**	**8.4**	Saline-sodic with excessive sodium & boron
Tri 60 SWC	1-2'	**13.00**	**86.2**	**22.2**	**12.7**	Saline-sodic with excessive sodium & boron
Tri 120 SE	0-1'	**4.57**	**24.3**	10.2	**4.4**	Saline with excessive sodium & boron
Tri 120 SE	1-2'	**12.50**	**83.6**	**21.3**	**17.6**	Saline-sodic with excessive sodium & boron
Field 212 NE	0-1'	2.06	**15.5**	10.0	**5.0**	Excessive sodium and boron
Field 212 NE	1-2'	**6.18**	**34.3**	9.0	**10.3**	Saline with excessive sodium & boron
Field 212 NC	0-1'	1.45	**12.3**	11.1	**4.2**	Excessive sodium and boron
Field 212 NC	1-2'	**6.20**	**33.5**	8.6	**7.4**	Saline with excessive sodium & boron
Field 212 NCW	0-1'	1.76	**13.9**	9.8	**5.7**	Excessive sodium and boron
Field 212 NCW	1-2'	**8.41**	**44.8**	11.1	**11.8**	Saline with excessive sodium & boron
Field 212 SWC	0-1'	1.40	**11.2**	9.1	**3.6**	Excessive sodium and boron
Field 212 SWC	1-2'	**5.82**	**25.4**	6.4	**4.3**	Saline with excessive sodium & boron
Field 212 SC	0-1'	3.40	**25.8**	11.3	**4.4**	Excessive sodium and boron
Field 212 SC	1-2'	**6.07**	**35.1**	9.4	**5.2**	Saline with excessive sodium & boron

Bold & Red *= Above acceptable agricultural limitations*

4. Saline-sodic conditions at the project site are naturally occurring and have been exacerbated by poor natural drainage and limited water supply availability. Under these conditions, insufficient applications of water cause insufficient salt leaching from the root zone. Continued irrigation with water from any source, the lack of subsurface drainage systems, and a sustainable disposal outlet are expected to increase soil salinity conditions.

F. SITE WELL INFORMATION

1. The proposed project site has two irrigation water supply wells. These wells are depicted in **Exhibit 4**. According to the farm manager, both wells are approximately 1,000 feet deep. One of the wells, which was constructed in the 1960s, is abandoned due to low production and poor water quality.

2. The operating well (Field 206 North Well) produces approximately 500 gpm with a 150 hp pump. The operating well's production rate and water quality continues to decline so abandonment of this well is planned in the near future. All wells in the area are drawing significantly deeper water than normal, due to drought conditions and the unavailability of reliable surface water supplies.

3. The operating irrigation well water was sampled on June 12, 2014. The sample was delivered to the laboratory for analysis, following proper chain of custody procedures. This sample was tested for constituents that generally impact crop production. The results from this sample are provided in **Exhibit 6 – Groundwater Well Sample Results**. A summary of the results is provided below in **Table 2** and summarizes the exceedences of critical constituents of concern which impact crop productivity.

Table 2
Groundwater Well Sample Results Summary

Well	Constituent	Result	Units	Result Ag Limits	Interpretation
Field 206 North Well	EC	**2.47**	dS/m	>2.20	Severe limitation of use
	SAR	3.2	--	0.1 – 4.0	Normal
	SAR Adj	**5.3**	--	4.1 - 9.0	High for sensitive crops
	Sodium (Na)	**10.2**	meq/L	>7.0	Severe limitation of use
	Chloride (Cl)	**3.6**	meq/l	>3.5	Severe limitation of use
	Boron (B)	**1.38**	mg/l	>0.60	Severe limitation of use
	Nitrate as N (NO_3-N)	0.3	mg/l	0.1 – 5.0	Normal
	pH	7.9	unit	6.8 – 7.9	Normal

Bold & Red *= Above acceptable agricultural limitations*

4. Groundwater from the Field 206 North Well, which is representative of the region, is at such a high salinity level that even salt-tolerant crops would be impacted. Additionally, the sodium, chloride and boron are above the maximums recommended for tolerant crops. Growing crops solely with this groundwater is not feasible. An additional good quality irrigation water supply is

required for blending and diluting the well water to sustain agricultural production.

G. SURFACE WATER QUALITY AND AVAILABILITY

1. The project site is located within the Westlands Water District (**WWD**). WWD irrigation supply water quality information is from the California Department of Water Resources (**DWR**), California Aqueduct, Check 21, grab sample taken in June 2014 is summarized in **Table 3**.

Table 3

Westlands Water District Irrigation Supply Water Characteristics
DWR California Aqueduct Check 21

Constituent	Check 21 Result	Units	Acceptable Range	Result
EC	0.648	dS/m	0.75 – 3.00, high	Ok
Sodium (Na)	3.4	meq/L	Above 7.0, high	OK
Chloride (Cl)	**5.5**	meq/L	Above 3.5, high for tolerant crops	High
Boron (B)	0.2	mg/l	Above 1.0, high	OK
pH	**8.8**	pH units	Above 8.4, high for tolerant crops	High

2. Surface water quality from the Westlands Water District is appropriate for growing most crops. However the chloride and pH of the surface water is considered high. The water quality of the surface water is a concern with regard to cultivated agricultural operations in the region. Even though the salinity/EC of this water is considered acceptable, due to poor drainage conditions its use will exacerbate the already excessive soil salinity issues. Salts will continue to accumulate until no plant growth is possible.

3. The most limiting factor in the region for long term sustainability of irrigated agriculture is the availability of surface water to the project site. Average rainfall is about 9.2 inches, which is significantly less than the crop water demands for typical crops in the area (30 to 48 inches). Because of the limited surface water allocations, most years available surface water must be supplemented with groundwater to irrigate planned crops. Additional demands for releases of water to meet environmental requirements means that future water allocations are not expected to increase.

4. Central Valley Project (**CVP**) WWD allocations are unreliable and water deliveries to the project site have been 80% or less for the past seven years, with an

average of less than 35%. Even in wet years like 2011, the WWD allocation was only 80%. In 2014, the allocation was 0%.

5. A summary of the water allocations for the Westlands Water District is provided in **Table 4**.

Table 4
Westlands Water District Water Allocation

Water Year	Allocation
2014	0%
2013	20%
2012	40%
2011	80%
2010	45%
2009	10%
2008	40%
Average	40%

Even in years of full entitlement (100% allocation), the site would only receive a maximum water allocation from WWD of 2.6 acre-feet per acre and would not be enough to irrigate all the available cropland.

As noted above, without sufficient allocations of surface water supplies, available groundwater would not be capable of sustaining economically viable crops on the site. Crops in the region typically require approximately three to four acre-feet of water per acre and historic, current and projected water allocations do not provide sufficient water to support this. A summary of the typical crops grown and average WWD surface water availability is provided in Table 5.

Table 5
Average Crop Water Demands and WWD Allocation

Crop	Annual Crop Water Demand	Average WWD Allocation
	(AF/ac)	(AF/ac)
Cotton	3.16	0.88
Alfalfa	4.51	0.88
Tomatoes	2.54	0.88

H. CONCLUSIONS

1. The project site is not suitable for sustaining long-term agricultural crop production. The saline-sodic soils found at the project site are not appropriate for most agricultural crops and will cause damage to many of the crops typically grown in the region. Reclamation of these soils is not feasible and long term soil salinity conditions are expected to increase, due to a lack of a subsurface drainage system on the site and the lack of a system for ultimate drainage water disposal.

