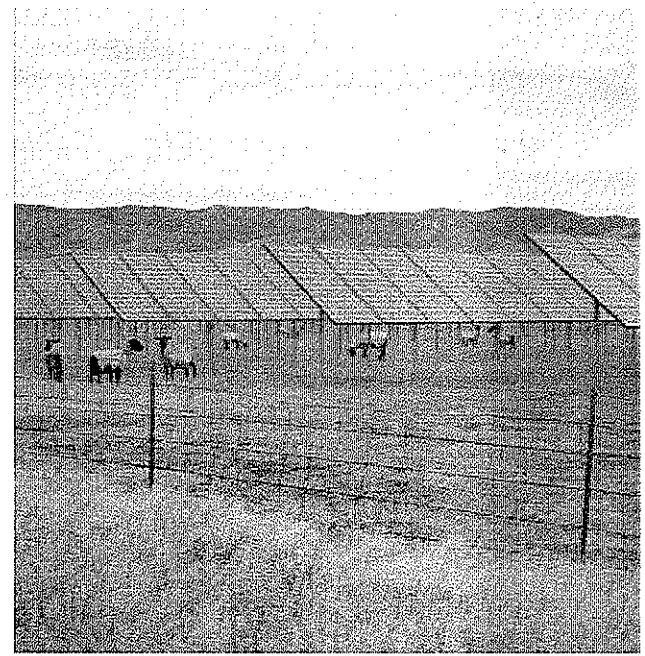


August 2009

SOLARGEN ENERGY, INC.

Panoche Valley Solar Farm *Initial Study*



PROJECT NUMBER:
117257

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*Panoche Valley Solar Farm
Initial Study*

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DESCRIPTION SUMMARY

1. Project Title: Panoche Valley Solar Project
2. Lead agency name and address:

San Benito Planning & Building Department
3224 Southside Road
Hollister, CA 95023

Contact person and phone number:
Bryon Turner, Assistant Planning Director
831.637.5313
3. Project location:
Assessor's Parcel Number: 0272900010
28002 Little Panoche Road
Paicines, CA 95043
4. Project sponsor's name and address:
Solargen Energy, Inc.
20400 Stevens Creek Boulevards, Suite 700
Cupertino, CA 95014
5. General plan designation: Agricultural Rangeland (AR)
6. Zoning: Agricultural Rangeland, forty acre minimum (AR-40)
7. Description of the project: Please refer to Section 1.3 of this document.
8. Surrounding land uses and setting: The site is located in eastern San Benito County in an area known as the Panoche Valley (see Figure 1). Similar to the Project site, surrounding lands support livestock grazing. There are scattered rural residences. The Panoche Inn is located south of the Project site near the intersection of Panoche Road and Little Panoche Road. Panoche School is located approximately one quarter of a mile from the Project site's southeastern boundary. The nearest rural community is approximately fifteen miles from the Project site.
9. Other public agencies whose approval is required. (e.g. permits, financing approval, or participation agreement) California Department of Fish and Game, Monterey Bay Unified Air Pollution Control District, Central Coast Regional Water Quality Control Board, U.S. Fish and Wildlife Service, and California Department of Forestry and Fire Prevention.

ABBREVIATIONS AND ACRONYMS

ABBREVIATIONS AND ACRONYMS	
ABBREVIATION	ACRONYM
AC	alternating current
amsl	above mean sea level
AQMP	Air Quality Management Plan
BMPs	Best Management Practices
Caltrans	California Department of Transportation
CAISO	California Independent System Operator
CBC	California Building Code
CEQA	California Environmental Quality Act
CGS	California Geological Survey
DC	direct current
DFR	Digital Fault Recorder
DOC	California Department of Conservation
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
IEEE	Institute of Electrical and Electronic Engineers
IS	Initial Study
kV	Kilovolt
MCE	Maximum Considered Earthquake
MND	Mitigated Negative Declaration
MPAC	Modular Protection Automation and Control
MSHCP	Multiple Species Habitat Conservation Plan
MSL	Mean Sea Level
MW	Mega Watt
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PG&E	Pacific Gas & Electric
PGA	Peak Ground Acceleration
PGAMCE	Peak Ground Acceleration Maximum Considered Earthquake

PV	Photovoltaic
RCRA	Resource Conservation and Recovery Act
RM	Resource Management
ROC	Reactive Organic Compounds
RWQCB	Regional Water Quality Control Board
SAS	Substation Automation Systems
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resource Control Board
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Initial Study (IS) is to identify the potential environmental impacts associated with the proposed Panoche Valley Solar Project (Project) on 10,000 acres in eastern San Benito County (County). This IS has been prepared in conformance with the California Environmental Quality Act (CEQA) Guidelines (Guidelines) that implement CEQA and the County's Implementation Procedures for CEQA. Pursuant to Section 15367 of the CEQA Guidelines, the County is the Lead Agency in the preparation of this Initial Study, and any additional environmental documentation required for the project. The County has primary responsibility for approval or denial of the project. The intended use of this document is to determine the appropriate level of environmental analysis required for Project approval and to provide the basis for input from public agencies, organizations, and interested members of the public. This document is organized into the following sections:

Section 1—Introduction. Describes the purpose of the document, project location, project description, intended uses of the document, environmental setting, project objectives, and project alternatives.

Section 2—Environmental Checklist. Provides an environmental checklist that identifies the level of impact associated with each environmental issue. Also provides a narrative discussion of each environmental issue contained in the environmental checklist.

Section 3—Reference Sources. Provides a list of references used in the preparation of this document.

Section 4—List of Preparers. Includes the individuals that were involved with the preparation of this IS.

1.2 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The 10,000-acre Project site is located in eastern San Benito County in the Panoche Valley area, approximately 15 miles west of Highway 5 and along West Shields Road / Little Panoche Road (see Figure 1). Specifically, the Project is located in Township 15S, Range 10E, Sections 3-5, 8-11, 13-17, and 20-25 and Township 15S, Range 11E, Sections 18, -20, 29, and 30 of the USGS Cerro Colorado, Llanada, Mercy Hot Springs, and Panoche 7.5-minute topographic quadrangle maps.

The topography of the site dips gently down to the east-southeast with sloping gradients up to approximately 30 percent. The site elevation ranges from approximately 125 feet above mean sea level (amsl) near the southeast end of the site to approximately 1,400 feet amsl near the west end. As rainfall is limited to approximately seven inches per year coupled with an average temperature ranging from 40° Fahrenheit in the winter to 80° Fahrenheit in the summer, the Project site is characterized as high desert. There is no urban development in the Project or surrounding area. The nearest rural community is approximately 15 miles from the perimeter of the Project site. Previously, the Project site was used for crop production; however, for approximately the past forty years, the project site and the surrounding area have been used for grazing. Vegetation is low-lying and sparse and primarily consists of annual non-native grass species.

Both Panoche Los Aguilas Creek traverse the Project site. In addition, there are several unnamed washes located throughout the site.

1.3 PROJECT DESCRIPTION

The proposed Project is the construction and operation of a 1,000 Mega Watt (MW) solar farm and ancillary facilities. Implementation would include the installation of 3,514,630 crystalline silicon photovoltaic (PV) solar panels on framed single-pole steel support structures, and a substation/ operation and maintenance (O&M) facility on 10,000 acres of undeveloped rangeland in eastern San Benito County.

The Project would be phased with development occurring at a rate of 150-200 MW per year (see Figure 2). Project implementation would commence in 2010 and is anticipated to be complete in 2016. The first phase has been designed (see Figure 3) and would be equipped to generate 20 MW of solar energy. Additionally, the Project substation and O&M facilities would be constructed during this phase.

This Farm will support California in meeting the Renewable Portfolio Standard (RPS) mandate, which requires each of California's investor-owned utilities to supply 20 percent of its total electricity through renewable energy generation by the year 2010. California has also established a goal of receiving 33 percent of its electricity supply from renewable energy by 2020.

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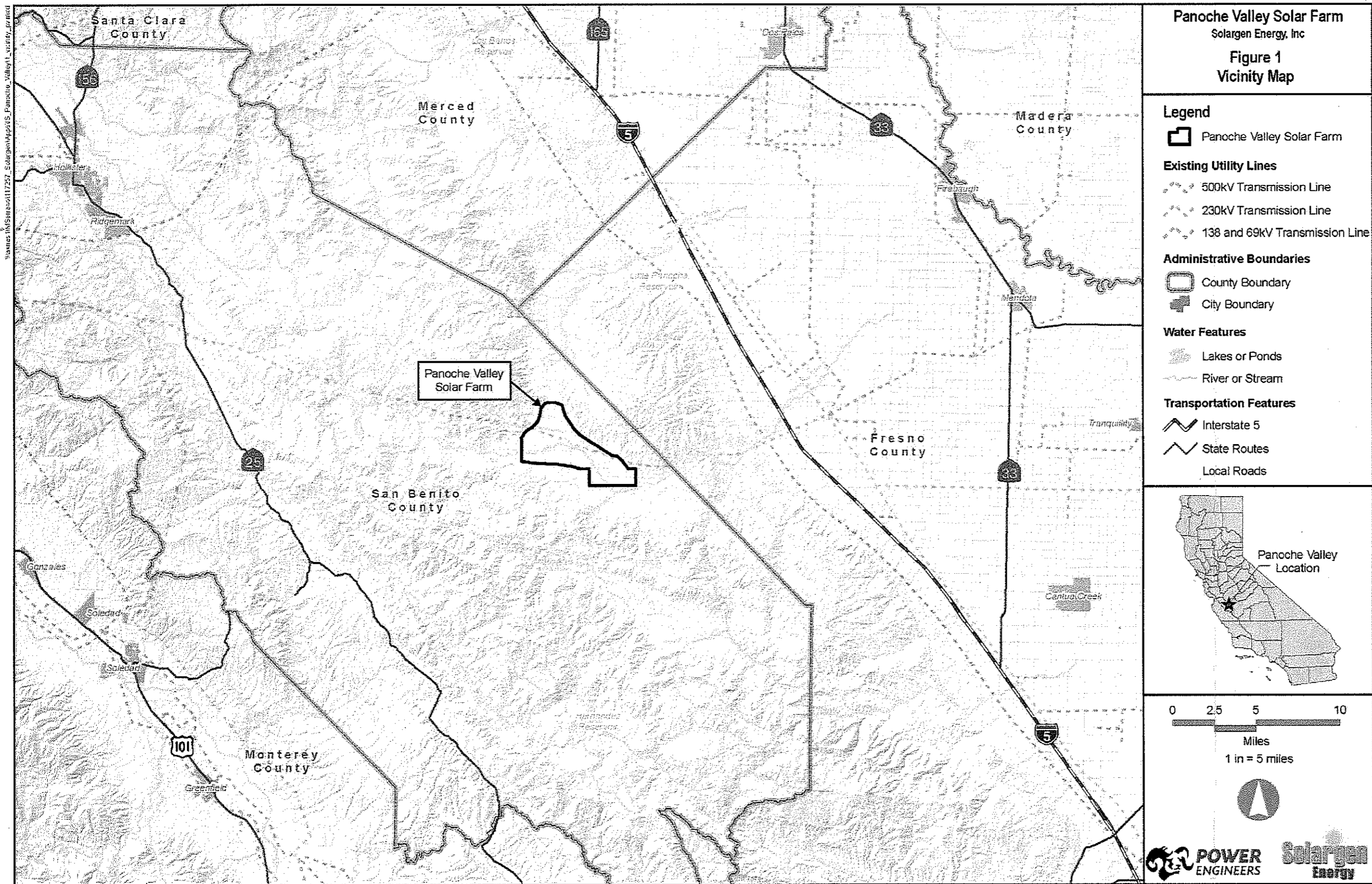


FIGURE 1. SITE VICINITY MAP.

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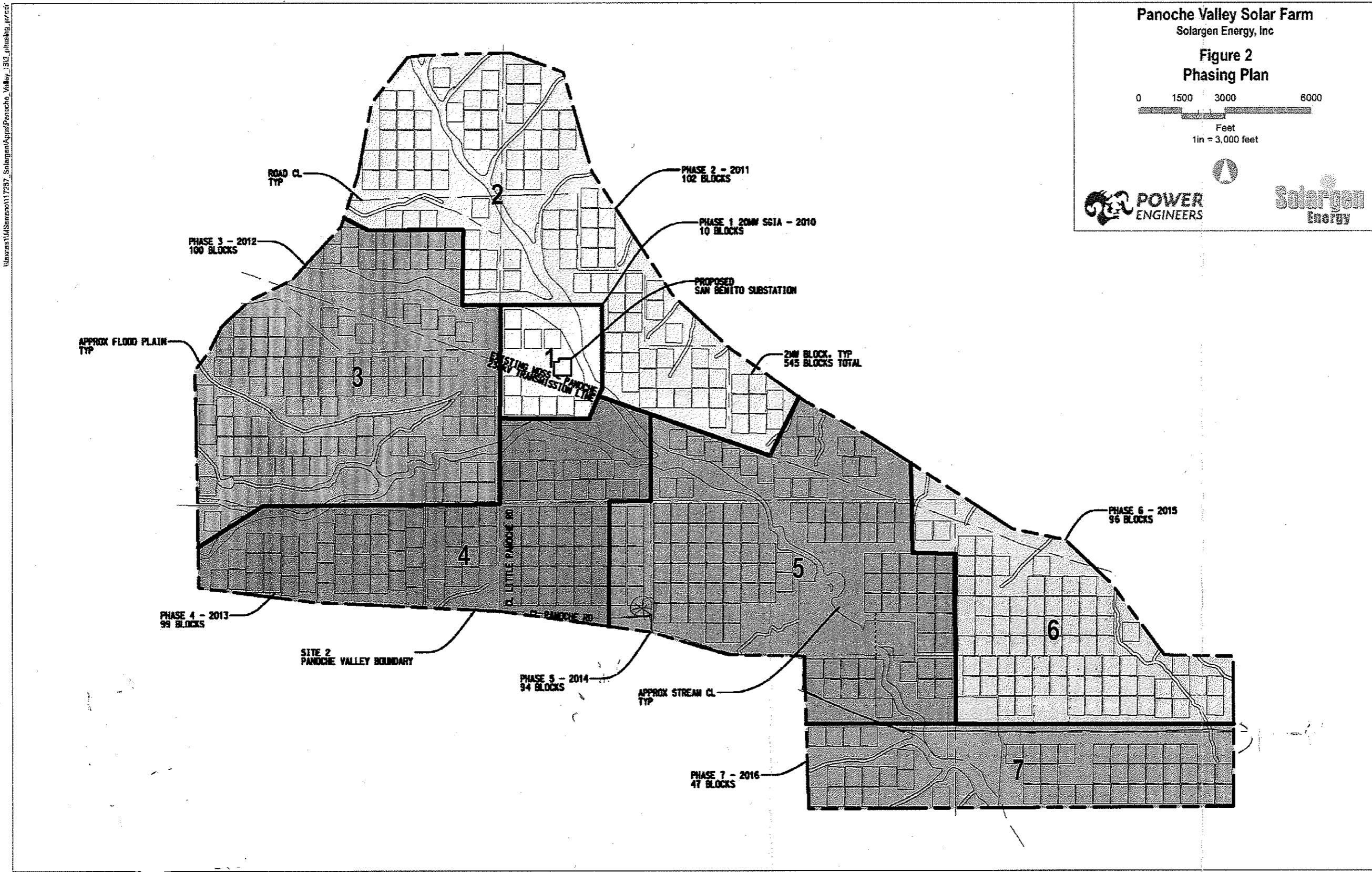


FIGURE 2. PHASING PLAN.