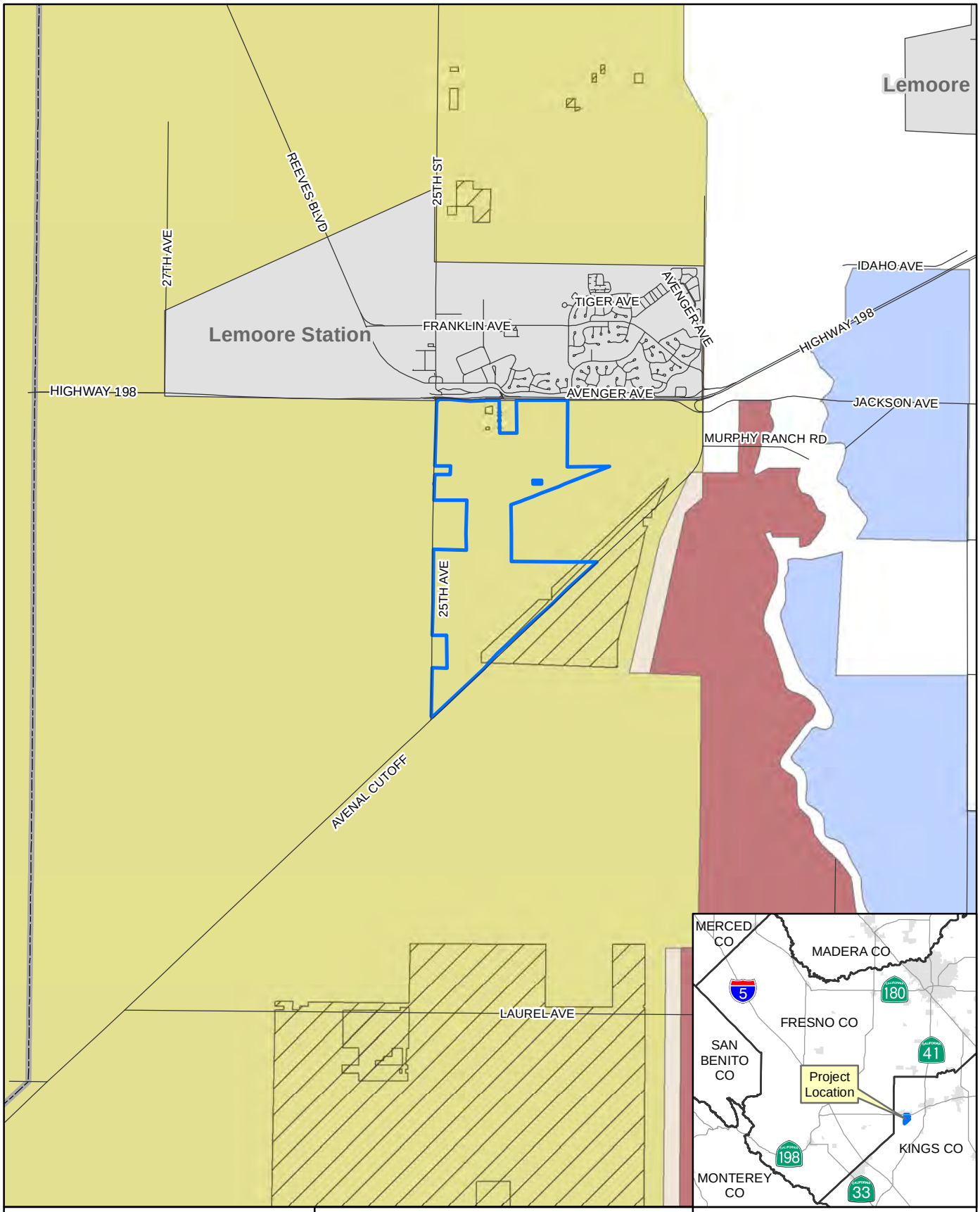
2. Groundwater at the site is of poor quality and of insufficient availability in the aquifer. With the current drought conditions and the reduction in surface water availability, most aquifer areas of Kings County are in severe overdraft conditions. The water quality sample from the irrigation well found salinity, boron, chloride and sodium in concentrations that are not recommended for most tolerant crops. Long-term usage of the site's groundwater is not sustainable because leaching excess salts through the soil is not possible due to a lack of a drainage system and outlet. Additionally, dilution of the available groundwater with surface water is not as feasible due to significant curtailments of surface water allocations.

3. Conversion of these parcels from irrigated agriculture would free up the water supply for use on other parcels in the area. Because water availability, not land area is a limiting factor for the project site, agricultural productivity in the vicinity would not be reduced should these parcels not be irrigated.

4. The severe limitation of reliable water availability and related soil salinity issues constitute specific circumstances under which Kings County can make the finding that a reasonably foreseeable agricultural use of the site would be dry land farming with seasonal grazing. Since the proposed project is compatible for use with dry-farm seasonal grazing or a similar agricultural activity, the project is a compatible use with a Farmland Security Zone contract pursuant to Government Code Section 51238.1(a) and the County of Kings Implementation Procedures for the California Land Conservation "Williamson" Act of 1965.

Exhibit 1

Vicinity Map



0 0.5 1 Miles

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CONSULTING GROUP
An Employee Owned Company

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Clovis, CA 93611
(559) 326-1100

Legend

- Westlands W.D.
- WWD Retired Lands
- Empire West Side I.D.
- Stratford I.D.
- Project Site

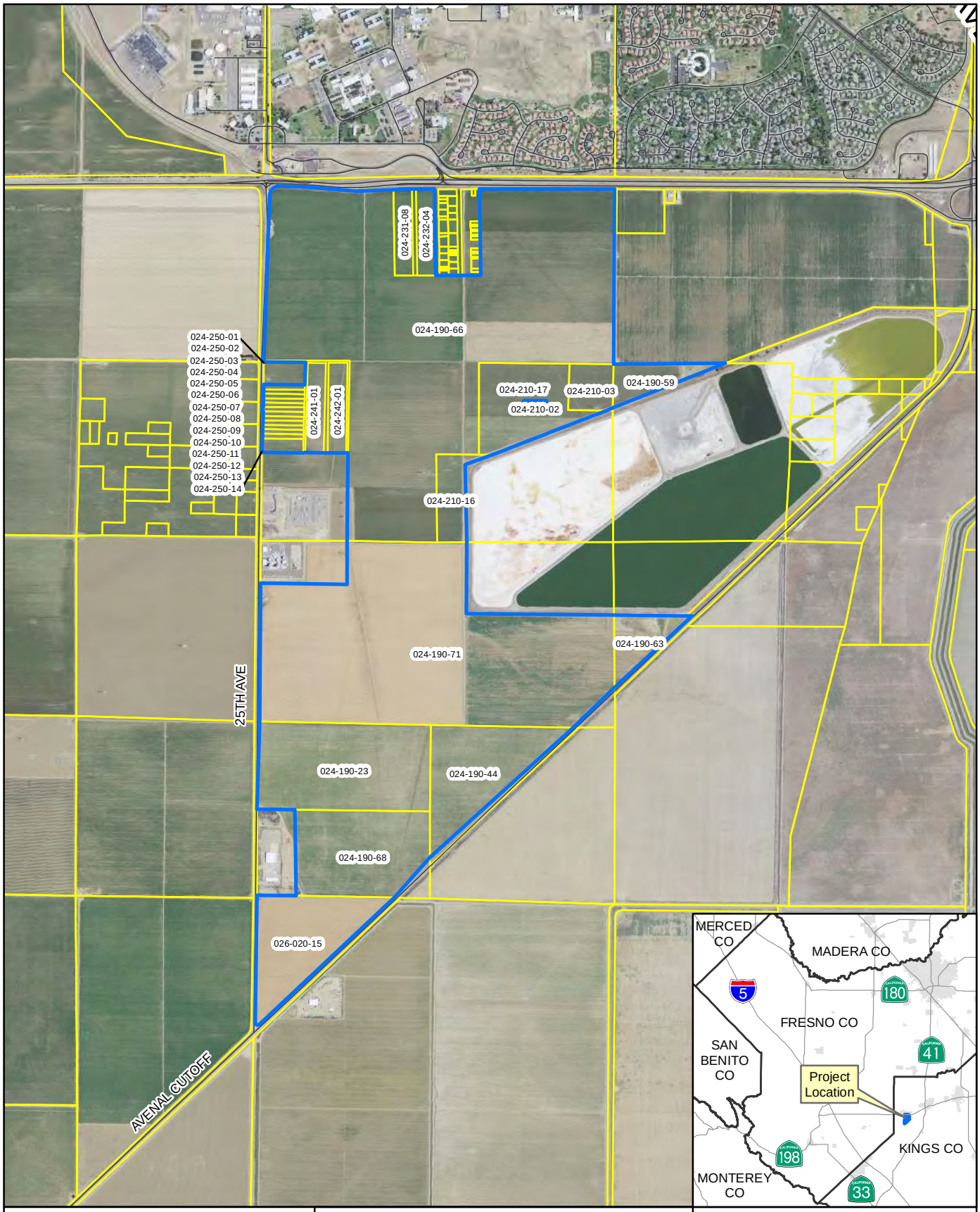
American Kings Proposed Solar Generating Facility

Water Agency Map

6/30/2014 : V:\Clients\Morrison Foerster - 2339\233914V1-Soil and Water Analysis\GIS\Map\WaterAgencies.mxd

Exhibit 2

Parcel Map



0 1,000 2,000 Feet

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Legend

Project Site

Kings Co. Parcel

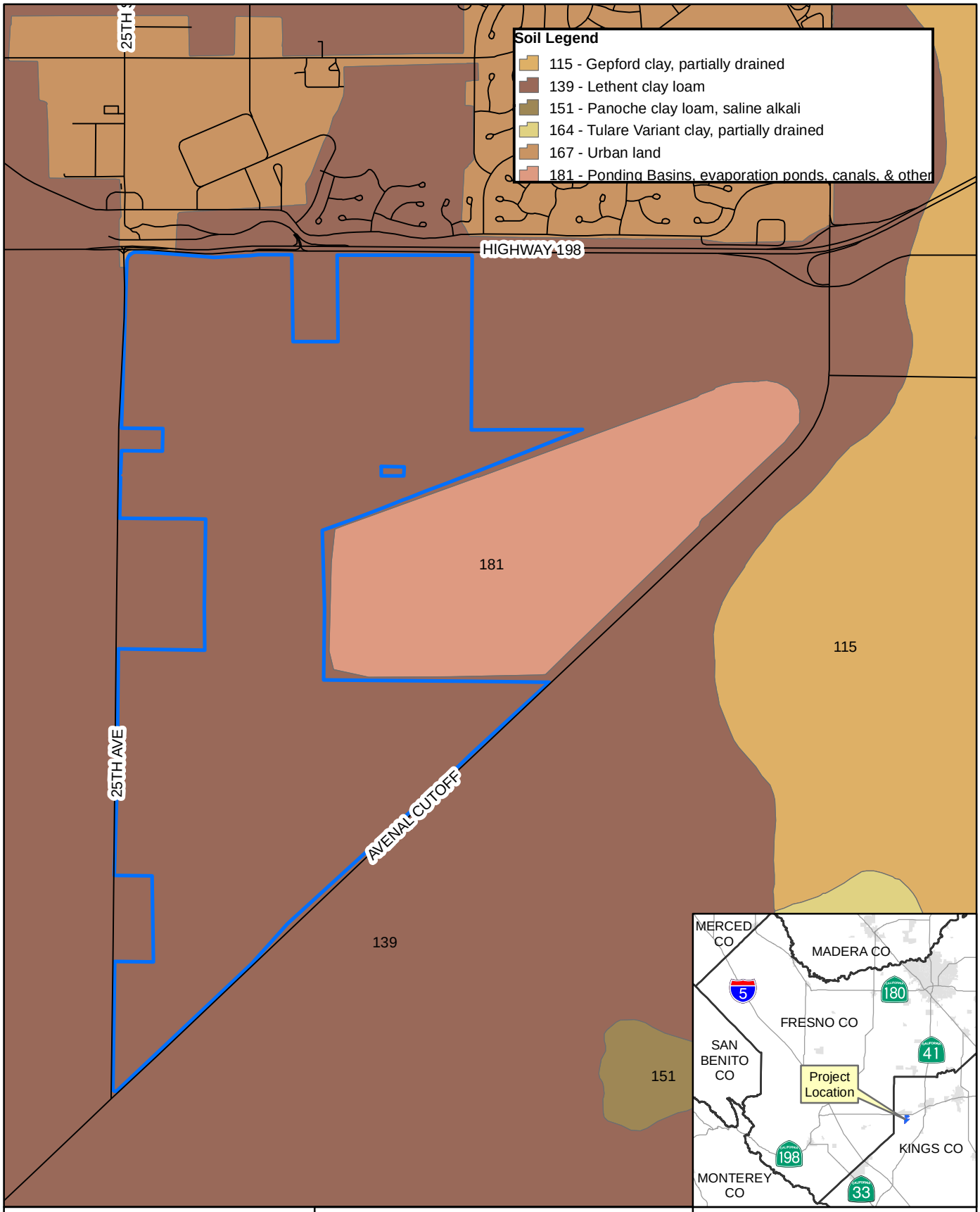
American Kings Proposed Solar Generating Facility

Parcel Map

7/7/2014 : V:\Clients\Morrison Foerster - 2339\233914V1-Soil and Water Analysis\GIS\Map\Parcels.mxd

Exhibit 3

NRCS Soil Survey Map



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Legend

Project Site

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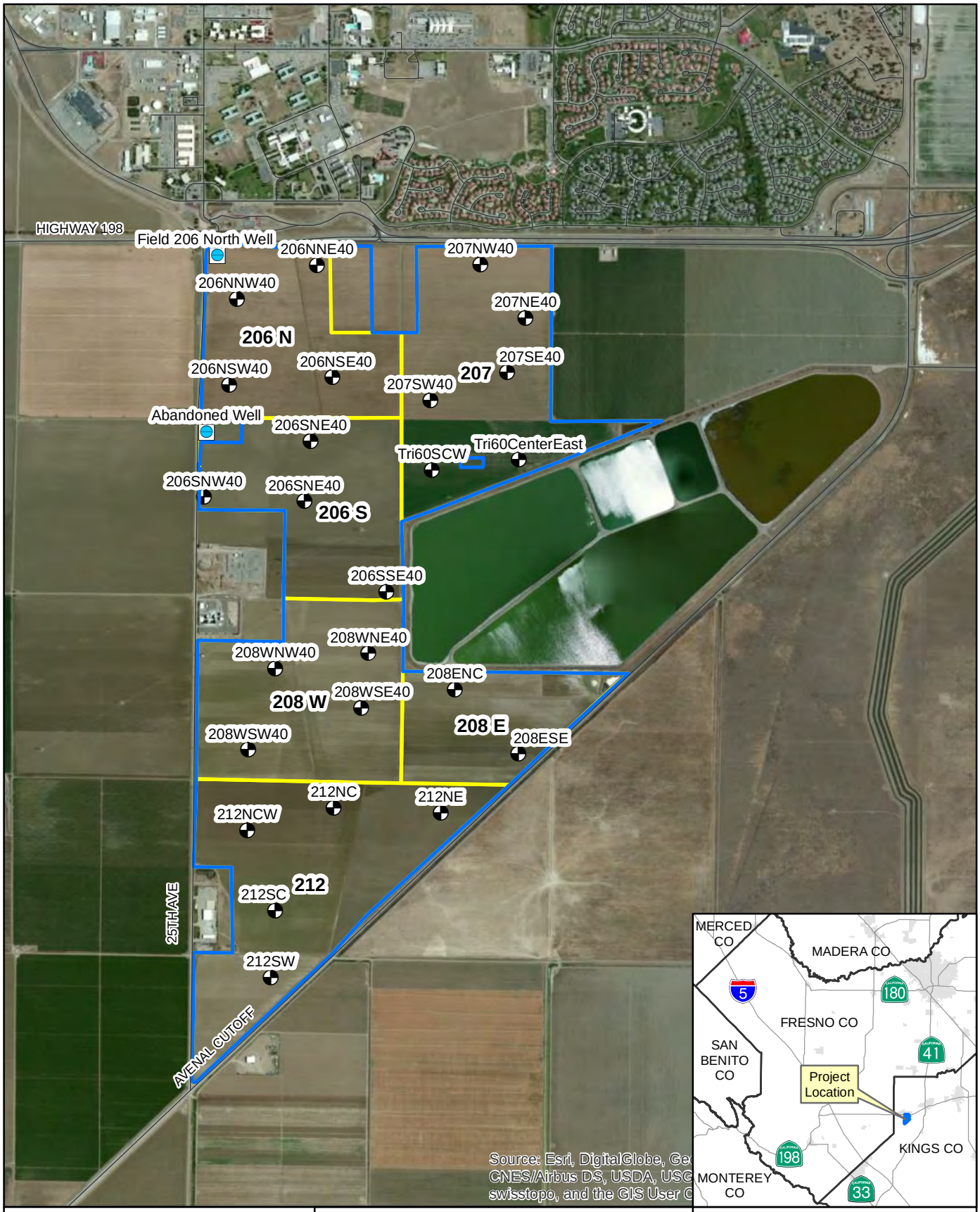
NRCS Soils Map