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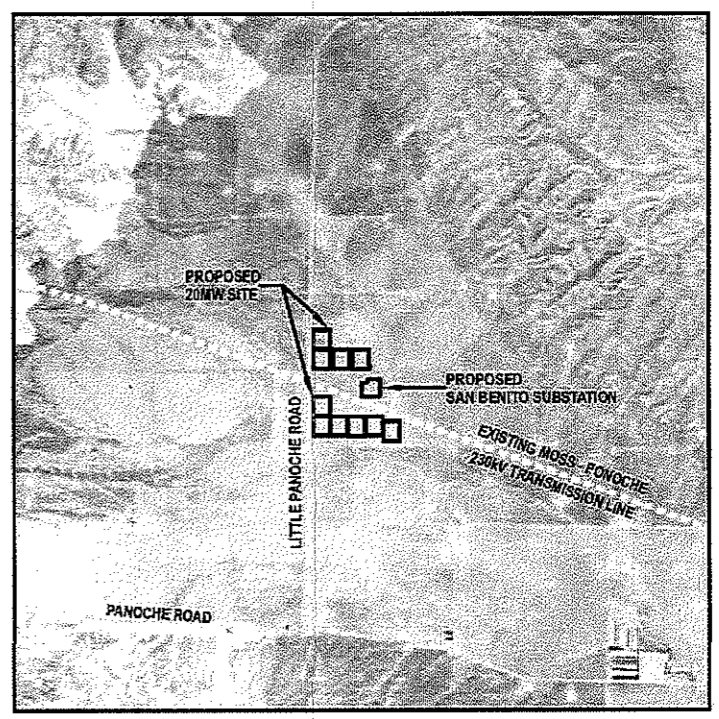
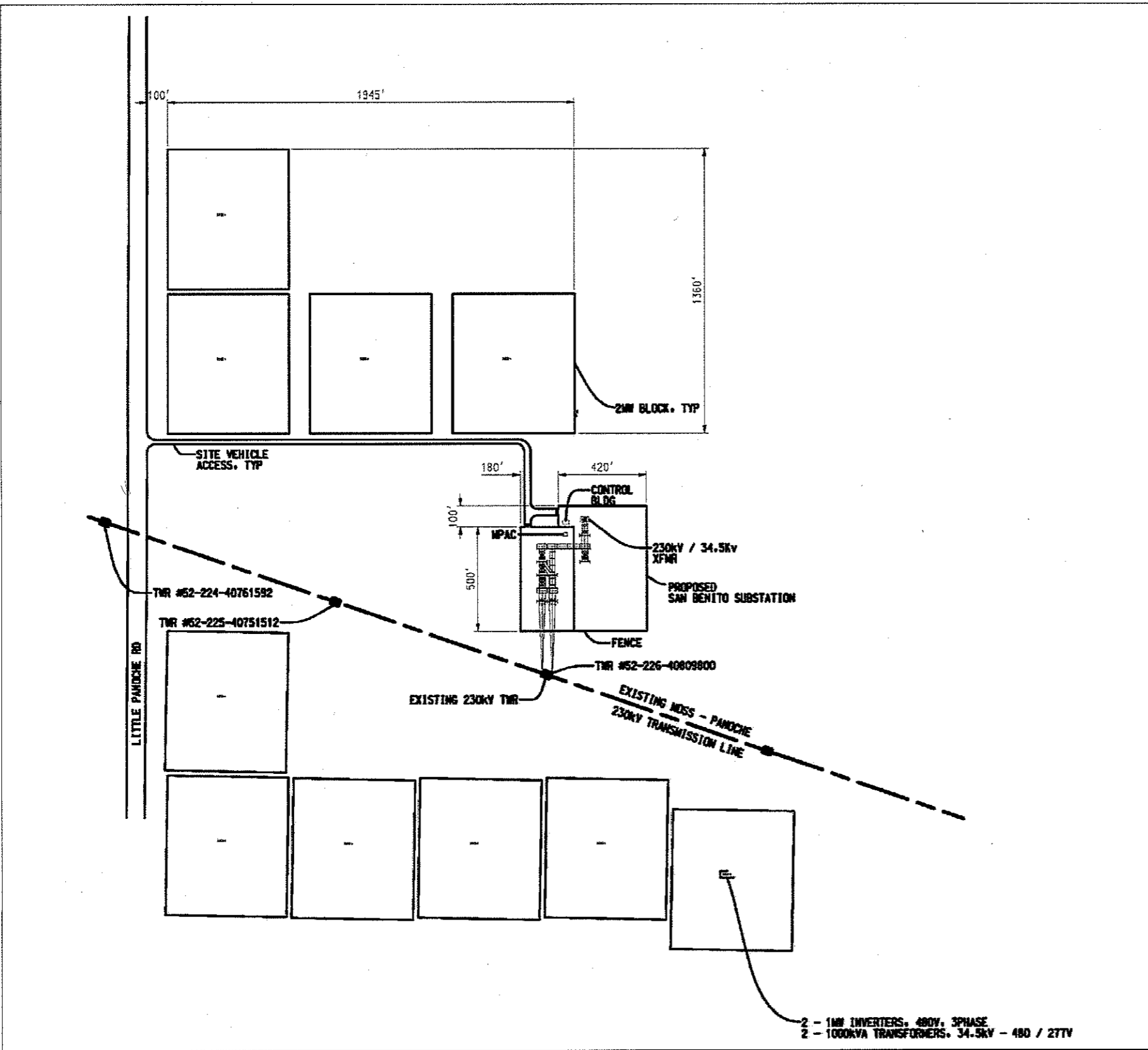
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Panoche Valley Solar Farm
 Solargen Energy, Inc

Figure 3
Phase 1 Site Plan

0 250 500 1000
 Feet
 1in = 500 feet

POWER ENGINEERS **Solargen Energy**



VICINITY MAP
 (NOT TO SCALE)

FIGURE 3. PHASE 1 SITE PLAN.

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Additionally, the proposed Farm incorporates a variety of environmentally protective features into the power generation system and site design, including the following:

- The Farm's direct conversion of sunlight to electricity through the photovoltaic effect does not require water to generate electricity.
- Key design features of the Farm maximize system simplicity and enable compatibility with current agricultural activities and key wildlife species in the area.
- Avoidance of key environmentally sensitive areas.
- The Farm's use of previously disturbed non-prime agricultural land lessens resulting impact on wildlife habitat.
- Solargen's PV panels will consist of non-toxic materials such as glass, silicon, and steel.
- The Farm will take advantage of dry grazing of sheep under the solar panels to keep the land within agricultural use (compatible use) and for fire prevention.
- The Farm would offset potential emissions of greenhouse gases that contribute to climate change and other pollutants such as nitrogen dioxide from fossil fuel fired powered plants, and would help achieve California's Renewable Portfolio Standard Program requirements.

*reg'd Williamson
at Prime
ag land*

1.3.1. Site Selection Process

In 2006, Solargen began evaluating the availability of electric transmission capacity throughout Pacific Gas & Electric's (PG&E's) service territory. Many potential locations for the interconnection of solar projects would require lengthy and expensive system upgrades in order to integrate the new capacity into the transmission system. However, the Moss to Panoche transmission line, which is owned by PG&E, provides an opportunity to interconnect the Farm at a point on the system with available electric transmission capacity. The Moss to Panoche line runs from the, through the Panoche Valley area, and eventually into Fresno County in the San Joaquin Valley. Solargen began researching potential Farm sites along this transmission line. Much of the land near the Moss to Panoche line in San Benito County is in highly productive agricultural use. Many of the properties in San Benito County also contain underground mineral resources that continue to support oil and gas production. These factors posed substantial challenges to Solargen's search for a site for a large, contiguous solar PV project site.

The Panoche Valley area has a strong solar resource, as demonstrated by the National Renewable Energy Laboratory solar radiation database which has collected data for the last decade on various locations around the United States. The value of the Panoche Valley area for a solar PV project location is further enhanced by its relatively flat terrain.

As a result of a thorough site selection alternatives analysis, Solargen selected the Farm location described in this document. Once constructed, the Farm will be in operation for at least 30 years, with the possibility of a subsequent re-powering of the Farm for additional years of operation. *

if not assumed?

1.3.2. PV Panels, Inverters, and Transformers

The solar panels are dark in color. The rows of panels will be tilted upwards and facing towards the south. At the highest end, the panels would stand less than fifteen feet above the ground. Each glass PV panel would be about two feet by four feet in size. The rows of panels would be spaced based on a panel tilt angle to prevent them from shading one another (row spacing may be varied and approximately up to 15 feet apart). Unpaved, compressed and crowned rock-type aisle ways will be created around the perimeter of the blocks for vehicle traffic.

Each PV block would also contain one or more inverters and a transformer. The inverter will convert the output of the PV panels from direct current (DC) to alternating current (AC). The transformer would then step up the voltage of the panel output to a high-voltage collection system voltage. The inverter and transformer would be centrally located within each PV block, and would be housed together on a concrete pad of approximately 100 square feet (concrete will cover less than 1% of the entire developed area). The transformer and inverter unit would stand a below a 15 foot maximum height.

In all, the Project would include the following components:

- PV panels mounted on steel support structures and associated inverters and transformers
- Low-voltage and medium-voltage collection system
- Site grading and all-weather access roads
- A permanent fenced substation and O&M facility

1.3.3. Collection System

The high-voltage collection system lines transmitting power from each PV block would be either buried underground or strung aboveground and connected to the new site collection side of the substation. At the substation, the Project's output would be stepped up to the existing transmission system's voltage of 230 kilovolts (kV).

1.3.4. Site Grading and All-Weather Access Roads

The Project does not require large-scale grading for construction and implementation. It is expected that the only grading on site would occur for the construction of all-weather roads, the site's substation, and the O&M facility. It would be necessary to create some graded all-weather roads in selected locations to bring equipment and materials from the staging areas to the construction areas, and for long-term site operation and maintenance. These roads would be heavily used during construction and rarely used during operation.

If electrical cables are buried, then trenching machines would be used to bury the cables between the inverter and transformer locations and the substation. Most trenching would take place within the proposed aisle ways between the rows of panels. The trenched areas would be filled once the cables are buried, and disturbed vegetation would be replaced or newly planted with native vegetation to cover those areas disturbed by trenching. Given the durability of the specified wiring and related equipment, it is not expected that the wires would need to be accessed at any time after installation.

1.3.5. Site Substation and Operations and Maintenance (O&M) Facility

The substation would occupy approximately ten acres. Included in this area would be an occupied Modular Protection Automation and Control (MPAC) building for Pacific Gas & Electric's (PG&E) substation control and protection equipment. There would also be a plant PV and collection substation control building to house its relay and protection equipment. Worker parking would be provided in a designated area outside the substation fence. The substation would be located adjacent to the existing PG&E Moss to Panoche 230 kV transmission line.

The substation site would be graded and compacted to an approximately level grade. One or more cement pads would be constructed as foundations for substation equipment and the remaining area would be graveled. Electrical transformers, switchgear, and related substation facilities will be designed and

constructed to transform high-voltage power from the Project's delivery system to the existing 230 kV transmission line. A gated eight foot-high chain link fence would be constructed around the PG&E substation and the plant substation.

The plant collection substation would include a fenced O&M facility for parts storage, security, and site monitoring. The O&M facility would most likely consist of two doublewide trailers located on a graded area.

In addition to the general Project components described above, the Project incorporates several environmentally-sensitive design features.

1.3.6. Environmentally Sensitive Design Features

Biological Resources

The Project has been designed to avoid sensitive biological areas. Surveys have confirmed the presence of federally and state protected listed species known to occur on the 1,200-acres that comprise the first phase of the Project. The Project layout has been designed to be flexible to accommodate the habitat and conservation measures required to meet the regulations of the California Department of Fish and Game and the U.S. Fish and Wildlife Service. Solar modules can be removed from the sensitive areas and concentrated in portions of the Project site that are less sensitive. Any vegetation that is disturbed during the Project construction period will be replaced or newly planted with native species to restore those areas disturbed.

Wetlands and Waterways

Similar to the approach to biological resources, the Project is designed to accommodate flexibility in the placement of solar modules in jurisdictional areas.

Drainage and Erosion Control

The Project includes the implementation of measures to maintain the volume and quality of storm-water runoff at historic levels. The PV panels would be located four to five feet above the ground and would shade about 40 percent of the total site. Storm-water runoff will be able to percolate into the soil beneath the panels, recharging the groundwater table.

In order to prevent soil erosion and provide dust control after construction, a vegetated understory composed of indigenous flora species consistent with existing vegetation that would integrate annual grassland vegetation would be planted under the panels. The vegetation would be kept to a height of less than approximately eighteen inches by planting slow-growing grass native to the region and through short-duration intensive grazing by sheep.

Water Resources

The Project would not use any water for electricity generation. During the operational phase of the Project, the only water uses would be for periodic panel cleaning. During the construction period, additional water would be needed for uses such as dust control, sanitary facilities, initial panel washing, and concrete manufacturing.

Industrial Waste and Toxic Substances

The Project would not generate industrial wastes or toxic substances during operation. The PV technology utilized by Solargen contains no toxic metals, such as cadmium, that occur in other types of solar technology. There would be no hazardous substances stored on site.

1.3.7. Project Implementation

Initiation of Construction

The construction of the Project would begin once all applicable approvals and permits have been obtained. The first phase, 125 acres designed to support 42,550 solar modules, which would generate 20 MW of solar energy and the associated substation and O&M facilities, is planned to commence in 2010. It will take approximately one to two years from the commencement of the construction process to complete the first phase. The remaining 6 phases would be developed at a schedule of one phase per year, with the final phase completed in 2016 (see Figure 2). The Project would be in operation for at least 30 years, with the possibility of a subsequent re-powering of the Project for additional years of operation.

Construction of PV Blocks

A pre-developed racking system would arrive on-site at a rate of about 10-20 MW per month to be assembled and grounded. PV panels would arrive at the site and be placed in a staging area inside shipping containers. The PV panels would be put in place manually and secured to the rack per vendor specifications. The rack populated by PV panels connected electrically in series and connected to a DC combiner box will deliver DC power to the local inverter. Inverters and transformers would be installed at predetermined central locations, and then connected to incoming lines from the combiner boxes. After the PV blocks are installed, there should be only infrequent low-impact vehicular traffic for inspection and repair purposes on the aisle ways between PV blocks.

Construction Pace

Construction of the PV blocks is expected to take place at a pace of between 10 to 20 MW per month¹, and occupy between 30 and 50 acres at any given time. Prior to construction of the PV blocks, locations for the inverters, transformers, and buried electrical lines would be surveyed. After this work is complete, the construction team would move on to the next 30- to 50-acre parcel.

Construction of Site Substation and Interconnection

It is expected that a separate crew would build the site substation and the connection to the existing transmission line. After the initial PV blocks are installed and interconnected to the grid, they would be able to begin generating power while the subsequent PV blocks are still being constructed.

Workforce and Truck Trips

The construction workforce is estimated to be between 68-84 workers for construction of the 20 MW Phase 1, including the substation, and approximately 99-137 workers during the construction of each subsequent phase (see Figure 2, Phasing Plan). After the construction period, the workforce for operation and maintenance and security purposes is estimated to be 10 workers on average for the lifetime of the Project. Typical work schedules are expected to be during daylight hours only, with the exception of 24-hour onsite security.

During construction of each Phase 1, approximately five truck trips to the Project site will occur each day. Phases 2-7 would require approximately 10 truck trips per day for material delivery. In addition to material delivery, approximately 10 trip ends will occur daily to transport personnel to the Project site during Phase 1, and 18 trip ends during Phases 2-7. Table 1 shows estimates of personnel and trip ends for the Project, with numbers included for both Phase 1 and Phases 2-7 of construction.

¹With the exception of Phase 1, which would be developed at a rate of 4 MW per month.

TABLE 1. CONSTRUCTION LABOR AND TRIP ENDS ESTIMATES.

	Phase 1 1 MW per Week 20 MW per Year	Phases 2-7 2-4 MW per Week 150-200 MW per Year
Solar Installation		
Civil Personnel	6-7	6-7
Fencing Personnel	4-5	4-5
PV Support Pole Driver Personnel	2-3	4-8
PV Mechanical Installation Personnel	8-9	16-32
PV Electrical Personnel	8-12	30-34
Project Management Personnel	5-6	5-6
Environmental Monitors	2-3	2-3
Startup and Testing Personnel	3-4	8-12
Total Estimated for Solar Installation	38-49	75-107
Substation Construction		
Civil Personnel	6-7	0
Mechanical Personnel	5-6	8-9
Electrical Personnel	8-9	11-15
Startup and Testing Personnel	3-4	5-6
O&M and Control Building Personnel	8-9	0
Total Estimated for Substation Construction	30-35	24-30
Trip Ends per Day		
Material Delivery	5	10
Worker Bus Trips	4	8
Civil Worker Trips	2	2
Electrical Worker Trips	2	4
Mechanical Worker Trips	2	4
Total Estimated Trips per Day	15	28

Fencing

Subject to regulatory approval, the site would be enclosed with a six-foot-high chain link fence. It would be designed with regularly spaced, appropriately sized culverts to enable certain wildlife, including the San Joaquin kit fox, to move through the site. Gated eight-foot-high chain link fences would be constructed around the substation and temporary fencing would be placed around the construction staging areas.

Site Access

The Project would be fenced to help prevent access by the public. Gates would be installed at the roads entering the site. Limiting access to the site is necessary both to ensure the safety of the public and to protect the equipment from potential theft and vandalism.

Fire Control

The Project allows for sheep to continue to graze on the site to reduce any vegetative fuel. The PV panels and ancillary equipment result in a negligible increase in fire potential; however, a fire prevention plan would be prepared in compliance with applicable County regulations.

Inspections

During construction, the site would be under continual surveillance by the supervising construction staff. Special inspections and monitoring would be conducted in conformance with the environmental protection measures included in the Project design and adopted at the time of Project approval. During normal operations, the facilities would be subject to continuous security and inspections by O&M staff.

Contingency Planning

Considerable engineering design has been completed for the Farm that has sought to anticipate problems or issues that could arise prior to the start of construction. Should unforeseen problems occur, Solargen will identify them as early as possible and work with San Benito County and other agencies to implement any necessary changes to the Farm in a manner that complies with all relevant regulations.

1.4 INTENDED USES OF THIS DOCUMENT

This Initial Study document has been prepared to determine the appropriate scope and level of detail required in completing the environmental analysis for the proposed Project. This determination will allow the County of San Benito to focus the environmental analysis on potential significant environmental impacts for the Panoche Valley Solar Farm.

The Initial Study is a public document used by the decision-making lead agency to determine whether a project may have significant effects on the environment. In accordance with CEQA Guidelines (Section 15064[a]), an environmental impact report (EIR) must be prepared if there is substantial evidence, such as the results of the Initial Study, that a project may have a significant effect on the environment. A negative declaration (ND) or mitigated negative declaration (MND) may be prepared if the lead agency determines that the project would have no potentially significant impacts or that revisions to the project, or measures agreed to by the applicant, mitigate the potentially significant impacts to a less-than-significant level (CEQA Guidelines Section 15063[f]).

This document will also serve as a basis for soliciting comments and input from public agencies and interested members of the public. The Initial Study will be circulated for a total of 30 days, during which written comments regarding the Project are invited to be sent to:

San Benito County
Planning and Building Department
5224 Southside Road
Hollister, CA 95023

1.5 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 description of each environmental factor within Section 2.0 of this document.

TABLE 2. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED BY PROJECT

ENVIRONMENTAL FACTORS	POTENTIALLY SIGNIFICANT IMPACT
Aesthetic/Visual Resources	
Agricultural Resources	

ENVIRONMENTAL FACTORS	POTENTIALLY SIGNIFICANT IMPACT
Air Quality	
Biological Resources	
Cultural Resources	
Geology and Soils	
Hazards and Hazardous Materials	
Hydrology and Water Quality	
Land Use and Planning	
Mineral Resources	
Noise	
Population and Housing	
Public Services	
Recreation	
Transportation/Traffic	
Utilities and Service Systems	
Mandatory Findings of Significance	

1.5.1. Determination

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 in 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.
	I 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 (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) 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.

Signature

Date

Printed Name, Title

2.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

2.1 AESTHETICS

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

a) Have a substantial adverse effect on a scenic vista?

Less than Significant Impact. Aesthetics and visual resources are subjective by nature, and therefore the level of a project's visual impact is difficult to quantify.

Presently, the Project site is undeveloped and is characterized by rolling hills vegetated with low-lying grasses. Views into and across the site are unobstructed. Within the Project area, the terrain is dominated by relatively level land and a series of rolling foothills, providing some topographic relief along the northern and southern reaches of the Panoche Valley. The Project site is characterized as high desert, located along the level valley floor. There are two creeks—Panoche Creek and Los Aguilas Creek—that cross the Project site, entering from the northwest and converging in the southern portion of the site. During the warm months of the year when there is little precipitation, these creeks are dry with gravelly bottoms. There are other unnamed drainages and washes that also traverse the site.

Historically, the Project site and surrounding areas had been used for crop cultivation; however, over the past 30 to 40 years, the lands have been used for cattle grazing. The only physical improvements on the site are the two 230 kV transmission towers.

The installation of the PV panels mounted on single pole structures would result in a marked change in the visual environment. The Project would contrast with the natural form, line, color, and texture of the surrounding landscape. Visual evidence of a solar field cannot easily be avoided, reduced, or concealed, owing to its size and exposed location; therefore, effective mitigation is often limited. Yet, the Project site is located more than 1.5 miles from the nearest rural community. The PV panels are very low-profile, with the highest end of the tilted panel standing less than fifteen feet above the ground. Each glass PV panel is approximately two by four feet in size. Project implementation would result in a visually apparent change of the site; however, the Project site and surrounding area are not designated scenic resources.

The PV segments require a relatively flat surface for installation. Based on site visits and topographic map evaluations, it appears that most of the Project site can accommodate PV segments with minimal ground preparation. Thus, the solar modules would be located along the flat valley floor rather than upon the plateaus or lands with distinct topographic relief (e.g., rolling foothills and hillsides). The Project would accommodate the existing grazing activities, thereby retaining the existing rangeland landscape characteristics. As discussed in Section 1.3, Project Description, of this document, disturbed lands would be re-vegetated.

No mitigation measures are required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The project site is not located within the area of any state scenic highway. There are no trees on the project site and the few trees in the surrounding area consist of ornamental landscaping and are not part of the natural landscape. There are no rock outcrops or historic buildings located on the project site or surrounding areas.

No mitigation measures are required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The visual value of a landscape and the acceptable degree of visual change allowed in the natural landscape are subjective. However, for purposes of analysis, it is noted that the San Benito County General Plan does not recognize the Panoche Valley as a scenic resource. Additionally, the Project site and surrounding area do not offer a unique landscape that differs from the general visual characteristics of the rest of the central valley of California.

Project implementation would result in a visually apparent change of the present landscape; however, due to its remote locale, visibility would be limited to those who travel along Little Panoche Road and Panoche Road. Moreover, since the Project is being constructed on the relatively level valley floor, the Project would not obstruct any views of the rolling hillsides located to the northwest and south of the site. Project design accommodates the continuation of livestock grazing, co-existing with the solar farm, maintaining the existing rural agricultural character.

No mitigation measures are required.

d) 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 solar panels used for the Panoche Project are dark colored photovoltaic panels which result in less glare impacts than those associated with other solar technologies (i.e., solar dishes). Additionally, the panels would be situated south facing at latitude (32° angle), which reduces impacts.

Any lighting associated with the operational lifetime of the Project would be for security purposes and thus would not be a new major light source affecting nighttime views. Lighting would be directed inward toward the Project site and, where warranted, along access roads.

No mitigation measures are required.

2.2 AGRICULTURAL RESOURCES

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- 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?**

Less than Significant Impact. Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with the U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS.

According to the most recently published Important Farmland Map for San Benito County (2008), the lands within and surrounding the project site as are classified as suitable for grazing (see Figure 4). 68.1 acres in the southeastern portion of the Project site are designated Prime Farmland. Project implementation would avoid any land disturbance in this area, and the land will be maintained for grazing in its existing state.

In addition, the Project is designed to allow grazing to co-exist with the solar farm. Panels would be mounted on a single pole, minimizing ground disturbance and the structure footprint.

No mitigation measures are required.

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

No Impact. The Project site is zoned AR (Agricultural Rangeland) according to the Land Use Element of the San Benito County General Plan (see Figure 4). The use of a solar farm is not expressly allowed as permitted by right in land zoned AR. However, Section 25.29.106 (M) of the Municipal Code lists *Additional Uses Permitted*, stating that public utility facilities are permissible, wherein "the commission may, after a public hearing, permit the following uses in districts from which they are prohibited by this title where the uses are deemed essential or desirable to the public convenience or welfare, and are in harmony with the various elements or objectives of the general plan." Thus, the County would need to support the findings of the Project, demonstrating that its purpose is consistent

with the overall intent and provisions of the AR zone. Currently the Project site supports livestock grazing. As discussed in Section 1.3, Project Description, of this document, Project implementation includes the continuation of the grazing activities in concert with the operation of the solar farm. Additionally, disturbed lands would be re-vegetated with grasslands to promote grazing activities.

None of the parcels in the Project area have initiated the nonrenewal process, and the contracts are set to renew automatically each year. Section 19.01.023 of the San Benito County Municipal Code lists public utility facilities as a compatible use on land subject to Land Conservation Act Contracts (San Benito County, 2009). The Applicant shall obtain approval from the Agricultural Preserve Advisory Committee and County Board of Supervisors for a Land Conservation Act Compatible Use Permit. The Project applicant has initiated discussions regarding the compatibility determination; per the discussions, with both the County and the California Department of Conservation, it is anticipated that the Project would be considered a compatible use. The permit would demonstrate the Project's compliance with County regulations associated with permitted uses on properties subject to Williamson Act Contracts. Thus, the Project would not conflict with existing zoning for agricultural use or a Williamson Act Contract.

No mitigation measures are required.

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact. According to maps prepared pursuant to the FMMP (2008), the Project site is located on land designated as agriculture (Grazing Land). Livestock grazing is the primary use of the Project site. The project would not restrict the existing grazing activities from occurring during the operational lifetime of the project.

The ability to successfully use the land for its current function for grazing would not be impeded or diminished because there would be no physical barrier to limit the free movement of livestock from one side of the Project site to the other. Therefore, there would be no impact related to conflicts with existing farmland.

No mitigation measures are required.

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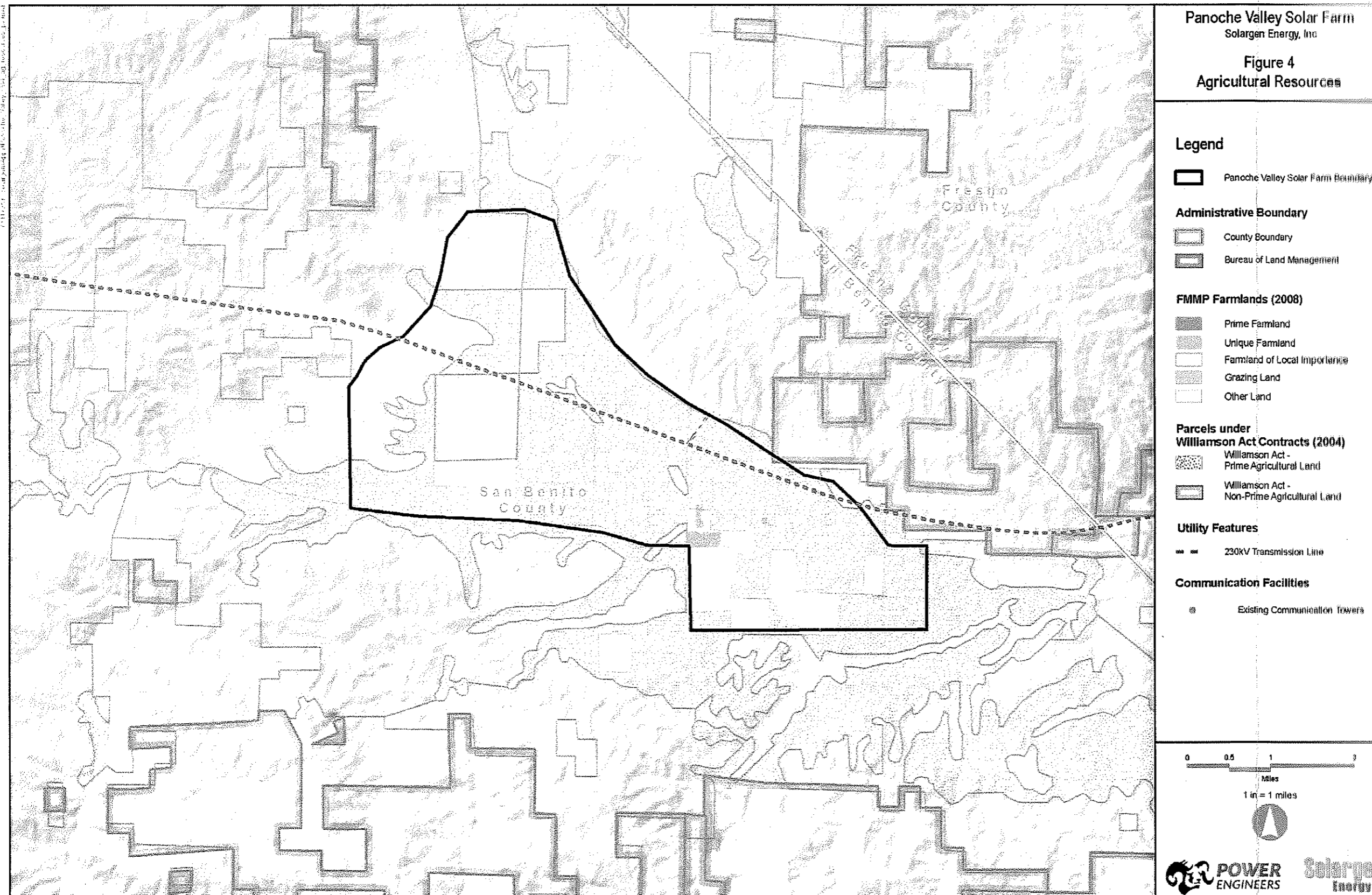


FIGURE 4. AGRICULTURAL RESOURCES MAP.