6/12/2014 : V:\Clients\Morrison_Foerster - 2339\233914V1-Soil and Water Analysis\GIS\Map\Soils.mxd

Exhibit 4

Soil Boring Locations



0 1,000 2,000 Feet

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Project Site
Field Boundary
Boring
Well

American Kings Proposed Solar Generating Facility

Soil Boring Location Map

7/8/2014 : V:\Clients\Morrison Foerster - 2339\233914V1-Soil and Water Analysis\GIS\Map\Soil_Boring.mxd

Exhibit 5

Soil Sample Results

Report of Soil Analysis

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ID: Tomatoes

Lab No.	206205
Sampled Date	6/13/2014
Submitted Date	6/16/2014
Submitted by	Donald Ikemiya
Reported Date	6/25/2014
Location/Project	American Kings Solar Project
Copy To	
Fax	(559) 636-1177
E-mail	lgomezsloan@ppeng.com

No.	Description		% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->		0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->		S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->										Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 206 N North Center West	0-1'	52	8.0	4.12	13.7	8.1	21.1		7.6		+		1.8	47	14	385		1.1
2	Field 206 N North Center West	1-2'	55	7.8	6.16	21.5	13.5	34.0		9.7		+		2.7	34	9	340		1.1
3	Field 206 N North East Center	0-1'	47	7.9	5.19	25.3	12.7	19.9		5.2		+		1.6	52	15	371		1.2
4	Field 206 N North East Center	1-2'	50	7.8	4.58	19.1	9.5	20.2		6.2		+		2.0	15	4	178		0.5

Tomato Soil		"Texture"	"Acidity"	Total Salts	Calcium	Magnesium	Sodium	Chloride	"Alkali"	Gyp Req	Lime Pres	Lime Req.	Boron	Nitrate-N*	Phosphate-P*	Potassium*	Zinc*
Low		Sand<20	< 6.3	< 0.5	< 4	-	-	-	-		-		< 0.2	< 4	<24	<180	< 0.7
Normal		25-45	6.7-7.9	0.7-2.5	7-15	2-15	< 8	< 8	<8		++		.3-1.2	7-30	25-45	200-350	0.8-3.0
High		Clay>55	8.2+	3.0 +	25+	25+	Na>Ca	12+	11 +		++++		2.0 +	45 +	70+	450+	4.0+

*Tissue analysis is advised to track nutrient use during the season.

High & Sl High may indicate non-economic situations or toxic situations, see report.

** = EC up to 3.5 not a problem if primarily calcium

(mg/kg & mg/L are equivalent to ppm)

*** = High & Low color levels may be differ based on consultant interpretation of the situation, including crop age, soil type, weather, irrigation system, etc.

Black = Normal	
Red = High	Green = Sl Low
Purple = Sl. High	Blue = Low

Report of Soil Analysis

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ID: Open

Lab No. 206202
Sampled Date 6/13/2014
Submitted Date 6/16/2014
Submitted by Donald Ikemiya
Reported Date 6/25/2014
Location/Project American Kings Solar Project
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Fax (559) 636-1177
E-mail lgomezsloan@ppeng.com

No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 206 N SW 40 Center West 0-1'	59	7.8	3.56	12.2	8.3	15.2		5.4		+		1.2	38	9	260		0.8
2	Field 206 N SW 40 Center West 1-2'	64	8.2	2.25	3.7	3.3	16.8		10.7	1.0	+		2.4	24	7	216		0.5
3	Field 206 N SE 40 North West Center 0-1'	61	8.0	2.54	7.2	5.7	14.6		6.7		+		1.6	45	18	276		0.9
4	Field 206 N SE 40 North West Center 1-2'	57	8.1	3.52	10.1	7.1	18.9		7.7		+		1.9	52	14	293		0.9
5	Field 206 S NW 40 South West Corner 0-1'	61	8.2	1.15	2.9	1.6	7.5		5.7		+		2.0	6	17	493		2.0
6	Field 206 S NW 40 South West Corner 1-2'	66	8.0	8.78	26.2	13.1	63.7		16.6	2.3	+		7.8	4	11	371		0.8
7	Field 206 S NE 40 North West Corner 0-1'	58	8.2	12.30	28.4	15.6	83.6		20.0	2.5	+		10.8	7	14	438		1.6
8	Field 206 S NE 40 North West Corner 1-2'	73	8.1	14.20	27.2	13.6	104		24.6	0.4	+		14.0	3	9	307		0.3
9	Field 206 S SE 40 North West Corner 0-1'	58	8.1	1.38	4.1	2.3	6.4		3.8		+		1.9	6	21	519		1.9
10	Field 206 S SE 40 North West Corner 1-2'	53	7.9	15.20	28.4	15.7	115		25.8	3.8	+		11.2	6	9	347		0.8
11	Field 206 S SE 40 South East Corner 0-1'	59	8.0	1.66	3.7	2.1	11.4		7.9		+		2.7	4	9	554		2.0
12	Field 206 S SE 40 South East Corner 1-2'	58	8.2	1.60	2.7	1.7	13.6		11.0	1.5	+		3.5	4	8	465		1.6
13	Field 208 W NW 40 South Center West 0-1'	61	8.2	2.85	7.6	3.8	21.0		10.5	1.5	+		4.7	9	14	507		1.6
14	Field 208 W NW 40 South Center West 1-2'	59	8.3	2.75	7.5	3.7	19.6		9.9		+		4.2	12	11	528		1.4
15	Field 208 W NE 40 Center' 0-1'	56	8.2	1.74	4.4	2.3	13.2		8.6		+		3.0	18	8	493		1.0
16	Field 208 W NE 40 Center' 1-2'	60	8.1	4.85	20.0	9.2	27.5		8.6		+		4.0	15	7	411		0.7
17	Field 208 W SW 40 South Center 0-1'	52	8.0	6.18	19.8	10.4	40.0		12.2	1.7	+		7.0	9	8	383		0.9
18	Field 208 W SW 40 South Center 1-2'	52	8.0	7.62	26.6	14.3	51.9		13.6	2.9	+		9.6	10	8	362		0.7
19	Field 208 W SE 40 North Center 0-1'	54	8.0	4.48	16.5	7.7	27.3		9.4		+		6.1	24	11	550		1.1
20	Field 208 W SE 40 North Center 1-2'	52	7.9	7.53	26.9	12.3	41.4		11.1	0.1	+		9.6	15	11	431		0.8

Report of Soil Analysis

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Lab No. 206198
Sampled Date 6/13/2014
Submitted Date 6/16/2014
Submitted by Donal Ikemiga
Reported Date 6/25/2014
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No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 208 E North Center 0-1'	60	8.0	13.40	28.9	15.2	86.8		20.6	2.3	-		26.3	10	12	468		1.4
2	Field 208 E North Center 1-2'	68	8.2	18.60	27.4	17.1	129		28.2	5.7	-		36.5	5	13	385		0.3
3	Field 208 E SE 0-1'	59	8.0	17.40	28.7	21.5	118		25.0	4.1	-		28.8	10	12	506		1.1
4	Field 208 E SE 1-2'	63	8.1	18.30	27.2	21.9	134		27.8	4.1	-		30.7	9	14	490		0.7

Report of Soil Analysis

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Fax (559) 636-1177
E-mail lgomezsloan@ppeng.com

No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 207 NW 40 North Center East 0-1'	50	7.9	3.42	11.4	5.9	16.9		6.7		+		2.3	29	12	410		1.5
2	Field 207 NW 40 North Center East 1-2'	49	8.0	3.49	12.5	6.3	17.6		6.7		+		2.1	34	12	424		1.4
3	Field 207 NE 40 South West Corner 0-1'	55	8.1	1.40	3.9	2.6	7.4		4.5		+		1.2	20	5	333		1.1
4	Field 207 NE 40 South West Corner 1-2'	49	8.0	2.04	6.7	4.5	10.3		4.9		+		1.3	23	5	302		0.9
5	Field 207 South West 40 South Center West 0-1'	54	7.9	5.60	27.1	12.7	23.8		6.2		+		3.7	21	5	303		0.5
6	Field 207 South West 40 South Center West 1-2'	50	8.1	2.50	7.7	4.0	14.6		7.1		+		2.8	24	7	348		1.0
7	Field 207 South East 40 Center East 0-1'	52	8.2	4.40	10.0	7.5	26.2		10.5	0.5	-		3.9	24	11	426		1.5
8	Field 207 South East 40 Center East 1-2'	52	8.0	4.75	11.7	8.8	26.7		9.9		+		3.9	28	12	458		1.4
9	Triangular 120 South of Field 207 West Center 0-1'	56	8.0	10.40	22.9	12.1	55.7		15.5	<0.1	+		8.4	44	7	394		1.3
10	Triangular 120 South of Field 207 West Center 1-2'	71	8.1	13.00	21.2	15.1	86.2		22.2	7.9	+		12.7	26	6	310		0.4
11	Triangular 120 South of Field 207 South East 0-1	54	7.9	4.57	10.9	5.3	24.3		10.2	<0.1	+		4.4	59	12	431		1.4
12	Triangular 120 South of Field 207 South East 1-2	59	8.0	12.50	24.0	14.1	83.6		21.3	3.8	+		17.6	47	13	383		0.9

Report of Soil Analysis

DELLAVALLE Laboratory, Inc.
Chemists and Consultants

1910 W. McKinley, Suite 110, Fresno, CA 93728
FAX (559) 268-8174 - (800) 228-9896 - (559) 233-6129

Provost & Pritchard Eng - Visalia
130 N Garden St
Visalia CA 93291
14015
01

ID: Cotton

Lab No. 206204
Sampled Date 6/13/2014
Submitted Date 6/16/2014
Submitted by Donald Ikemiya
Reported Date 6/25/2014
Location/Project American Kings Solar Project
Copy To
Fax (559) 636-1177
E-mail lgomezsloan@ppeng.com

No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 212 North East Center 0-1'	56	8.2	2.06	4.8	2.1	15.5		10.0	0.1	+		5.0	22	14	443		1.4
2	Field 212 North East Center 1-2'	63	7.9	6.18	28.2	13.1	34.3		9.0		+		10.3	12	12	342		0.5
3	Field 212 North Center' 0-1'	54	8.3	1.45	2.2	1.3	12.3		11.1	4.5	+		4.2	21	12	484		1.6
4	Field 212 North Center' 1-2'	61	7.9	6.20	27.5	15.3	33.5		8.6		+		7.4	7	7	325		0.4
5	Field 212 North Center West 0-1'	60	8.2	1.76	3.5	2.2	13.9		9.8		+		5.7	10	6	313		0.8
6	Field 212 North Center West 1-2'	58	7.9	8.41	28.5	17.4	44.8		11.1	<0.1	+		11.8	9	8	289		1.4
7	Field 212 South West Corner 0-1'	53	8.2	1.40	2.7	1.5	11.2		9.1		+		3.6	20	10	464		1.6
8	Field 212 South West Corner 1-2'	63	7.9	5.82	28.6	13.6	25.4		6.4		+		4.3	10	7	390		0.9

Report of Soil Analysis

DELLAVALLE Laboratory, Inc.
Chemists and Consultants

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Provost & Pritchard Eng - Visalia
130 N Garden St
Visalia CA 93291
14015
01

ID: Cotton

Lab No. 206446
Sampled Date 6/18/2014
Submitted Date 6/19/2014
Submitted by Donald Ikemiya
Reported Date 6/26/2014
Location/Project American Kings Solar Project
Copy To
Fax (559) 636-1177
E-mail lgomezsloan@ppeng.com

No.	Description	% SP	units pH	dS/m EC	meq/l Ca	meq/l Mg	meq/l Na	meq/l Cl	% ESP	T/ac-6" GR	+\- Lime	lbs/ac-6" Lime	mg/l B	mg/kg NO_3-N	mg/kg PO_4-P	mg/kg K	mg/kg Acid K	mg/kg Zn
	RL--->	0.50	1.0	0.01	0.1	0.1	0.1	0.1	0.1	0.1		500	0.1	1.0	2.0	2.0	40.0	0.1
	NAPT Methods--->	S1.00	S1.10	S1.20	S1.60	S1.60	S1.60	S1.40	Calc.			S2.50	S1.50	S3.10	S4.10	S5.10		S6.10
	Handbook 60--->									Hndbk 60-22d	Hndbk 60-23a						SSSA,p5 61 mod	
1	Field 212 S Corner 0-1'	60	7.9	3.40	9.8	4.9	25.8		11.3	<0.1	-		4.4	80	9	408		1.2
2	Field 212 S Corner 1-2'	60	7.8	6.07	26.0	13.9	35.1		9.4		-		5.2	16	3	334		0.9

Cotton Soil	"Texture"	"Acidity"	Total Salts	Calcium	Magnesium	Sodium	Chloride	"Alkali"	Gyp Req	Lime Pres	Lime Req.	Boron	Nitrate-N*	Phosphate-P*	Potassium*	Zinc*
V. Low	Sand<20	< 6.5	< 0.5	< 4	-	-	-	-		-		<0.2	< 5	< 10	<90	<0.9
Normal	25-45	6.7-8.0	0.6-2.0	5-14	-	< 8	< 10	< 9		++		0.3-1.5	8-25	12-30	110-350	1.0-2.5
High	Clay>55	8.4+	2.5**	30+	-	10+	15 +	12+		++++		2.0	40 +	50+	500+	3.0+

*Tissue analysis is advised to track nutrient use during the season. High & Sl High may indicate non-economic applications or toxic levels..

** = EC up to 4.0 not a problem if primarily calcium

Sodium should not be significantly higher than calcium.

*** = High & Low color levels may be differ based on consultant interpretation of the situation, including crop age, soil type, weather, irrigation system, etc.

Black = Normal	***
Red = High	Green = Low
Purple = Sl. High	Blue = V. Low

Exhibit 6

Groundwater Well Sample Results

Report of Water Analysis

DELLAVALLE Laboratory, Inc.
Chemists and Consultants

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Provost & Pritchard Eng - Visalia
130 N Garden St
Visalia CA 93291
14015
01

Crop: Tomatoes

Lab No. 206129
Sampler T. Witman
Submitted Date 6/13/2014
Submitted by
Reported Date 6/20/2014
Location/Project American Kings Solar Project
Copy To
Fax (559) 636-1177
e-mail lgomezsloan@ppeng.com

	Date Sampled	Time Sampled	EC dS/m	Ca meq/L	Mg meq/L	Na meq/L	SAR	Adj SAR	Cl meq/L	CO_3+ HCO_3 meq/L	SO_4 meq/L	B mg/L	NO_3-N mg/L	Fe mg/L	Mn mg/L	pH unit	L.I. Calc	TDS mg/L
RL--->			0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				0.02	1.0 to 14.0	-2.0 to 2.0	10.0
SM--->			2510 B	3120 B	3120 B	3120 B	Calc	Calc		2320 B		3120 B		3120 B	3120 B	4500H B	2330 B	2540 C
EPA--->									300.0		300.0		300.0					
Analysis Date:			*6/13/2014*	*6/18/2014*	*6/18/2014*	*6/18/2014*	*6/18/2014*	*6/20/2014*	*6/13/2014*	*6/13/2014*	*6/16/2014*	*6/18/2014*	*6/13/2014*	*6/18/2014*	*6/18/2014*	*6/13/2014*	*6/20/2014*	
Analysis Time:				*10:14*	*10:14*	*10:14*	*10:14*		*15:13*			*10:14*	*15:13*	*10:14*	*10:14*			
001 Field 206 North Well	6/12/14	13:41	**2.47**	**19.46**	0.35	**10.2**	3.2	**5.3**	**3.6**	0.3	27.5	**1.38**	0.3	<0.10	0.04	7.9	0.1	

Field and Row Crops Generalized Levels	Total Salts	Calcium	Magnesium	Sodium	Sodium Abs. Ratio SAR	Adjusted	Chloride	Carbonates & Bicarbonates	Sulfate	Boron	Nitrate-N	Iron	Manganese	pH	Langelier Index
Low	<0.40	<4.00	-	-	-	-	-	-	-	-	-	-	-	<6.5	< -0.5
Normal	0.50-1.50	5.00-10.00	1.1-5.0	<4.0	0.1-4.0	0.1-4.0	0.1-1.5	0.1-2.5	0.1-5.0	0.01-0.40	0.1-5.0	<0.20	<0.20	6.8-7.9	-0.3 - 0.5
High for Sensitive Crops	1.51-2.20	> 10.00	> 5.0	4.1-7.0	4.1-9.0	4.1-9.0	1.6-3.5	2.5-3.5	-	0.41-0.59	5.1-7.0	0.21-0.40	0.21-0.40	8.0-8.4	0.6-0.7
High for Tolerant Crops	> 2.20	-	-	> 7.0	> 9.0	> 9.0	> 3.5	> 3.5	-	> 0.60	> 7.0	> 0.40*	> 0.40*	> 8.4	> 0.9*

Many of the above parameters need specific adjustment for crops, uses, irrigation procedures, etc. Check report for specifics.