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2.3 AIR QUALITY

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standards or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is classified as non-attainment under an applicable federal or state AAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentration?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors that would affect a substantial amount of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

a) **Conflict with or obstruct implementation of the applicable air quality plan?**

No Impact. Please see response to 2.3 b.

No mitigation measures are required.

b) **Violate any air quality standards or contribute substantially to an existing or projected air quality violation?**

Less than Significant with Mitigation Incorporation. The Project site is located within the jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). It is the responsibility of the MBUAPCD to ensure that state and federal ambient air quality standards are achieved and maintained in the area under its jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter with a diameter of 10 microns or less (PM₁₀), sulfur dioxide (SO₂), and lead (Pb). These standards were established to protect sensitive receptors from adverse health impacts due to exposure to air pollution. The California Ambient Air Quality Standards (CAAQS) are more stringent than the federal standards. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. CAAQS and the National Ambient Air Quality Standards (NAAQS) for pollutants are shown in Table 3.

TABLE 3. AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVG. TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Method	Primary	Secondary	Method
Ozone (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³)	0.12 ppm (235 µg/m ³)	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)	0.075 ppm (147 µg/m ³)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen Dioxide (NO ₂)	Annual Average	0.030 ppm (56 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	0.053 ppm (100 µg/m ³)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m ³)		--	--	
Sulfur Dioxide (SO ₂)	Annual Arithmetic mean	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m ³)	--	Spectrophotometry (Pararosaniline method)
	24 hours	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m ³)	
	1 hour	0.25 ppm (655 µg/m ³)		--	--	
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	150 µg/m ³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		--	--	
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³	15 µg/m ³	Inertial Separation and Gravimetric Analysis
	24 hours	No separate state standard		35 µg/m ³	35 µg/m ³	
Sulfates	24 hours	25 µg/m ³	Ion Chromatography	--	--	--
Lead	30-day Average	1.5 µg/m ³	Atomic Absorption	--	--	High volume sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m ³	1.5 µg/m ³	
	3-Month Rolling Average	--		0.15 µg/m ³	0.15 µg/m ³	
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m ³)	Gas Chromatography	--	--	--

ppm= parts per million; µg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter
 Source: www.arb.ca.gov/aqd/agd.htm, June 2009.

As shown in Table 4, San Benito County is an attainment area for the NAAQS for all criteria pollutants. Additionally, San Benito County is currently classified as an attainment area for all CAAQS except PM₁₀.

TABLE 4. SAN BENITO COUNTY ATTAINMENT CLASSIFICATION FOR CRITERIA POLLUTANTS

Pollutant	CAAQS Attainment Classification	NAAQS Attainment Classification
Ozone	Attainment	Attainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	N/A
Hydrogen Sulfide	Unclassified	N/A
Vinyl Chloride	Unclassified	N/A

Source: www.arb.ca.gov/aqd/aqd.htm, June 2009.

The closest ambient air quality monitoring station to the Project site is the Pinnacles National Monument site, which monitors O₃. The only other air monitoring station in San Benito County is in Hollister, which measures O₃, PM₁₀, and PM_{2.5}. All other pollutants are not considered to be an issue in the area.

Table 5 identifies the background ambient air quality data from 2006 through 2008 for criteria pollutants measured at the Pinnacles and Hollister stations. It should be noted that PM_{2.5} was not measured at the Hollister monitoring station until 2007.

TABLE 5. BACKGROUND AIR QUALITY DATA (2006 – 2008)¹

Pollutant	Averaging Time	2006	2007	2008	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.088	0.083	0.094	0.070	Pinnacles
	1 hour	0.105	0.100	0.102	0.09	Pinnacles
PM ₁₀	Annual	16.1	17.3	19.8	20 µg/m ³	Hollister
	24 hour	45	40	39	50 µg/m ³	Hollister
PM _{2.5}	Annual	N/A	6.3	7.0	12 µg/m ³	Hollister
	24 hour	N/A	20.9	22.7	35 µg/m ³	Hollister

¹ppm unless otherwise indicated
 Source: www.arb.ca.gov/aqd/aqd.htm, June 2009.

San Benito County has not established quantitative emission thresholds to evaluate the significance of a project's emissions. Accordingly, the offset thresholds from the MBUAPCD's Rule 207, Review of New or Modified Sources, are used to evaluate whether a project's emissions have the potential to cause or contribute to a violation of an air quality standard. Because sources with emissions that exceed these thresholds under MBUAPCD Rule 207 would be required to provide offsets, it is assumed that emissions below these thresholds would not result in a significant air quality impact. The offset thresholds are listed in Table 6.

TABLE 6. MBUAPCD RULE 207 OFFSET THRESHOLDS

Pollutant	Offset Threshold, lbs/day
VOC	150
NOx	150
SOx	150
CO	550
Total Suspended Particulate (TSP)	150
PM ₁₀	82
Source: www.arb.ca.gov/aqd/aqd.htm , June 2009.	

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs), which include diesel particulate matter from construction equipment and other substances that are emitted from combustion from motor vehicles or equipment.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12th Grade), hospitals, resident care facilities, residences or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. A project would have a significant impact on a sensitive receptor if it would result in an unacceptable health risk due to exposure to TACs.

The proposed Project's air quality impacts are primarily confined to the construction of the substation and roadway improvements. Minor operational impacts may include vehicle trips associated with inspection and maintenance operations.

Emissions of pollutants, such as fugitive dust and heavy equipment exhaust that are generated during construction, are generally highest near the construction site.

The Project does not require large-scale grading of the site for construction and implementation. It is expected that the only grading on site will occur for the construction of all-weather roads, the substation, and the Project's O&M facility. It would be necessary to create some graded all-weather roads in selected locations to bring equipment and materials from the staging areas to the construction areas, and for long term operation and maintenance. These roads would be heavily used during construction and rarely used during operation.

Construction of the PV blocks is expected to take place at a pace of between 10 MW and 20 MW per month, which will occupy between 30 and 50 acres at any given time. Prior to construction of the PV blocks, locations for the inverters, transformers, and buried electrical lines will be surveyed. Trenching machines would be used to bury electrical cables. The trenched areas would be filled once the cables are buried.

The construction workforce is estimated to be 45 to 80 workers for the six-year construction period.

Emissions associated with construction would include the following:

- Emissions of fugitive dust from surface disturbance activities
- Emissions of combustion pollutants from heavy construction equipment
- Emissions of combustion pollutants from worker vehicles
- Emissions of combustion pollutants from heavy-duty vehicles transporting construction materials and equipment to the site

Unmitigated construction emissions may have the potential to result in a temporary significant impact on the air quality. Projects are typically required to implement fugitive dust control measures to reduce emissions of particulate matter during construction and operations. These measures may include watering, application of dust suppressants, handling of bulk materials and reduction of trackout/carryout onto paved public roads. In addition, watering or use of dust suppressants may be required on unpaved roads to reduce fugitive dust emissions. Provided emissions are reduced below 82 lbs/day through implementation of these mitigation measures, PM₁₀ impacts would be mitigated to below a level of significance.

Likewise, for other pollutants, provided that emissions are reduced below the significance thresholds shown in Table 6, emissions would be less than significant. This can be accomplished by reducing the number of pieces of equipment operating on site at any one time, using Tier 2 or 3 equipment for construction, limiting truck trips, and restricting idling times on construction equipment and trucks on site.

With the implementation of fugitive dust control measures to reduce emissions, the Project would not conflict with or obstruct implementation of the applicable air quality plan.

Additionally, post construction air quality emissions would be limited to the vehicle trips associated with the 10 employees that may occupy the site at any one time. The addition of ten vehicle trips would not result in a significant increase in air emissions.

No mitigation measures are required.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is classified as non-attainment under an applicable federal or state AAQS (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. In analyzing cumulative impacts from a proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the NCCAB is listed as "non-attainment" for the federal or state AAQS. A project that has a significant impact on air quality with regard to emissions of PM₁₀ as determined by the CEQA Guidelines Appendix G and the screening criteria outlined above would have a significant cumulative effect. In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the project, in combination with the emissions from other proposed, or reasonably foreseeable future projects are in excess of screening levels identified above, and the project's contribution accounts for more than an insignificant proportion of the cumulative total emissions.

PM₁₀ emissions associated with construction generally result in near-field impacts. Project construction emissions should be evaluated in consideration with other projects in the vicinity of the Project (i.e., within one mile) to assess the potential for cumulative impacts due to PM₁₀ emissions during construction. There are no other planned or approved projects within a one-mile radius of the proposed Project.

No mitigation measures are required.

d) Expose sensitive receptors to substantial pollutant concentration?

Less than Significant Impact. The Project site is not located in proximity of any sensitive receptors. The nearest rural community is approximately 15 miles from the Project site. There are a few scattered ranch residences within the general vicinity of the Project site; however, no residences are located

adjacent to the site boundaries. The Panoche School is located adjacent to Phases 4 and 5 of the Project, which would be developed with the solar modules and associated infrastructure. As discussed in 2.3-b, the Project's air quality impacts are confined to the construction of the substation improvements, which would be constructed during the initial 20 MW phase. The operation of the solar modules would not result in the generation of any air emissions.

No mitigation measures are required.

e) Create objectionable odors that would affect a substantial amount of people?

Less than Significant Impact. Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust; however, because the construction equipment would be operating at various locations throughout the construction site, and because any operations near existing receptors would be temporary, impacts associated with odors during construction are not considered significant. Solar facilities are not generally considered to be a source of odors.

No mitigation measures are required.

2.4 BIOLOGICAL RESOURCES

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a 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?**

Less-than-Significant with Mitigation Incorporation. In April 2009, Live Oak Associates, Inc. (LOA) performed a two-day reconnaissance survey of the Project site. In addition, LOA conducted a literature review, which included a review of the California Natural Diversity Database (CNDBB) and previous natural resource reports that evaluated the Project area, during the same time frame. Federal- and state-listed species have been documented as being within the Project site and surrounding area and the site supports suitable or potentially suitable foraging and breeding habitat for a number of listed animal species, including the California tiger salamander (*Ambystoma californiense*); western spadefoot (*Scaphiopus hammondi*); California horned lizard (*Phrynosoma coronatum frontale*); and blunt-nosed leopard lizard (*Gambelia sila*) (BNLL) (see Figure 5).

In June of 2009, LOA began protocol-level surveys for the BNLL within Township 15E, Range 10S, Sections 10 and 15. The BNLL, a federally and state endangered and California protected species, was observed on multiple occasions along the southeastern edge of Section 15, specifically along the channels of Panoche and Las Aguilas Creeks.

Other species observed on site include the San Joaquin coachwhip (*Masticophis flagellum ruddocki*) (SJCW); California condor (*Gymnogyps californianus*); golden eagle (*Aquila chrysaetos*); American kestrel (*Falco sparverius*); burrowing owl (*Athene cunicularia*) (BUOW); loggerhead shrike (*Lanius ludovicianus*); San Joaquin antelope squirrel (*Ammospermophilus leucurus*) (SJAS); giant kangaroo rat (*Dipodomys ingens*) (GKR); San Joaquin kit fox (*Vulpes macrotis mutica*) (SJKF); and American badger (*Taxidea taxus*).

The 10,000-acre Panoche Valley Solar Farm site is situated over portions of four United States Geological Survey (USGS) 7.5-minute quadrangles: Cerro Colorado, Mercey Hot Springs, Llanada, and Panoche. A search of published accounts of special-status species occurring in the four quadrangles and the twelve surrounding quadrangles (Rock Spring Peak, Topo Valley, San Beniot, Panoche Pass, Ruby Canyon, Ortigalita Peak, Laguna Seca Ranch, Hammonds Ranch, Chounet Ranch, Tumey Hills, Idria and Hernandez Reservoir) was conducted. A list of many of the special-status animal species, their legal status, their habitat requirements, and their potential to occur onsite or within the immediate vicinity of the site are presented in Table 7 below.

TABLE 7. LIST OF SPECIAL-STATUS ANIMAL SPECIES THAT OCCUR OR HAVE THE POTENTIAL TO OCCUR WITHIN THE VICINITY OF THE STUDY AREA.

Species	Status	Habitat	Occurrence in the Study Area
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Grassland swales, slumps or basalt-flow depressions with grass or mud bottoms	Possible. Observations indicative of vernal pool signatures have been made during BNLL surveys and recon surveys onsite. It is expected that suitable habitat exists onsite to support vernal pool fairy shrimp. However, there are no CNDDB observations of the species within three miles of the site.
California Tiger Salamander (<i>Ambystoma californiense</i>)	FT, SCE	Breeds in vernal pools and stock ponds of central California; adults aestivate in burrows associated with fossorial grassland species adjacent to the breeding sites.	Present. CTS were documented in Range 15E, Township 10S, Section 4 in 1992, and therefore the species is presumed present onsite. However, no winter surveys have been conducted onsite and it is unknown if suitable habitat still exists for this species.
California Red-legged Frog (<i>Rana aurora draytonii</i>)	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	Absent. Although CRLF are known to occur in the greater region of Panoche Valley, suitable habitat for CRLF is absent onsite (Jennings, personal communication).
Blunt-Nosed Leopard Lizard (<i>Gambelia sila</i>)	FE, CE, CP	Frequents grasslands, alkali meadows and chenopod scrub of the San Joaquin Valley from Merced south to Kern Co.	Present. BNLL have been observed by LOA along the SE edge of Range 15S, Township 10E, Section 15 during protocol-level surveys begun on 10 June 2009. Furthermore, there are CNDDB observations in Sections 4, 9 and 25 between 1979 and 2004.

Species	Status	Habitat	Occurrence in the Study Area
San Joaquin Antelope Ground Squirrel (<i>Ammospermophilus nelsoni</i>)	CT	Occurs in the southwest portion of the valley on dry, sparsely vegetated loamy soils. Often associated with <i>ephedra</i> and <i>atriplex</i> .	Present. One male SJAS was observed on Range 15S, Township 10E, Section 10 during BNLL surveys. Furthermore, the species was recorded by the CNDDDB in Section 3, and antelope squirrels were observed to the east of the site regularly while driving to the site on Panoche Road.
Giant Kangaroo Rat (<i>Dipodomys ingens</i>)	FE, CE	Occurs in grasslands and shrub communities on gentle slopes (less than 11%). Primarily feeds on seeds, and occasionally on green plants and insects.	Present. GKR have been observed in Sections 10 and 15 during BNLL surveys. Furthermore, evidence of their presence was observed in Sections 11, 13, 14, 15, and 24; and Range 15S, Township 11E, Sections 18, 19, and 30 during recon surveys in April 2006. The CNDDDB also lists occurrences for this species in Sections 19 and 29 in 1992 and 2004, respectively.
California Condor (<i>Gymnogyps californianus</i>)	FE, CE	Inhabits rugged, hilly and montane regions from sea level to 2700m. Forages over varied terrain including open savannahs, grasslands and foothills looking for carrion. Nests mainly in caves or cave-like structures on cliffs or rocky hillsides.	Unlikely. Due to the proximity of Pinnacles National Monument, a known release site for condors, it is possible that condors may occasionally forage over the site; however, breeding habitat is lacking in the general vicinity of the site. No condors have been observed foraging onsite.
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	CE	Inhabits various areas of California where tall trees for nesting occur adjacent to water bodies for foraging.	Absent. Suitable habitat for bald eagles is completely lacking from the site.
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	Nests in valley oaks, willows and cottonwoods or other tall riparian trees. Forages over open grasslands, foothills and a variety of agricultural fields.	Possible. The site supports suitable foraging habitat for the Swainson's hawk, though nesting habitat is absent. No Swainson's hawks have been observed during BNLL surveys.
San Joaquin Kit Fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat.	Present. Panoche Valley is known to be one of three core habitat areas for SJKF. Burrows of suitable size for SJKF denning and scats of appropriate size for SJKF were observed in Sections 11, 13, 14, 15, 18, 19, 24 and 30 during recon surveys in April 2009. The CNDDDB lists occurrences of the species in Sections 20, 22, 23, 25, 29 and 30 between 1975 and 2006. Conversations with local residents indicate frequent sightings. Therefore, SJKF are presumed present onsite.