LI 0.4+ Problematic for drip system deposits. LI < -0.3 corrosive to plumbing *= High levels can cause plumbing deposits.

When sodium is greater than calcium (or high SAR), the water is considered sodic or "alkali".

Note: High & Low levels are based on consultant interpretation of the situation, including plant varieties, age, soil type, irrigation system, etc., when information is available.

Notes: Black = Normal
Red = High | Green = Sl. Low
Purple = Sl. High | Blue = Low

APPENDIX C
LETTER TO MR. GREG GATZKA, COMMUNITY DEVELOPMENT DIRECTOR AT KINGS COUNTY, FROM MONTY G. ASHLIMAN, COMMANDING OFFICER AT NAS LEMOORE

DEPARTMENT OF THE NAVY
COMMANDER OFFICER
NAVAL AIR STATION
700 AVENGER AVENUE
LEMOORE, CALIFORNIA 93246-5001

IN REPLY REFER TO:
11010
Ser N00/0539
2 Sep 2015

Greg Gatzka
Community Development Director
1400 W. Lacey Blvd.
Hanford, CA 93230

Dear Mr. Gatzka,

Thank you for allowing Naval Air Station Lemoore (NAS Lemoore) the opportunity to comment on American Kings Solar Photovoltaic project and (Conditional Use Permit 11-05 and Amended Resolution 10-08). NAS Lemoore staff has reviewed the project, and given the information provided about the facility, does not anticipate conflicts with flight operations.

Specifically pertaining to Resolution 10-08, Finding 4, Part D, PDF AES-1: *"Plant a row of screening vegetation along the north boundary of the project site (along the south side of SR-198 to screen views of the project from SR 198 and the residences on the north side of SR 198"*

NAS Lemoore staff has reviewed the requirement and has determined no anticipated impact to operations with or without the presence of screening vegetation at this location.

NAS Lemoore continues to monitor the effects of land uses on Bird/Animal Aircraft Strike Hazards. Regarding Finding 4, Part D, PDF BIO-1, BIO-2, and BIO-3: I would respectfully request any pre-construction and/or baseline data gathered regarding avian species counts, active and/or inactive habitat, and/or mortality data be shared with NAS Lemoore staff upon completion.

I would encourage continued communication with NAS Lemoore during the construction process to ensure minimal operations impacts from construction dust and traffic.

NAS Lemoore supports well-planned compatible growth and appreciates Kings County's consideration of NAS Lemoore's need to maintain an encroachment free operating environment.

If you require additional information, please contact my Community Planning and Liaison Officer, Ms. Marlana Brown, at (559) 998-4093 or Marlana.Brown@navy.mil.

Sincerely,

MONTY G. ASHLIMAN
Commanding Officer
Naval Air Station Lemoore

APPENDIX D
EMAIL TO MS. JANICE CHEUNG, RISK MANAGEMENT AT EHS, FROM RICK SMITH, BATTALLION CHIEF AND FIRE MARSHALL AT KINGS COUNTY FIRE DEPARTMENT

Roy Skinner

From: Smith, Rick <Richard.Smith@co.kings.ca.us>
Sent: Thursday, April 30, 2015 1:44 PM
To: Janice Cheung
Subject: RE: American Kings Project - Fire Personnel Training

Hi Janice

I believe that your proposed language is more relevant to today's real-world fire service than that from the five-year old CUP, and I have no objections to making that amendment.

Rick

KINGS COUNTY
FIRE DEPARTMENT
Battalion Chief
Fire Marshal
Rick Smith
280 Campus Drive—Headquarters
Hanford, CA 93230
rick.smith@co.kings.ca.us
Direct (559) 852-2885•Cell (559) 469-2844•Fax (559) 582-8261
WWW.COUNTYOFKINGS.COM

From: Janice Cheung [mailto:Janice.Cheung@FIRSTSOLAR.COM]
Sent: Thursday, April 30, 2015 11:34 AM
To: Smith, Rick
Subject: American Kings Project - Fire Personnel Training

Hi Rick,

Our development team is preparing an amendment to an old CUP that we acquired from another developer. Attached is a copy of a Conditional Use Permit that our company acquired from Trina a couple of years ago. The Conditional Use Permit is dated 2010. Below is the language relevant to training Fire Personnel.

7. Applicant shall provide training for fire personnel to be able to interrupt electrical power safely for emergency incidents requiring fire suppression or rescue activities.

As fire/emergency response methods can vary across jurisdictions, and given the fact that there isn't a true shut off to power from a solar panel (unless it's pitch black midnight), our development team is proposing to remove this language. If we were to propose alternative language, we would default to boilerplate "subject to Fire AHJ review and approval".

Would Kings County FD have any objections to this? I appreciate your thoughts on the matter.

Thanks,

Janice Cheung, P.E.
EHS, Risk Management
135 Main Street, 6th Floor
San Francisco, CA 94105

Phone: (415) 935-2572
Mobile: (419) 819-7627
Janice.Cheung@firstsolar.com

Please consider the environment before printing this e-mail

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PLANNING COMMISSION RESOLUTION NO. 16-05

EXHIBIT B:
MMRP

MITIGATION MONITORING AND REPORTING PLAN

The purpose of this Mitigation Monitoring and Reporting plan (MMRP) is to ensure effective implementation of the Project PDFs that are required by the Kings County Community Development Agency and that American Kings Solar, LLC c/o First Solar (the applicant) has agreed to implement as part of project construction and/or operation. The MMRP, which is outlined in Table 4-1, includes the:

- PDFs that the applicant is required to implement as part of the project
- CEQA checklist questions to which the PDFs apply
- Responsibility for compliance
- Timing for implementation of the PDFs