Species	Status	Habitat	Occurrence in the Study Area
Western spadefoot (<i>Spea hammondi</i>)	CSC	Found in areas that support temporary pools in sand and gravel substrates, often associated with short grassland, coastal sage scrub and chaparral. From Shasta County south through Central Valley and along central and southern coastal range to Baja. Feeds mainly on mosquito larvae.	Possible. Western spadefoot toads may occur onsite if there are pools that form during winter rain events. This species can live a long time without water. As no winter surveys have been conducted to date, the extent of potentially suitable habitat for the species is unclear; however, based on surveys conducted to date, potentially suitable habitat is present onsite for this species.
California Horned Lizard (<i>Phrynosoma coronatum</i>)	CSC	Wide-ranging animal from southern reaches in Ventura County to northern reaches in Shasta County. Found in wide variety of habitat associations including coastal sage scrub with loose friable soil and native ant colonies.	Possible. Suitable habitat for the California horned lizard is present in the form of loose sandy soils abundant on this site. Furthermore, there are a number of native ant colonies, the species' preferred prey item, located on the site.
San Joaquin Coachwhip (<i>Masticophis flagellum ruddocki</i>)	CSC	Occurs in open, dry, treeless areas, including grassland and saltbush scrub. Refuge areas include rodent burrows, shaded vegetation, and surface objects.	Present. A shed skin or a SJCW was observed on Section 10 during BNLL surveys. The skin was identified by Dr. Mark Jennings, noted expert on California herps. Furthermore, this species was documented by CNDDDB in Section 29 in 1984.
Mountain Plover (<i>Charadrius montanus</i>)	CSC	Breeds in the prairie lands of the central plains. Winters in grassland valleys of California, Arizona and Mexico that have habitats that mimic their nesting grounds.	Present. Mountain plovers have been documented by the CNDDDB within Range 15S, Township 10E, Section 22 in 2003. Therefore, the species is presumed present onsite.
Golden eagle (<i>Aquila chrysaetos</i>)	CSC	Typically frequents rolling foothills, mountain areas, sage-juniper flats, and desert habitats. Often forages over open country. Nests in tall trees or on cliffs.	Present. An adult and juvenile golden eagle were observed foraging over the site during BNLL surveys. The site does not support nesting habitat for this species.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, and freshwater emergent wetlands; uncommon in wooded habitats. Nests on the ground in grasslands.	Possible. The site supports suitable habitat for both nesting and foraging for the northern harrier. However, there have been no observations of this species during BNLL or recon surveys conducted onsite.
Merlin (<i>Falco columbarius</i>)	CSC	Breeds in Canada but winters in a variety of California habitats, including grasslands, savannahs, and wetlands.	Possible. Breeding habitat within the study area is absent for the merlin, though it may visit the site from time to time as a winter migrant.
Burrowing owl (<i>Athene cunicularia</i>)	CSC	Open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. This species is often associated with California ground squirrels.	Present. Individual BUOW and evidence of their presence (i.e., white wash, feathers, pellets) were observed in Sections 10 and 15 during BNLL surveys. Furthermore, there is a CNDDDB occurrence in Range 15S, Township 11E, Section 29 from 2004.

Species	Status	Habitat	Occurrence in the Study Area
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Nests in tall shrubs and dense trees, forages in grasslands, marshes, and ruderal habitats.	Likely. The site supports both suitable breeding and foraging habitat for the loggerhead shrike. This species was observed along Panoche Road while driving to the site, though it has not been observed directly onsite during BNLL surveys or the recon surveys conducted in April 2009.
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Inhabits semi-arid to arid open habitats and also found in oak woodlands. Forages on the ground for crickets, scorpions and spiders. Roosts in crevices of steep rocky cliffs, tall trees, and to a lesser extent in tall buildings. Highly sensitive to disturbance.	Possible. The site supports foraging habitat for pallid bats; however, roosting habitat is absent.
Western Mastiff Bat (<i>Eumops perotis californicus</i>)	CSC	Inhabits semi-arid to arid open habitats, foraging for moths, crickets and grasshoppers. Roosts in crevices of steep rocky cliffs, mines, tall trees and tall buildings.	Possible. Western mastiff bats may forage over the site, though roosting habitat is absent.
Tulare Grasshopper Mouse (<i>Onychomys torridus tularensis</i>)	CSC	Often found in shrubland of hot, arid grasslands. Sometimes found in saltbush scrub near sloping margins of valleys.	Unlikely. Although the site supports potentially suitable habitat, the Tulare grasshopper mouse has not been observed in Panoche Valley since 1938, when it was observed in Range 10E Section 20.
American badger (<i>Taxidea taxus</i>)	CSC	Found in drier open stages of most shrub, forest and grassland habitats with friable soils. In summer months may create a new burrow daily.	Present. Several badger burrows were observed on Sections 10 and 15 during BNLL surveys.

Notes:

- Present: Species observed on the sites at time of field surveys or during recent past.
- Likely: Species not observed on the site, but has been observed in areas adjacent to the site with similar habitats.
- Possible: Species not observed on the sites, but it could occur there from time to time.
- Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient
- Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

STATUS CODES

- | | | | |
|-----|---------------------------------|-----|---------------------------------------|
| FE | Federally Endangered | CE | California Endangered |
| FT | Federally Threatened | CT | California Threatened |
| FPE | Federally Endangered (Proposed) | CR | California Rare |
| FC | Federal Candidate | CP | California Protected |
| | | CSC | California Species of Special Concern |
| | | SCE | California Candidate (Endangered) |

CNPS California Native Plant Society Listings:

- | | | | |
|----|---|---|---|
| 1A | Plants Presumed Extinct in California | 3 | Plants about which we need more information – a review list |
| 1B | Plants Rare, Threatened, or Endangered in California and elsewhere | 4 | Plants of limited distribution – a watch list |
| 2 | Plants Rare, Threatened, or Endangered in California, but more common elsewhere | | |

Several of the state and/or federally listed species require additional analysis. Although other listed species are known from the region of Panoche Valley, this discussion is focusing on species with the potential to occur onsite, based on available habitat, or having been observed onsite either directly by LOA or through CNDDDB occurrence data. Below are brief discussions that include an analysis of their legal status, their potential to occur onsite, anticipated impacts by the projects to the species, and mitigation measures meant to reduce any impacts associated with the species.

California Tiger Salamander

The U.S. Fish and Wildlife Service (USFWS) listed the California tiger salamander (CTS) as Threatened under the authority of the Federal Endangered Species Act. The CTS is presumed present onsite due to the fact there is an historic CNDDDB sighting of the species from 1992 in Range 15S, Township 10S, Section 4. This sighting was associated with two bermed ponds formed along Las Aguilas Creek. This area has been maintained by the current land owner and used to water cattle. It is unknown at this time if the site continues to support populations of CTS. In addition to these two bermed ponds, it is possible the site supports other areas of suitable breeding habitat for the species if there are areas that pond sufficiently during years of substantial rainfall.

Winter surveys are scheduled throughout the 10,000-acre buildout portion of the Project site to determine to what extent, if any, suitable habitat for CTS is present. Should suitable breeding ponds be observed, larval surveys using dip netting or seining during February, March and April are proposed.

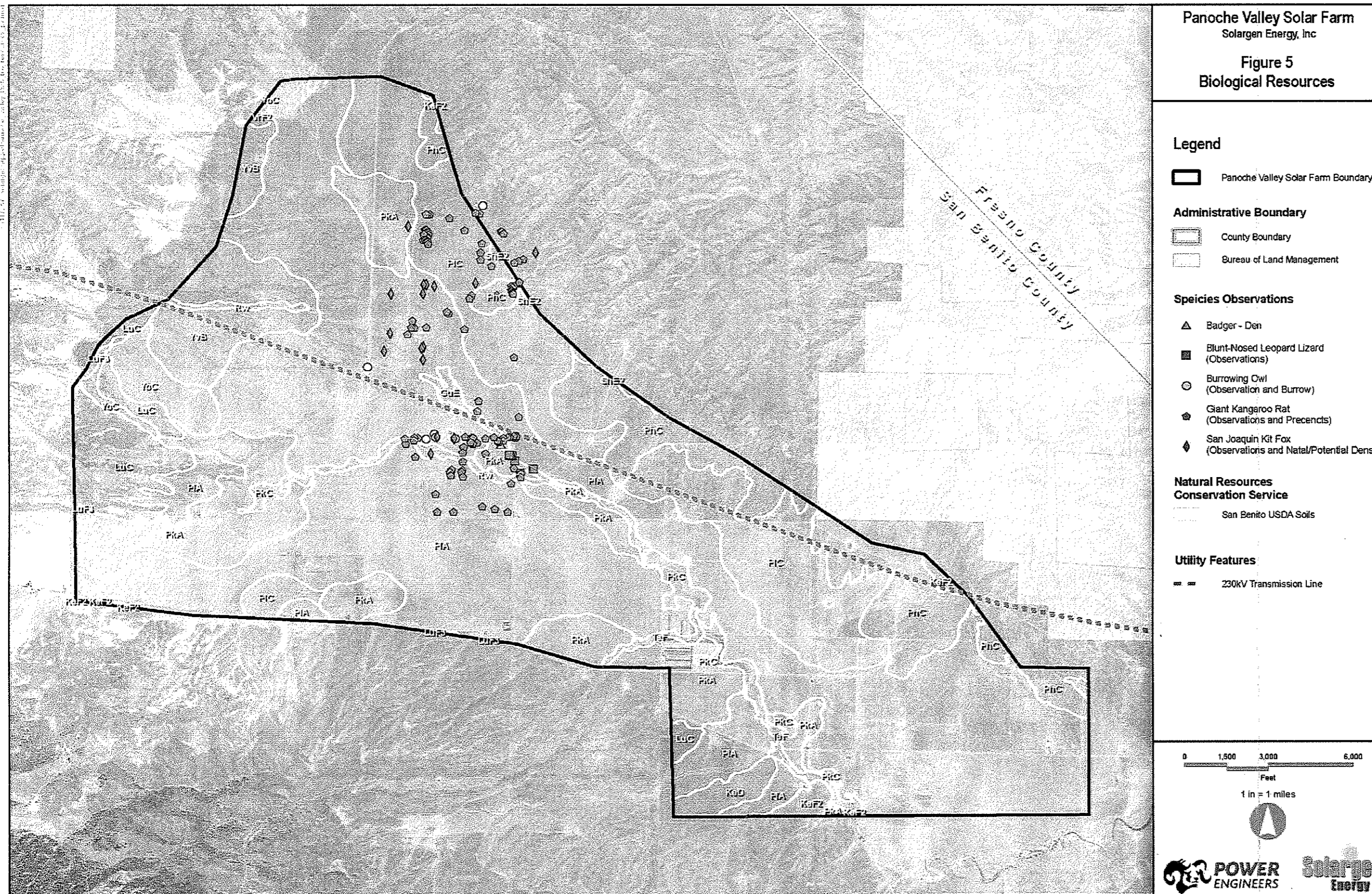
The loss of breeding habitat onsite due to fill of a breeding pond or impediments to movement to and from a pond by CTS (should they be present onsite) would constitute a significant impact under CEQA. It should be noted that San Benito County is an area that supports hybrid CTS (*Abystoma californiense* x *A. tigrinum*). Should hybrid CTS be found onsite, further discussions with the agencies would be necessary to determine the level of significance and appropriate course of action.

BIO-1 The Project shall be designed to avoid breeding ponds for CTS. Estivation habitat at least 2100 feet around any breeding ponds shall also be avoided. In addition to avoiding filling or altering the hydrology of any breeding ponds, the applicant shall ensure that movement between the pond and estivation habitat remains unimpeded.

BIO-2 If avoidance of a known breeding pond and associated estivation habitat for CTS is not feasible, the applicant shall minimize direct mortality to individuals of the species by designing, building and operating the Project in the following ways that are likely to minimize both direct and indirect impacts to the CTS.

- Pre-construction surveys for CTS shall be conducted within four days of the initial site preparation activities. These surveys shall be conducted by a qualified biologist approved by the USFWS and CDFG and consist, at a minimum, of scoping all burrows within 2100-feet of potential breeding habitat in all areas where construction related activities may result in "take" (e.g., driving support posts into the ground).
- Silt fencing shall be erected between CTS habitat and the build-out site to minimize the potential of a CTS dispersing onto the site during construction.
- A qualified onsite monitor shall be present during activities that could result in "take" of individuals.
- Any CTS detected during these procedures would be moved to suitable habitat (e.g., nearest safe burrow or mitigation site) approved by the USFWS and CDFG.

BIO-3 During the operation of the solar farm, rodenticides of any form shall not be utilized.



Panoche Valley Solar Farm
 Solargen Energy, Inc

Figure 5
Biological Resources

- Legend**
- Panoche Valley Solar Farm Boundary
 - Administrative Boundary**
 - County Boundary
 - Bureau of Land Management
 - Species Observations**
 - Badger - Den
 - Blunt-Nosed Leopard Lizard (Observations)
 - Burrowing Owl (Observation and Burrow)
 - Giant Kangaroo Rat (Observations and Precendts)
 - San Joaquin Kit Fox (Observations and Natal/Potential Dens)
 - Natural Resources Conservation Service**
 - San Benito USDA Soils
 - Utility Features**
 - 230kV Transmission Line

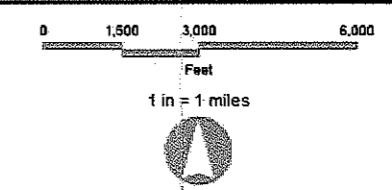


FIGURE 5. BIOLOGICAL RESOURCES MAP.

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At this time, it is unknown if the site supports CTS habitat and, if so, what the biotic value of that habitat would be. Nonetheless, it is believed that purchasing high quality, known breeding habitat at a 1:1 ratio would compensate for the loss of onsite CTS habitat, especially if the site acquired is either in fee-title or via a conservation easement that preserves and enhances breeding and estivation habitat or preserves and enhances suitable estivation habitat adjacent to a known, protected breeding site. Enhancement of compensation areas should include a controlled grazing regime, limited public access, fencing, etc. Any lands purchased for CTS mitigation could also compensate for the loss of burrowing owl habitat (see discussion below) if the location supports a known BUOW population.

BIO-4 The project proponent shall compensate for loss of potential CTS habitat at a minimum of 1:1 mitigation to loss ratio at a suitable site that has a known breeding population of CTS.