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
3.2 Agriculture and Forest Resources			
b. Would the project conflict with existing zoning for agricultural use or a Williamson Act Contract? **e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use?**	**PDF AG-1:** Prior to the issuance of a building permit, the applicant shall submit a Soil Reclamation Plan (Plan) for the restoration of the Project site to its pre-project condition, for review and approval by the Planning Division of the Kings County Community Development Agency. The Plan shall contain an analysis of pre-project baseline soil conditions at the solar generating facility. General preconstruction conditions of the project site shall be photographically documented by the applicant prior to the start of construction of the project. The Plan shall contain specific measures to restore the soil to its pre-project condition at the end of the Solar Facility's useful life, unless an alternate use of the site is proposed, and agreed to by the County. Restoration shall include removal of all project fixtures, equipment, and non-agricultural driveways, as well as restoration of compacted soil. The Plan shall provide that all driveways and other areas compacted during original construction or by equipment used in the decommissioning would be tilled to restore the sub-grade material to a density and depth consistent with its pre-project condition. If the project site is not returned to agricultural production immediately upon completion of site restoration, a Kings County-approved grasses and forbs seed mixture designed to maximize revegetation with noninvasive species shall be broadcast or drilled across the project site, and weed-free mulch spread shall be applied, as	Applicant	Prior to issuance of building permit.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	needed, to stabilize the soil until germination occurs and young plants are established to facilitate moisture retention in the soil. Whether the project area has been restored to pre-construction conditions would be assessed by Kings County staff six months after the initial return to agricultural production, or seeding, has occurred. Additional seedlings and applications of weed free mulch shall be applied to areas of the project site that have been determined to be unsuccessfully reclaimed (e.g., restored to pre-project conditions) after six months, until the entire project area has been restored to equivalent conditions prior to construction and operation of the project. The Soil Reclamation Plan shall provide for all waste associated with decommissioning to be recycled or disposed of in compliance with applicable law. It is anticipated that waste would go to the Kings Waste and Recycling Authority's Materials Recovery Facility in Hanford, where recyclable materials would be removed. All remaining waste would then go to the B-17 Landfill Unit at the Chemical Waste Management Kettleman Hills Facility. If either of these facilities is not available at the time of decommissioning, the Plan shall be revised to provide that another equivalent facility will be utilized. Additionally, the Soil Reclamation Plan shall discuss the retention of any surface water rights. The applicant shall verify the completion of reclamation within 18 months after expiration of the Project use permit, with Planning Division staff. (Please note that Section 2501 of the Kings County		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Development Code defines an Abandoned Use as a business or other use which has discontinued operations and/or vacated the site, or abandoned the use, for more than six (6) months).		
	PDF AG-2: Prior to the issuance of a building permit, the applicant shall post security in the form of a performance or cash bond, Certificate of Deposit, or letter of credit to ensure completion of the activities under the Soil Reclamation Plan. Every 5 years the Applicant shall submit an updated Engineer's Cost Estimate for financial assurances for the Reclamation Plan, which will be reviewed every 5 years by the Kings County Community Development Agency to determine if the posted security is sufficient to perform reclamation of the project. The security amount shall be adjusted as necessary to ensure the amount is sufficient to cover the County approved updated cost estimate.	Applicant	Prior to issuance of building permit.
	PDF AG-3: The productive agricultural capability of the project site would be maintained during the life of the project by implementation of an Agricultural Management Plan (AMP) which specifies use of the site for sheep grazing in conformance with adopted County policy. The AMP shall contain an analysis of existing and future agricultural conditions of the Project site and surrounding area, a soil analysis of the Project site, existing and future surface water availability, and groundwater quality and availability which shows the proposed concomitant commercial agricultural operation proposed by the applicant is a	Applicant	Prior to issuance of building permit.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	reasonably foreseeable use of the land within the site. The AMP shall also describe how the applicant will ensure the site retains onsite agricultural activity sufficient to meet the compatibility requirements of Kings County Resolution 13-058. The AMP shall be submitted to the Kings County Community Development Agency for approval prior to the issuance of a building permit.		
3.3 Air Quality			
a. Would the project conflict with or obstruct implementation of the applicable air quality plan? **b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?** **c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions**	**PDF AQ-1:** Prepare and submit an Air Impact Assessment (AIA) along with the ISR application to SJVAPCD.	Applicant	During project environmental review.
	PDF AQ-2: Project construction equipment shall meet the 20 percent reduction in NO_x emissions when compared to the statewide average specified in the SJVAPCD ISR Rule. Submit the construction fleet information to support this reduction to SJVAPCD prior to the start of project construction.	Applicant	During project environmental review.
	PDF AQ-3: Prepare a Fugitive Dust Control Plan and submit it to the SJVAPCD prior to the start of project construction. The Fugitive Dust Control Plan shall incorporate all applicable control measures identified in Regulation VIII.	Applicant	During project environmental review.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
which exceed quantitative thresholds for ozone precursors)?			
3.4 Biological Resources			
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? **d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?** **e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**	**PDF BIO-1:** The project applicant shall retain a qualified biologist to conduct a pre-construction survey for active Swainson's hawk nests within 0.5 mile of the project site during the nesting season (March 1 to September 15). If a Swainson's hawk is found within 0.5 mile of the project site during project construction, the applicant shall stop work within that 0.5 mile buffer, and shall contact the California Department of Fish and Game (CDFG) to determine the appropriate actions to undertake. The project applicant shall retain a qualified biologist to conduct a census level analysis (which includes a nest reconnaissance survey and main census survey) of nesting Swainson's hawk. These surveys shall include aerial photographic reconnaissance, windshield surveys of accessible property, and shall incorporate and update the census level analysis of the March 2012 "Distribution and Abundance of Nesting Swainson's Hawks in the Vicinity of the Proposed RE Mustang LLC, RE Orion LLC, and RE Kent South LLC Solar Generation Facilities", prepared by Estep Environmental Consulting for an adjacent and neighboring property which also included the proposed project in its cumulative analysis of Swainson's hawk foraging habitat. To update this report and adapt it to the proposed	Biologist and Applicant	Prior to the start of project construction

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	project, nesting surveys shall be conducted in two phases, once during the incubation/early nestling phase (mid-April to mid-May), and once during late nestling/early fledging phase (mid-May to late-June). Conducting an early and later survey ensures that all active nesting territories are documented and that failed nests and nests abandoned later in the breeding season are not missed as they may be if only a June survey were conducted. If the census level analysis determines that the project would not result in a significant reduction of available Swainson's hawk agricultural foraging habitat at either the project-specific or cumulative level, based on the significance criteria in the above mentioned reports, no further mitigation shall be required as per CEQA guidelines. If the census level analysis determines that the project will result in a significant reduction of available Swainson's hawk agricultural foraging habitat, the applicant shall mitigate the loss of up to 966 acres of agricultural land (foraging habitat) by providing a conservation easement, deed restriction, or an in-lieu fee to a conservation bank at a 0.5:1 ratio. The habitat management land shall be located within 10 miles of a known nest site.		
	PDF BIO-2: Conduct a preconstruction survey for burrowing owls no more than 30 days prior to the start of construction to determine if owls are occupying areas on or within 250 feet of the project site. The survey shall be performed during the burrowing owl	Biologist and Applicant	Prior to the start of project construction and throughout the project construction period.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	breeding season (February 1 through August 31) to determine whether nearby ground squirrel or other appropriate sized burrows or cavities are occupied by burrowing owls. Implement mitigation measures to protect burrowing owls by restricting construction activities within 150 feet of occupied burrows during the non-breeding season or 250 feet of active burrowing owl nest sites during the breeding season (February 1 through August 31). Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFG verifies through noninvasive methods that either (1) the birds have not begun egg laying and incubation, or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. When destruction of occupied burrows is unavoidable, existing unsuitable burrows shall be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2:1. If owls must be moved away from the disturbance area, passive relocation techniques (as described below) shall be used rather than trapping. Passive relocation shall begin at least 1 or more weeks prior to the start of construction activities to allow the owls to acclimate to alternate burrows. If avoidance is possible, no disturbance shall occur within 50 meters (approximately 160 feet) of occupied burrows during the non-breeding season (September 1		

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	through January 31) or within 75 meters (approximately 250 feet) during the breeding season (February 1 through August 31).Owls in non-active nests shall be excluded from burrows in the immediate impact zone and within a 50-meter (approximately 160 feet) buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g., modified dryer vents) shall be left in place 48 hours to insure owls have left the burrow before excavation. Two natural or artificial burrows shall be provided for each burrow in the project site that would be rendered biologically unsuitable. The project site shall be monitored daily for 1 week to confirm owl use of burrows before excavating burrows in the immediate impact zone. Whenever possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.		
	PDF BIO-3: Conduct a San Joaquin kit fox pre-construction clearance survey to determine whether any San Joaquin kit fox dens are onsite prior to project construction. If a den is identified, the applicant shall adhere to the monitoring and excavation provisions in the USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range (1999). Copies of any survey results and forms shall be submitted to USFWS and CDFG prior to the start of project construction. Documentation of the submittal shall also be provided to Kings County. The bottom of the perimeter fence will either have a 4	Biologist and Applicant	Prior to the start of project construction

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	to 6 inch continuous gap (as measured from ground level) or portals (sized 4 inches by 6 inches, spaced no more than 50 feet apart) around the entire perimeter of the site to allow for and maintain wildlife passage through the site (as shown in Figure 1-11 and Figure 1-12). Implement and maintain a weed control program around the perimeter fence.		
	PDF BIO-4: A qualified biologist will conduct a preconstruction survey for nesting bird species that are protected by the MBTA not more than 30 days prior to commencement of construction.	Biologist and Applicant	Prior to the start of project construction.
3.5 Cultural Resources			
a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? **b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?** **c. Would the project directly or indirectly destroy a unique**	**PDF CUL-1:** The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources. The project proponent shall retain a professional archaeologist to provide a pre-construction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team. The project proponent shall retain a professional	Archaeologists and Applicant	Throughout the project construction period