Blunt-nosed Leopard Lizard

The USFWS listed the blunt-nosed leopard lizard (BNLL) as Endangered under the authority of the Federal Endangered Species Act. The species was also listed by the CDFG under the California Endangered Species Act.

In addition to being federally and state endangered, the BNLL is one of less than forty species that has a "fully protected" status through provisions of the California State Fish & Game Code. The CDFG cannot issue a "take" permit for fully protected species, and projects proposed for sites that may harbor fully protected species are required to completely avoid direct "take" of the species. In this instance, "take" refers to direct harm, injury, or killing of an individual, not to habitat modifications. The CDFG's *Approved Survey Methodology for the Blunt-Nosed Leopard Lizard* (2004) was developed to provide a minimum level of protection for BNLL when projects or maintenance activities are scheduled to occur within potential BNLL habitat.

LOA initiated protocol-level surveys for the BNLL in June 2009 on approximately 1280 acres of land (Range 15E, Township 10S, Sections 10 and 15) that encompasses Phase I of the Project. No evidence of BNLL was obtained from Section 10. However, BNLL were observed on multiple occasions along the southeastern edge of Section 15 in areas associated with the channels of Panoche and Las Aguilas Creeks. Protocol surveys were completed on July 15, 2009. Young-of-the year surveys are to be conducted in August through September, or until five surveys have been completed for each transect on Sections 10 and 15.

The majority of the valley floor associated with Panoche Valley is more or less homogenous, supporting mainly ruderal grasses common in rangelands. Sampling surveys are proposed for the entire 10,000 acre site, which will employ an occupancy-based model sampling framework that will allow for estimates of demographic parameters such as density or abundance. By employing these methods, it is expected LOA will be able to determine the general distribution of BNLL across the site.

The first phase of the Project is designed to avoid taking BNLL habitat, which is contingent upon the findings of the protocol and young-of-the-year surveys. A combination of the following three mitigation measures would reduce impacts to the BNLL to a less-than-significant level for Phase I of the Project.

BIO-5 Prior to the issuance of grading permits, the Project applicant shall demonstrate that the Project is designed to avoid take of BNLL individuals and their habitat by observing a work-free buffer zone around known locations of BNLL. The County, CDFG, and the USFWS shall review and approve the Project design.

BIO-6 Pre-activity surveys shall be conducted by a qualified biologist outside the buffer zone to ensure there are no BNLL within the work area. Walking surveys that adhere to established protocol

shall be conducted during the species' active seasons (15 April to 15 July and 1 August to 15 September). If construction activities occur outside those times (i.e., when BNLL are dormant) pre-activity surveys shall be conducted by a qualified biologist and include scoping all burrows of appropriate size for BNLL with fiber optics. In the event that BNLL are observed in burrows outside of the buffer zone, the Project shall be required to construct beyond a newly established appropriate buffer zone to avoid take of individuals and their habitat. The applicant shall provide written verification that pre-construction surveys will occur prior to the approval of the grading plan.

BIO-7 A biological monitor shall be onsite during all Project construction activities.

Under state and federal law, and under CEQA, the take of habitat for listed species is considered a significant effect. Potentially suitable habitat for BNLL exists throughout the 10,000-acre site. Therefore, even though avoidance and minimization measures will be employed, the applicant will still be responsible for compensation measures to offset habitat modification. It is assumed that lands to the east of the Project site on either side of Panoche Road support suitable habitat for BNLL, among other species, and may be targeted as high-value mitigation lands.

BIO-8 Compensation for loss of habitat due to modification shall be set aside using at least a 1:1 loss to compensation ratio.

Burrowing Owl

The BUOW is considered a California species of special concern. BUOW are also protected under the federal Migratory Bird Treaty Act of 1918 (FMBTA: 16 U.S.C., sec. 703, Supp. I, 1989), which prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Furthermore, birds of prey are protected in California under provisions of the State Fish and Game Code, Section 3503.5, (1992), which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Burrowing owls have been observed onsite in Range 15E, Township 10S, Sections 10 and 15 during BNLL surveys. As much of the site is fairly homogenous in ground cover and topography, it is expected that BUOW occur in pockets throughout the site.

Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Construction activities that occur outside the breeding period may also result in take of individuals. Furthermore, the loss of breeding and foraging habitat for BUOW would be considered a significant effect under CEQA. If employed, the following mitigation measures would reduce the effect on BUOW to a less-than-significant level.

BIO-9 No owls shall be disturbed during the breeding season (1 February to 31 August). Construction may still occur on a site with breeding BUOW; however, a 250-foot buffer shall be erected around each active burrow and a qualified biologist shall monitor construction activities (BIO-7) to ensure the 250-foot buffer was adequate to allow for successful breeding.

During the non-breeding season (1 September to 31 January) owls may be evicted from a site. Construction that occurs September through January shall employ the following mitigation measure:

BIO-10 One-way doors shall be inserted into all burrows of appropriate size (approximately 4" in diameter) for BUOWs.

Standard compensation for sites occupied with BUOW is 6.5 acres per individual or breeding pair. Impact to BUOW habitat will be based upon total number of BUOW onsite. The applicant will be compensating for habitat loss to other grassland species that share the same habitat as BUOW (e.g., SJKF); it is assumed those lands will dually compensate for the loss of BUOW habitat onsite.

San Joaquin Antelope Squirrel

The San Joaquin antelope squirrel (SJAS) is listed as threatened under the California Endangered Species Act.

One adult male SJAS was observed within Range 15S, Township 10E, Section 10 during adult BNLL surveys conducted in 2009. This species was often seen to the east of the site along Panoche Road while driving to and from BNLL surveys. Furthermore, there was an historic sighting of the species recorded in the CNDDDB from 1936 on Range 15 S, Township 10E, Section 3. The species is presumed present onsite although, due to a lack of surveys across the entire 10,000 acres, it is not currently known to what extent the species is currently using the site.

Impacts to individual SJAS and their burrows could occur during construction activities. As this species is diurnal (meaning it is active both day and night), it is possible an individual could be taken (killed or injured) by heavy equipment or other construction activities. The following mitigation measures are designed to reduce impacts to this species to a less-than-significant level:

BIO-11 Pre-activity surveys shall be conducted by a qualified biologist for this species no more than four days prior to any construction activity. Burrows shall be monitored by a qualified biologist for a minimum of three days by tracking and/or trapping to determine presence if disturbance to a burrow or an avoidance zone is not feasible. The applicant shall provide written verification that pre-construction surveys will occur prior to the approval of the grading plan.

BIO-12 If SJAS is found present in a work zone area, its location(s) shall be clearly marked and construction activities shall maintain at least a 50-foot buffer from the individual(s). A biological monitor shall be onsite during construction activities to assist in minimizing adverse effects of the Project on SJAS.

BIO-13 Excavation of burrows shall be completed within 24 hours after a determination of absence has been established under the direct supervision of a qualified biologist. If an occupied burrow cannot be avoided and destruction is likely, then the squirrel(s) shall be trapped and relocated to a nearby safe burrow by a qualified biologist.

The area comprised of Phase I of the Project (Sections 10 and 15) appears to support a low to moderate biotic value to SJAS. Therefore, it is assumed that compensation for GKR and SJKF would dually compensate for the loss of habitat to SJAS. This may not be the case, however, for the entire 10,000-acre Project site.

As stated above, no surveys for SJAS have been completed on the remaining 8,000 acres of the Project site, and it is therefore currently unknown to what extent SJAS occur throughout the entire site. Sampling surveys are scheduled to begin in early August throughout the remaining Sections of land, and will continue until summer 2010. These surveys will include SJAS surveys.

Giant Kangaroo Rat

The giant kangaroo rat (GKR) is listed as endangered under the federal Endangered Species Act and as endangered under the California Endangered Species Act. According to the *Recovery Plan for Upland*

Species of the San Joaquin Valley, 1998, the Panoche Region is one of six geographic units remaining of GKR habitat, and represents one of the three most important habitat blocks.

Although no species-specific surveys have been conducted for GKR, a number of GKR precincts and several individuals were observed on Range 15E, Township 10S, Sections 10 and 15 during adult BNLL surveys conducted in 2009 (data collected ancillary to the adult BNLL surveys conducted in 2009 are still being analyzed). Precincts were also noted in various locations throughout the 10,000-acre site during reconnaissance surveys conducted onsite, as well as being readily identifiable on aerial photography.

Furthermore, there are CNDDDB accounts of the species in Range 15S, Township 11, Sections 19 and 29 in 1992 and 2004, respectively. The lack of more observations in the CNDDDB is likely due to a lack of surveys being conducted on the private lands that make up the valley floor.

Impacts to individual GKR and their burrows could occur during construction activities. As this species is nocturnal, it is unlikely an individual would be taken (killed or injured) above ground during construction activities; however, individuals and burrows could be taken by heavy equipment or other construction activities. In addition, this species requires direct sunlight in which to dry its seeds above ground which are later cached underground. Therefore, shading by solar panels is expected to have an adverse effect on GKR habitat and life history.

Although no detailed surveys for GKR have been completed on the remaining 8,000 acres of the Project site, based on aerial photography and direct observance during reconnaissance surveys, it is assumed that the species occurs readily throughout the site.

The loss of individual GKR and their habitat supported by the 1200-acres (Phase I) and the remaining 8,000 acres of the Project would result in a potentially significant impact if not mitigated. With mitigation, impacts are reduced to less than significant.

BIO-14 Pre-activity surveys shall be conducted by a qualified biologist for this species no more than four days prior to any construction activity. Burrows shall be monitored by a qualified biologist for a minimum of three days by tracking and/or trapping to determine presence if disturbance to a burrow or an avoidance zone is not feasible. The applicant shall provide written verification that pre-construction surveys will occur prior to the approval of the grading plan.

BIO-15 If GKR is found present in a work zone area, its location(s) shall be clearly marked and construction activities would need to maintain at least a 50-foot buffer from the individual(s). A biological monitor shall be onsite during construction activities to assist in minimizing adverse effects of the project on GKR.

BIO-16 Excavation of burrows should be completed within 24 hours after a determination of absence has been established under the direct supervision of a qualified biologist. If an occupied burrow cannot be avoided and destruction is likely, then the GKR(s) shall be trapped and relocated to a nearby safe burrow by a qualified biologist.

The area comprised of Phase I of the Project (Sections 10 and 15) supports a high biotic value to GKR. Compensation for loss of habitat for GKR should be incorporated with compensation for loss of habitat for SJKF, as the two species are interdependent.

BIO-17 Compensation for loss of habitat for this species shall occur on at least a 2:1 compensation to loss ratio, and compensation lands shall be of equal or greater biotic value to the species than those lands lost to the Project. To fully compensate for the loss of habitat for GKR, the compensation lands must maintain regional connectivity.

As stated above, no specific surveys for GKR have been completed on the remaining 8,000 acres of the Project site, and it is therefore currently unknown to what extent GKR occur throughout the entire site; however, based on reconnaissance surveys conducted in April 2009 and aerial photography, GKR appear to be present in areas throughout the site. Sampling surveys are scheduled to begin in early August throughout the remaining Sections of land, and will continue until summer 2010. These surveys will include GKR surveys.

San Joaquin kit fox

The USFWS lists the SJKF as Endangered under the authority of the Federal Endangered Species Act and the State of California lists the kit fox as Threatened. In 1998, the USFWS adopted a final recovery plan for the SJKF

SJKF has been observed on several occasions in Range 15E, Township 10S, Sections 10 and 15 during adult BNLL surveys conducted in 2009. Furthermore, there are various CNDDDB observations throughout the greater 10,000 acre site between 1975 and 2006. While species-specific surveys have not been conducted onsite, it is assumed that SJKF occur throughout the site and that some individuals spend their entire lifetime on the site while others disperse to or from the site to other suitable habitat in the region.

According to the *Recovery Plan for Upland Species of the San Joaquin Valley*, 1998 the Ciervo-Panoche Natural Area represents one of three core populations for the SJKF, and is isolated from the other two core populations by over 100 miles. Like the GKR, impacts to individual SJKF and their dens would likely occur during ground disturbing activities, and SJKF could be killed or injured by vehicles, while occupied dens could be crushed by heavy equipment. The implementation of the following avoidance and minimization measures would greatly reduce the likelihood that individuals or dens would be taken during construction activities:

BIO-18 Pre-activity surveys shall be conducted by a qualified biologist for at least three-five days (depending on time of year – i.e., five days during natal season) prior to any construction activity. Burrows shall be monitored by a qualified biologist for a minimum of three days by camera station or tracking medium to determine presence if disturbance to a burrow or an avoidance zone is not feasible. The applicant shall provide written verification that pre-construction surveys will occur prior to the approval of the grading plan.

BIO-19 If SJKF is found present in a work zone area, its location(s) shall be clearly marked and construction activities would need to maintain at least a 100-foot buffer from the individual(s). A biological monitor shall be onsite during construction activities to assist in minimizing adverse effects of the Project on SJKF.

BIO-20 Excavation of burrows shall be completed within 24 hours after a determination of absence has been established under the direct supervision of a qualified biologist. If an occupied burrow cannot be avoided in the non-breeding season and destruction is likely, the fox(es) shall be allowed to leave the den prior to destruction. A qualified biological monitor shall verify the den has been vacated.

BIO-21 All applicable minimization measures listed in the *U.S. Fish and Wildlife Service Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance*, 1999, shall be carried out prior to and during all construction phases.

The area comprised of Phase I of the Project (Sections 10 and 15) supports a high biotic value to SJKF. As the site is fairly homogenous, and kit fox have been observed historically throughout

Panoche Valley, it is assumed that the remaining 8,000 acres also support high quality habitat for SJKF.

BIO-22 Compensation for loss of habitat for this species shall occur on at least a 2:1 compensation to loss ratio, and compensation lands should be of equal or greater biotic value to the species than those lands lost to the Project. To fully compensate for the loss of habitat for SJKF, the compensation lands must maintain regional connectivity.

As stated above, no species-specific surveys for SJKF have been completed on the Project site, and it is therefore currently unknown to what extent SJKF occur throughout the entire site. Sampling surveys are intended to begin in early August throughout the remaining Sections of land, and will continue until summer 2010. These surveys will include SJKF surveys.

American Badger

The American badger is a California species of special concern.

Evidence of American badger (i.e., burrows with distinctive claw marks and shape) indicative of their presence was observed in multiple areas during the adult BNLL surveys conducted onsite in 2009. The entire Panoche Valley offers suitable habitat for this species; as an animal with large home ranges (e.g., up to 2,100+ acres/adult male and 400+ acres/adult female), it is likely several males and multiple females occur onsite.

Construction disturbance during the breeding season (March through August) could result in the incidental loss of adult and/or young, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFG. Construction activities that occur outside the breeding period may also result in take of individuals. Furthermore, the loss of breeding and foraging habitat for the American Badger is a significant impact under CEQA. If employed, the following mitigation measures would reduce the effect on the badger to a less-than-significant level.

BIO-23 No badgers shall be disturbed during the breeding season (1 March to 31 August). Pre-construction surveys should be conducted by a qualified biologist no more than 30 days prior to construction activity. Construction may still occur on a site with breeding badgers; however, a 300-foot buffer must be erected around each active burrow and a qualified biologist should monitor construction activities to ensure the 300-foot buffer is adequate to allow for successful breeding.

BIO-24 Pre-construction surveys shall be conducted by a qualified biologist in the non-breeding season (1 September to 28 February). Excavation of burrows shall be completed within 24 hours after a determination of absence has been established under the direct supervision of a qualified biologist. If an occupied burrow cannot be avoided in the non-breeding season and destruction is likely, the badger(s) shall be allowed to leave the den prior to destruction. A qualified biological monitor shall verify the den has been vacated. The applicant shall provide written verification that pre-construction surveys will occur prior to the approval of the grading plan.

As badgers share the same habitat type as BLNN, BUOW, SJAS, GKR and SJKF, compensation for loss of habitat for badgers could be accommodated under compensation for loss of habitat to the other grassland species that share the same type of habitat.

TABLE 8. LIST OF SPECIAL-STATUS PLANT SPECIES THAT HAVE THE POTENTIAL TO OCCUR ON OR WITHIN THE VICINITY OF THE STUDY AREA AND THE TIME TABLE FOR RARE PLANT SURVEYS

Scientific name	Common name	CNPS	Blooms	Habitat	Elevation	March	May/June	Aug/Sept
<i>Monolopia congdonii</i>	San Joaquin woollythreads	1B.2	Feb-May	Chenopod scrub, Grassland - Sandy	60-80m	X	X	
<i>Amsinckia vernicosa</i> var. <i>furcata</i>	forked fiddleneck	4.2	Feb-May	Woodland, Grassland	50-1000m	X	X	
<i>Androsace elongata</i> ssp. <i>acuta</i>	California androsace	4.2	Mar-Jun	Chaparral, Woodland, Coastal Scrub, Meadows & seeps, Pinyon/Juniper, Grassland	150-1200m	X	X	
<i>Astragalus macrodon</i>	Salinas milk-vetch	4.3	Apr-Jul	Chaparral, Woodland, Grassland	250-950m		X	
<i>Atriplex coronata</i> var. <i>coronata</i>	crownscale	4.2	Mar-Oct	Chenopod scrub, Grassland, Vernal Pools - Alkaline	1-590m	X	X	X
<i>Atriplex vallicola</i>	Lost Hills crownscale	1B.2	Apr-Aug	Chenopod scrub, Grassland, Vernal pools - alkaline	50-635m		X	X
<i>Blepharizonia plumosa</i>	big tarplant	1B.1	Jul-Oct	Grassland	30-505m			X
<i>California macrophylla</i>	round-leaved filaree	1B.1	Mar-May	Woodland, Grassland	15-1200m	X	X	
<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	hispid bird's-beak	1B.1	Jun-Sep	Meadows & seeps, Playas, Grassland - Alkaline	1-155m		X	X
<i>Delphinium recurvatum</i>	recurved larkspur	1B.1	Mar-Jun	Chenopod scrub, Woodland, Grassland - Alkaline	3-750m	X	X	
<i>Eriogonum vestitum</i>	Idria buckwheat	4.3	Apr-Aug	Grassland	235-900m		X	X
<i>Layia heterotricha</i>	pale-yellow layia	1B.1	Mar-Jun	Woodland, Coastal scrub, Pinyon/Juniper, Grassland - alkaline or clay	300-1705m	X	X	
<i>Lepidium Jaredii</i> ssp. <i>album</i>	Panoche pepper-grass	1B.2	Feb-Jun	Grassland - Alluvial fans, washes	185-275m	X	X	
<i>Madia radiata</i>	showy golden madia	1B.1	Mar-May	Woodland, Grassland	25-900m	X	X	
<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	shining navarretia	1B.2	May-Jul	Woodland, Grassland, Vernal pools	76-1000m		X	
<i>Trichostema ovatum</i>	San Joaquin bluecurls	4.2	Jul-Oct	Chenopod scrub, Grassland	65-320m			X

* Actual survey timing may vary depending on local seasonal weather patterns.

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BIO-25 Prior to the issuance of a grading permit, special-status plant surveys shall be conducted for each species during its appropriate bloom time to determine if any are present onsite.

Should any of the listed plants be found onsite and avoidance of the population is not feasible, the following mitigation measures would reduce impacts to a less-than-significant level.

BIO-26 The applicant should prepare a Special-Status Plant Species Mitigation and Monitoring Plan identifying measures that allow for restoration of the impacts at a minimum of a 1:1 ratio. This Plan should be submitted to the County for approval. The development of and implementation of the measures described in the Plan are expected to reduce Project impacts to a less-than-significant level to any special-status plant species that may occur on site. The mitigation and monitoring plan shall discuss:

- Protection of occupied areas onsite from indirect impacts (e.g., human intrusion such as by motorized vehicles);
- Measures to be implemented by the Project to minimize impacts of preserved populations during and after installation. These would include erecting construction fencing to ensure that identified populations are not disturbed during installation of solar panels, etc.
- Measures that would result in the restoration of impacted populations, including location of mitigation areas and propagation techniques. It is assumed that sufficient open space areas will be preserved onsite for the mitigation.

This plan should also provide a monitoring schedule (likely five years), along with a funding source(s), and establish success criteria for all proposed restoration sites.

With the implementation of mitigation measures BIO-1 through BIO-26, impacts are less than significant.

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?

Less than Significant with Mitigation Incorporation. Two main drainages occur within the Panoche Valley Project site. Both Panoche and Las Aguilas Creeks (the Creeks) run in a northwest to southeasterly direction through the site (see Figure 5). These creeks are ephemeral, meaning they contain water only intermittently, mainly during rain events and for a short time after large events. Reaches of both that occur within the site boundary were dry by 1 April 2009. Reaches of Panoche Creek downstream and off-site support somewhat dense riparian vegetation year-round. In addition, there are several unnamed drainages that occur onsite. The applicant intends to avoid erecting solar panels or substations near water courses. Therefore, the Project is not expected to have a negative effect on riparian habitat.

Nonetheless, to preserve sensitive riparian habitats and maintain watershed health (including water and habitat quality), the typically recommend riparian setback is at least 100 feet from the top of a bank or the edge of a riparian corridor, defined by the dripline of riparian vegetation, whichever is greater. Due to a general lack of riparian vegetation along the Creeks onsite, the top of bank would serve as the edge of the riparian corridor in most places. For the smaller, unnamed drainages onsite, a lesser setback may be appropriate, depending on the species that are found in particular reaches. The Project design includes a 50-foot setback from the centerline on both sides of the creeks.

The Project proponent shall implement avoidance, minimization, or compensation measures for impacts to Panoche and/or Las Aguilas Creeks and their associated riparian corridors, as well as along drainages.

As part of Project build-out, any proposed lighting is designed to avoid light and glare impacts to the riparian corridors. Light sources would not be visible from riparian areas and would not illuminate riparian areas.

No mitigation measures are required.

- 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, filling, hydrological interruption, or other means?**

Less than Significant with Mitigation Incorporation. All wetlands of the state are significant ecological features whether or not they support special status species (e.g., vernal pool fairy shrimp, CTS).

As of yet, no surveys have been completed onsite during winter months; therefore, it is unknown to what extent protected wetlands may occur onsite. However, surveys will be conducted in the winter of 2009. Several areas have been observed during the BNLL surveys that appear to have signature markings of vernal pools. Furthermore, there is a known seasonal pond/watering hole that occurs in Township 15S, Range 10E, Section 4. This feature is managed by the current land owner and is used to water cattle. A conceptual design has been drafted for the Project, which identifies the potential locations of the solar modules. However, as previously noted, the Project design is flexible and, as surveys are completed, the Project would be designed to either avoid or span such areas, and it is not anticipated that solar arrays would create a hydrological interruption to such features should they occur onsite.

Areas of greenness (i.e., biomass, leaf area, and potentially wet areas) can be determined using a continuous Normalized Vegetation Difference Index (NVDI) derived using multi-temporal Landsat Thematic Mapper satellite imagery to determine where to focus surveys. Survey areas shall also be determined based on information gathered during walking surveys that are ongoing at the site (e.g., BNLL and rare plant surveys).

Should it be determined that seasonal wetlands occur onsite and support special-status species, it is likely the features would fall under the jurisdiction of Section 404 of the Clean Water Act. The regulatory agencies are the final arbiters on jurisdictional issues and required mitigation ratios.

The Project shall be designed to avoid filling seasonal wetlands. The Project shall use best management practices (e.g., using siltation fencing during construction) to avoid impacting any seasonal wetlands. If avoidance is not feasible, the following mitigation measure is required.

BIO-27 Subject to the recommendation and approval of the Regional Water Quality Control Board (RWQCB), prior to the issuance of grading permits, the applicant shall purchase no less than an equal amount of seasonal wetlands (a 1:1 mitigation to loss ratio – to achieve no net loss) at an offsite mitigation bank or within a conservation easement approved by the resource agencies, or create other wetlands onsite in an area that would remain undisturbed in perpetuity.

With the implementation of mitigation measure BIO-27, impacts are less than significant.

- 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?**

Less than Significant Impact with Mitigation Incorporation. The Project would be enclosed by a six-foot chain-linked fence for security purposes. The fence would be designed, subject to regulatory

approval, with regularly spaced, appropriately sized culverts to enable certain wildlife, including the SJKF, to move through the site.

Many terrestrial animals need more than one biotic habitat in order to perform all of their biological activities. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles. Terrestrial animals use ridges, canyons, riparian areas, and open spaces to travel between their required habitats. The importance of an area as a movement corridor depends on the species in question and its consistent use patterns. Animal movements generally can be divided into three major behavioral categories:

- Movements within a home range or territory;
- Movements during migration; and
- Movements during dispersal.

While no detailed study of animal movements has been conducted for the study area, knowledge of the site, its habitats, and the ecology of the species occurring onsite permits sufficient predictions about the types of movements occurring in the region and whether or not the proposed Project would constitute a significant impact to animal movements.

Panoche Valley has historically been used as rangelands which utilize barbed wire fencing to contain livestock in specific areas and, as such, the valley currently offers wide open spaces through which animals move mainly unimpeded. The valley floor provides suitable habitat for a number of smaller species to carry out their entire life cycles, while some mammals requiring larger home ranges, such as coyotes, SJKF and badgers, likely move through the valley, especially when young are dispersing and looking for their new home range.

Many of the animals found within Panoche Valley use the valley floor for natal nesting and denning grounds and for raising their young. Special-status species that are likely to or do breed onsite include the BNLL, SJCW, BUOW, GKR, SJAS, SJKF, and badger. Due to the general lack of surveys on the greater portion of the site to date, it is not clear what the distribution of these species are over the entire site; however, all of the species listed above have been observed within Sections 10 and 15.

Erecting a fence around 10,000 acres, even with regularly spaced culverts, would impede movement across the Panoche Valley floor for a number of species, mainly larger mammals that require relatively large, distinct home ranges, and species whose young must disperse away from natal grounds. Species requiring this type of movement include coyote, SJKF, American badger, cougar and, potentially, mule deer. Fencing could increase the level of predation for several of these species while trying to locate crossing culverts. Reptiles, birds and rodents are not expected to be affected by chain link fencing, as they may fly over or move relatively easily through the openings in the fence.

BIO-28 To avoid impacts to regional movement due to fencing, the project should consider maintaining the type of fencing currently in use onsite (i.e., three-four strand barbed wire).

BIO-29 If avoidance is not possible, fencing should be reduced to those areas around blocks of arrays rather than fencing of the entire 10,000 acres, using frequently spaced culverts at grade. This would allow for areas free of fencing that may be used more readily by local wildlife while still allowing wildlife to move throughout the arrays.

BIO-30 If neither maintaining the current barbed wire fencing nor limiting fencing to areas around the block areas are feasible, then frequently spaced culverts at grade (to allow for the shortest possible distance required to cross through) and with a diameter large enough for the majority of species that occur in the valley to pass through shall be employed.

BIO-31 To compensate for the loss of movement habitat on the valley floor, mitigation lands shall be set aside in perpetuity. These lands shall be strategically located to allow north-south movement through the valley along the eastern edge of the solar farm.

With the implementation of mitigation measures BIO-28 through BIO-30, impacts are less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance?

No Impact. There are no local biological resources policies or ordinances that are applicable to the proposed Project.

No mitigation measures are required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. Currently there are no known conservation plans governing the area of Panoche Valley. Therefore, the Project would not conflict with any such plans, and no mitigation would be warranted for conflicts with adopted HCP, NCCP or other conservation plans.

No mitigation measures are required.

2.5 CULTURAL RESOURCES

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5?**

Less than Significant with Mitigation Incorporation. Please see response to 2.5-b.

- b) **Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations Section 15064.5?**

Less than Significant with Mitigation Incorporation. The Project site has been previously disturbed as a result of activities, such as soil tilling and crop cultivation. Additionally, other site improvements, primarily the transmission towers have resulted in ground disturbance.

Tom Origer and Associates performed a preliminary record search at the Northwest Information Center on June 29 and July 10, 2009 (NWIC File #09-0042). The record search included inspecting the NWIC 7.5' USGS topographic quadrangles of Cerro Colorado, Llanada, Mercy Hot Springs, and Panoche. The results of this record search indicated that no recorded cultural resources are present in the Project area. In addition, the Project area was compared to the NWIC maps to determine whether any projects had previously overlapped the Project area. One previous negative survey was conducted at the northwest margin of the Project area. Overall, the majority of the Project site has never been surveyed for cultural resources.

CR-1 Prior to the issuance of grading permits, the Project site shall be surveyed for archaeological resources. In the event that the surveys identify cultural resources, the Project applicant shall prepare a mitigation plan that identifies the avoidance and/or recovery and documentation of cultural resources. The mitigation plan shall be reviewed and approved by San Benito County.

With the implementation of mitigation measure CR-1, impacts to cultural resources are less than significant.

c) **Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?**

Less than Significant with Mitigation Incorporation. The project site has been disturbed as a result of agricultural activities. A preliminary investigation by John Minch and Associates revealed that the Project area contains known sedimentary units of Late Pleistocene to Recent age exposed at the site. The Quaternary alluvial sediments of the area are considered to be of low paleontological sensitivity and are not known to contain significant fossils in the Panoche Valley. There is a low to moderate potential for significant paleontological resources over most of the site underlain by Quaternary Alluvium. The area near the town of Panoche is underlain by the Quaternary to Tertiary Tulare Formation. The Tulare Formation is considered to be of moderate to high paleontological sensitivity. It is not known to contain significant fossils in the Panoche Valley. The fossils contained in the Tulare alluvial sediments in other areas have proven to be of significant scientific value. New localities need to be carefully collected.

CR-2 A qualified paleontologist shall be retained by San Benito County to attend relevant pre-construction meetings to consult with grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues.

CR-3 A paleontological monitor shall be retained to monitor project-related ground disturbance in areas underlain by fossil-bearing geological formations. Any ground disturbance in areas underlain by non-fossil bearing geological formations shall not require any monitoring.

CR-4 In the event that fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. The paleontologist shall be allowed to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. At each fossil discovery site field data forms shall be prepared to document the geographic, geologic, stratigraphic, and taphonomic aspects of the discovery.

CR-5 Fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited (as a donation) in a certified repository as directed or in consultation with the Project paleontologist.

With the implementation of mitigation measures CR-2 through CR-5, impacts are less than significant.

d) **Disturb any human remains, including those interred outside of formal cemeteries?**

Less than Significant Impact. The site is not the location of any known burial ground. Therefore, it is unlikely that the Project would disturb any human remains. However, as with any land disturbance, there is the potential to discover human remains, either historic or prehistoric. Project implementation is subject to the regulations of the California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98. Adherence to these codes, as mandated, is considered full mitigation for any impacts to human remains.