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
paleontological resource or site or unique geologic feature? **d. Would the project disturb any human remains, including those interred outside of formal cemeteries?**	archaeologist to monitor during ground disturbing construction for the project to review, identify, and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, and Kings County Community Development Agency (CDA) shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under CEQA.		
	PDF CUL-2: If the professional archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate the impact to a less than significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the Kings County Community Development Agency. The archaeologist shall document the resources using DPR 523 forms and file said forms with the California Historical Resources Information System, Southern San Joaquin Valley Information Center. The resources shall be photo-documented and collected by the archaeologist for submittal to the Santa Rosa Rancheria's Cultural and Historical Preservation	Archaeologists and Applicant	Throughout the project construction period

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Department. The archaeologist shall be required to submit to the County for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.		
	PDF PALEO -1: If paleontological resources are discovered during excavation activities at the project site, work in the vicinity of the find (a 50-foot radius) shall cease, and a qualified professional paleontologist shall be retained to evaluate the significance of the resources and make recommendations regarding the treatment, recovery, curation of the resources, as appropriate. Treatment of any significant paleontological resources shall be undertaken with the approval of the Kings County CDA.	Paleontologist and Applicant	Throughout the project construction period.
	PDF CUL-3: Pursuant to State Health and Safety Code Section 7070.5(e) and Public Resources Code Section 5097.98, if human remains or remains of unknown origin are found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the Kings County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) who shall identify the person believed to be the Most Likely Descendant (MLD). California Public Resources Code allows 48 hours for the MLD to comment. The project proponent and MLD, with the assistance of the archeologist, shall make all reasonable efforts to	Archaeologist and Applicant	Throughout the project construction period.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance." The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the Kings County Community Development Agency, and the California Historical Resources Information System, Southern San Joaquin Valley Information Center.		
3.6 Geology and Soils			
b. Would the project result in substantial soil erosion or the loss of topsoil? **d. Would the project be located**	**PDF GEO-1:** Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), designed to reduce potential impacts related to erosion and surface water quality during project construction activities and through the life of the project. The SWPPP shall include measures to address erosion, such as a construction period monitoring program to be	Engineer and/or Erosion Control Specialist, Construction Contractor, and Applicant	Prior to the start of project construction, throughout the project construction period, and throughout project

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? **e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**	implemented by the construction supervisor, and shall include Best Management Practices (BMPs) to address erosion, such as watering for dust control and the construction of perimeter silt fences, as needed. The SWPPP shall be submitted to the Central Valley Regional Water Quality Control Board for review. Documentation of the submittal shall be provided to Kings County prior to issuance of any building permits. Implementation of the SWPPP shall comply with state and federal water quality regulations.		operation.
	PDF GEO-2: Expansive soils have been determined to be present onsite and pose a structural issue; therefore a geotechnical report is required prior to issuance of a building permit.	Engineer and/or Soil Scientist and Applicant	Throughout the project construction period.
	PDF GEO-3: Submit the engineered plans for the proposed septic system to the County Environmental Health and the Building Department. This must be completed prior to the County's issuance of a building permit.	Applicant	Prior to the start of project construction.
3.7 Greenhouse Gas Emissions			
	No applicable PDFs or mitigation measures.	N/A	N/A

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
3.8 Hazards and Hazardous Materials			
a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wild/and fires, including where wild/ands are adjacent to urbanized areas or where residences are intermixed with wild/ands?**	**Please see PDF GEO-1 above.**		
	PDF HAZ-1: The applicant shall implement the following measures during project construction and operation : The applicant shall implement applicable Kings County Improvement Standards to ensure accessibility and ground clearance of emergency vehicles (i.e. fire engines) to the main entrance, to the Control Building and the substation. Ensuring accessibility and ground clearance of emergency vehicles would be applicable not only to the main entrance, control building, and substation, but would also apply to all of the interior gravel driveways throughout the project site. The applicant shall develop safety measures in accordance with Cal OSHA safety and health regulations and guidance for construction, which shall be reviewed by all project construction staff prior to the start of any work. Safety measures shall include those that address potential electrical incidents and fire hazards. Work crews shall be required to park vehicles away from flammable vegetation, such as dry grass and brush. At the end of each workday, heavy equipment shall be parked over mineral soil, asphalt, or concrete, where available, to reduce the chance of fire. Fire suppression equipment (i.e., fire extinguishers)	Construction Contractor and Applicant	Prior to the start of project construction , throughout the project construction period, and throughout project operation

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	shall be made available on the project site at all times. All heavy equipment shall be required to include mechanisms for fire suppression, including spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers. Smoking shall be prohibited at the project site except in designated areas.		
3.9 Hydrology and Water Quality			
a. Would the project violate any water quality standards or waste discharge requirements? **c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?** **d. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a**	Please see **PDF GEO-1** above**.**	Construction Contractor and Applicant	Throughout the project construction period and throughout project operation

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite? **e. Would the project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?** **f. Would the project otherwise substantially degrade water quality?**			
3.10 Land Use and Planning			
	No applicable PDFs or mitigation measures	N/A	N/A
3.11 Mineral Resources			
	No applicable PDFs or mitigation measures	N/A	N/A
3.12 Noise			
a. Exposure of persons to or	**PDF NOI-1:** Limit noise-generating construction	Construction Contractor and	During development

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	activities to between the hours of 6:00 a.m. and 6:00 p.m. Monday through Friday, and from 8:00 a.m. to 6:00 p.m. on Saturday and Sunday if additional hours are needed to make up schedule deficiencies or to complete critical construction activities. Prohibit construction activities on major federal- and state-recognized holidays (i.e., New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day). [1] Equip construction equipment powered by an internal combustion engine with suitable exhaust and intake silencers, in accordance with manufacturers' specifications, and maintain it in good working order. Locate stationary construction equipment (i.e., portable power generators and compressors) the furthest distance possible from nearby residences. Park trailers or other quiet stationary objects to block direct noise transmission to sensitive receptors when possible. Notify nearby residents whenever extremely noisy work would be occurring.	Applicant	of project construction bid documents and throughout the project construction period.

[1] Of the list of federal and state recognized holidays, a United States Department of Labor, Bureau of Labor Statistics article (and supporting study) identifies the most common six holidays provided to workers are those six holidays listed above, with 95 percent of employers recognizing these holidays. NOI-1 is provided to prohibit construction on those holidays that local residents are most likely to be at home. Because of the high percentage of employers that recognize these holidays, avoiding construction activities on these holidays should reduce construction-related noise impacts to local residents.

Van Giezen, Robert W., Paid Leave in Private Industry Over the Past 20 Years, Beyond the Numbers, August 2013, Vol. 2, No. 18, Bureau of Labor Statistics, US Department of Labor (http://www.bls.gov/opub/btn/volume-2/paid-leave-in-private-industry-over-the-past-20-years.htm)

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	Shut off idling equipment. Include these noise PDFs in construction bid documents.		
3.13 Population and Housing			
	No applicable PDFs or mitigation measures	N/A	N/A
3.14 Public Services			
Would the project result in substantial adverse physical impacts associated with the provision of new and physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services: **a. Fire protection** **b. Police protection**	Please see **PDF HAZ-1** above.	Construction Contractor and Applicant	Prior to the start of project construction, throughout the project construction period, and throughout project operation
	PDF PUB-1: If sheriff and/or fire protection services are required at the proposed project site during project construction or operation, the applicant shall pay to the County the cost of those services.	Construction Contractor and Applicant	When billed by the County.

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
3.15 Recreation			
	No applicable PDFs or mitigation measures.	N/A	N/A
3.16 Transportation/Traffic			
	No applicable PDFs or mitigation measures	N/A	N/A
3.17 Utilities and Service Systems			
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?	Please see **PDF GEO-1** above.	Construction Contractor and Applicant	Throughout the project construction period and throughout project operation.
3.18 Mandatory Findings of Significance			

Table 4-1 Mitigation Monitoring and Reporting Plan

CEQA Checklist Questions	Project Design Features (PDFs) and Mitigation Measures (MMs)	Responsibility for Compliance	Timing
	No PDFs in addition to those described in the preceding sections.	N/A	N/A