No mitigation measures are required.

2.6 GEOLOGY AND SOILS

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

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.**

Less than Significant Impact. As with most of California, the Project site is located in a seismically active area. In general, potential hazards associated with seismic activity on one of the nearby faults in the region include ground surface rupture, strong ground motion, and seismically induced liquefaction.

The numerous faults in California include active, potentially active, and inactive faults. As defined by the CGS, active faults are faults that have ruptured within Holocene time or within approximately the last 11,000 years. Potentially active faults are those that show evidence of movement during Quaternary time (approximately the last 1.6 million years) but for which evidence of Holocene movement has not been established. Inactive faults have not moved in the last approximately 1.6 million years.

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. Evaluation of the potential hazard of surface fault rupture is based on the concepts of recency and recurrence of faulting along existing faults. In general, the more recent the faulting, the higher the probability for future faulting (Allen, 1975). Faults of known historic activity during the last 200 years (such as the San Andreas fault), as a class, have a higher probability for future activity than faults classified as Holocene age (last 11,000 years) and a much higher probability of future activity than potentially active faults classified as Quaternary age (last 1.6 million years). However, it should be kept in mind that certain faults have recurrent activity measured in tens or hundreds of years whereas other faults may be inactive for thousands of years before being reactivated. The magnitude, sense, and nature of fault rupture also vary for different faults or even along different strands of the same fault. Even so, future faulting generally is expected to recur along pre-existing faults (Bonilla, 1970).

Based on a background review and a limited site reconnaissance, no active faults are known to cross the Project site. The Project site is not located within a State of California Earthquake Fault Zone (formerly known as Alquist-Priolo Special Studies Zones) delineated for evaluating the potential for surface fault rupture due to active faults.

No mitigation measures are required.

ii. Strong seismic ground shaking?

Less than Significant with Mitigation. The site is located in a seismically active area, and the potential for strong ground motion is considered significant.

Principal active faults within approximately 25 miles of the Project site include the Ortigalita, San Andreas and Quien Sabe. Table 9 lists the known active faults that may affect the subject site.

TABLE 9. PRINCIPAL REGIONAL FAULTS

Fault	Approximate Fault to Site Distance ¹ in Miles (kilometers)	Maximum Moment Magnitude ² (Mmax)
Ortigalita	9.3 (14.9)	7.1
Quien Sabe	18.0 (28.9)	6.2
San Andreas	24.9 (40.0)	6.4
Calaveras	36.0 (57.95)	5.8
Zayante - Vergeles	36.8 (59.2)	7.0
Rinconada	38.7 (62.3)	7.5
Monterey Bay - Tularcitos	44.0 (70.8)	7.3
Notes:		
¹ Blake, 2001 ² Cao, et al., 2003		

Source: Ninyo & Moore, July 2009.

The 2007 California Building Code (CBC) recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a two percent probability of being exceeded in 50 years which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for PGAMCE is approximately 2,475 years. The probabilistic PGAMCE for the site was calculated as 0.60g using the web-based USGS ground motion calculator (USGS, 2008). The design PGA was estimated to be 0.40g using the USGS ground motion calculator. These estimates of ground motion do not include near-source factors that may be applicable to the design of structures on site.

The earthquake hazards are potentially significant only for the substation and O&M facilities. The potential seismic considerations, including site-specific evaluation, should be performed prior to design and construction of the Project. The Project, as required, would be designed in accordance with the Institute of Electrical and Electronic Engineers (IEEE) Standard 693, Seismic Design for Substations (1997).

GEO-1 Prior to Project approval, the Project proponent shall prepare a detailed geological site evaluation, which includes subsurface exploration and laboratory testing. The proponent shall incorporate the findings of the evaluation into Project design. Prior to the issuance of a grading permit, San Benito County shall review the grading plan and site design engineering report for approval.

With the implementation of mitigation measure GEO-1, impacts are less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant with Mitigation. Liquefaction is a phenomenon in which soil loses its shear strength for short periods of time during an earthquake. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid increase in pore water pressure, causing the soil to behave as a fluid for short periods of time. The effects of liquefaction may include excessive total and/or differential settlement of structures founded on the liquefying soils. To be susceptible to liquefaction, a soil is typically cohesionless, with a grain-size distribution of a specified range (generally sand and silt), loose to medium density, below the groundwater table, and subjected to a sufficient magnitude and duration of ground shaking.

The State of California Seismic Hazards Mapping Program produces maps showing potential liquefaction hazard zones, but has not yet produced these maps for the Project study area. Therefore, the site is not located within a published State of California Seismic Hazards Zone considered susceptible to liquefaction. Based on review of geologic background information, the site is underlain by young, Quaternary-aged alluvial soil deposits. These soils could contain sandy or silty materials, and may also be poorly consolidated. Shallow groundwater is present at the site. Due to these conditions, there may be a potential for liquefaction to occur at the site during a strong seismic event on one of the faults in the region. Prior to the design of the project, site-specific evaluations, including subsurface exploration and laboratory testing, should be performed to assess the potential for liquefaction at the site. Any impacts can be mitigated through the implementation of specific design features that would be based upon the recommendations of further studies.

GEO-1 Prior to Project approval, the Project proponent shall prepare a detailed geological site evaluation, which includes subsurface exploration and laboratory testing. The proponent shall incorporate the findings of the evaluation into Project design. Prior to the issuance of a grading permit, San Benito County shall review the grading plan and site design engineering report for approval.

With the implementation of mitigation measure GEO-1, impacts are less than significant.

iv. Landslides?

No Impact. No landslides are mapped at the site. The County's General Plan does not identify the Project site as an area susceptible to landslide hazards.

No mitigation measures are required

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Erosion refers to the process by which soil or earth material is loosened or dissolved and removed from its original location. Erosion can occur by varying processes and may occur at the Project site where bare soil (or rock) is exposed to wind or moving water (both rainfall and surface runoff). The processes of erosion are generally a function of material type, terrain steepness, rainfall or irrigation levels, surface drainage conditions, and general land uses. The study indicates that surface soils at the site are comprised of variable types of materials, and the Project site has varied topographic gradients. There may be potential for erosion to occur at the Project site. However, due to the relatively gentle nature of the slope gradients at the site (less than 30 percent), surface erosion is not considered a significant constraint to the project.

No mitigation measures are required.

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 on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant with Mitigation Incorporation. Please refer to responses to 2.6 a and 2.6 b.

GEO-1 Prior to Project approval, the Project proponent shall prepare a detailed geological site evaluation, which includes subsurface exploration and laboratory testing. The proponent shall incorporate the findings of the evaluation into Project design. Prior to the issuance of a grading permit, San Benito County shall review the grading plan and site design engineering report for approval.

With the implementation of mitigation measure GEO-1, impacts are less than significant.

d) 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 with Mitigation. In order to evaluate the potential presence of expansive soils at the Project site, data from the Natural Resources Conservation Service (NRCS) were utilized. Linear extensibility percent is the method used by the NRCS to evaluate the shrink-swell potential of soils, and refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. The shrink-swell (expansion) potential is low if the soil has a linear extensibility of less than three percent; moderate if three to six percent; high if six to nine percent; and very high if more than nine percent (USDA, 2007a). If the linear extensibility is more than three percent, shrinking and swelling can cause damage to buildings, roads, and other structures. The NRCS data indicate that the Los Banos clay loam soil that is mapped at the Project site has a linear extensibility percent of 7.5, and is potentially highly expansive. The NRCS data are limited to some soils that are present at the Project site, and expansive soils may be present in other areas of the site not indicated by the NRCS data.

GEO-1 Prior to Project approval, the Project proponent shall prepare a detailed geological site evaluation, which includes subsurface exploration and laboratory testing. The proponent shall

incorporate the findings of the evaluation into Project design. Prior to the issuance of a grading permit, San Benito County shall review the grading plan and site design engineering report for review and approval.

With the implementation of mitigation measure GEO-1, impacts are less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The Project does not include the use of septic tanks or alternative waste water disposal systems.

No mitigation measures are required.

2.7 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Less than Significant Impact. Construction activities would involve the limited transport, storage, use, or disposal of hazardous materials, such as the fueling/servicing of construction equipment. This type of activity is typically a short-term or one-time activity and is subject to federal, state, and local health and safety requirements.

The Department of Toxic Substances Control (DTSC) regulates the generation, handling, storage, disposal, and transportation of hazardous waste, oversees the remediation of contaminated sites, and

seeks to reduce the hazardous waste produced in California. The Project will include provisions such as maintaining appropriate storage areas for hazardous materials, installing or affixing appropriate warning signs and labels, and using commercial services that specialize in the disposal and transportation of hazardous materials.

Once operational, the Project would not require the use of hazardous materials and would not generate hazardous wastes. The solar panels would be constructed of non-toxic materials.

No mitigation measures are required.

- b) 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. Industrial wastes are generated during routine operations (dielectric fluids, cleaning agents, and solvents). These wastes typically would be put in containers, characterized and labeled, possibly stored briefly, and transported by a licensed hauler to an appropriate permitted off-site disposal facility as a standard practice. Please see response 2.7 a.

No mitigation measures are required.

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Less than Significant Impact. The Panoche School, located at the intersection of Panoche Road and Norton Road, southeast of the Project site. The solar modules located in Phases 4 and 5 would be within 0.25 miles of the school. As discussed in 2.7 a, the Project would not include the use of solar panels that contain heavy metals or other toxic materials. Please refer to the responses to items 2.7 a and 2.7 b.

No mitigation measures are required.

- 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?**

No Impact. Environmental Data Resources (EDR) completed a review of all applicable environmental databases on June 23, 2009 (see Appendix E). The search of the environmental databases by EDR and the accompanying findings report prepared by EDR is in compliance with the search requirements of the Environmental Protection Agency's (EPA) Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) and the American Society for Testing Materials (ASTM) Standard Practice for Environmental Site Assessment (E 1527-05). The Project site is not listed on any hazardous materials site compiled pursuant to Government Code Section 65962.5 and no other properties were listed on any environmental database within the standard ASTM search radii.

No mitigation measures are required.

- 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 Project site is not located within the boundaries of a land use plan or within two miles of a public or public use airport.

No mitigation measures are required.

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 is a single private air strip located northeast of the intersection of Panoche Road and Little Panoche Road, located in the area of the proposed fourth phase of the Project. The air strip is a 2,000 foot grass landing strip used by recreational gliders. Use of the landing strip is not scheduled and the number and times of flights vary. The use of the air strip would not pose a threat to construction workers during Phases 1-3 of the Project. Activities would cease at the air strip prior to the construction of Phase 4.

No mitigation measures are required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The County of San Benito adopted the Hazardous Materials Emergency Response Area Plan in January 2008. The Area Plan is designed to safeguard and protect the health and safety of people, the environment, and personal property in relation to a hazardous material release. The Area Plan is implemented through the Unified Program, which is a consolidation of several existing hazardous material programs that were implemented by several jurisdictions at various levels of government.

The Project would not restrict or impede access to the Project site and surrounding area through any roadway re-configurations or closings, and the Project site is not located along any designated emergency response or emergency evacuation route. The Project does not include any features that would disrupt communication.

No mitigation measures are required.

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?

Less than Significant Impact. The degree of risk or loss as a result of wildland fires is generally associated with the amount of fuels, topography, and climate. More specifically, wind, steepness of terrain, and naturally volatile hot-burning vegetation contribute to the wildland fire hazard potential. The majority of the Project site is located in a California Department of Forestry and Fire Protection (CDF) State Responsibility Area (SRA) that is zoned as Very High Fire Hazard Severity.

Public Resources Code Section 4209 et. Seq. sets minimum fire safety standards for development within the SRAs. Current development within San Benito County is subject to Fire Safe Requirements (Public Resources Code 4291), which include minimum roadway width access to parcels, turnarounds, and maximum length limitations for dead-end roads, driveway width and length standards, and fuel clearance. Additionally, Project implementation is required to be in compliance with the Uniform Fire Code that is the recognized standard in fire safety prevention and protection.

All new development in the SRAs is required to conform to the standards and recommendations for applicable fire protection agency to an acceptable fire protection risk level.

Moreover, during the operational lifetime of the Project, on-site staffing would be limited to the periodic maintenance of the panels and security. Thus, the Project would not result in the permanent placement of employees.

No mitigation measures are required.

2.8 HYDROLOGY AND WATER QUALITY

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 on or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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 on or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact. During grading and construction activities, there is the potential for surface water runoff to carry sediment and small quantities of pollutants offsite, thereby potentially

degrading water quality in downstream waters. Typical pollutants that may be introduced into stormwater during construction include, but are not limited to, fertilizers from landscape management, and petroleum hydrocarbons and heavy metals from construction vehicles.

Since construction operations would result in an area of disturbance of one acre or more, the Project is required to comply with the National Pollution Discharge Elimination System (NPDES) General Permit. As part of the NPDES General Permit, the applicant will file a Notice of Intent (NOI) and prepare a Storm Water Pollution Prevention Plan (SWPPP), which outlines Best Management Practices (BMPs) that would be included in the Project to minimize and control post-construction runoff. Implementation of BMPs would minimize erosion, siltation and contaminated runoff from construction sites. Examples of BMPs that are typically included within the SWPPP include:

- the use of sand bags and temporary de-silting basins during Project grading and construction during the rainy season to prevent discharge of sediment-laden runoff into storm water facilities;
- revegetation as soon as practicable after completion of grading to reduce sediment transport during storms;
- installation of straw bales, wattles, or silt fencing around the perimeter of graded building pads if they are not built upon before the onset of the rainy season (October 15th – April 15th);
- structural BMPs (e.g., grease traps, debris screens, oil/water separators, etc.) incorporated into substation design to minimize potential for contaminated stormwater to leave the substation.

Once operational, the Project would result in minimal generation of stormwater runoff within the Project site. An understory of native vegetation would be planted beneath the panels to reduce potential for sheet flow and allow stormwater to percolate into the ground.

As part of the SWPPP, post-construction regular maintenance activities (e.g., damp sweeping, controlling litter) prevents soil, grease and litter from accumulating on the Project site and contaminating surface runoff. In addition, stormwater drainage features inside the substation will be designed to minimize erosion and increase sediment control. Internal runoff would be released from the substation by means of surface drainage structures designed to filter contaminants from water flow. Drainage from the property would be collected and controlled by surface improvements.

No mitigation measures are required.

- 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)?**

Less than Significant. The Project site is located within the Panoche Valley Groundwater Basin. Although the California Department of Water Resources has no information on groundwater storage or an estimate of the groundwater basin budget, records of the San Joaquin Water District record a general trend of groundwater levels in this basin rising from 40 feet to as much as 130 feet from the 1970s to 2000. Groundwater levels appear to be recovering from an historical period of heavy groundwater pumping for agricultural purposes.

Water required for the physical operation of the Project, such as washing the solar panels, would be provided by existing groundwater wells. The amount of water required for the Project is estimated to be approximately 10.5 acre feet per year. Based on anecdotal evidence from landowners, existing wells on the Project site have capacity sufficient to meet this need. In addition, the Project is exploring options for cleaning and recycling gray water for reuse onsite, which would minimize the need for groundwater over the life of the Project.

No mitigation measures are required.

- 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 on- or off-site?**

Less than Significant with Mitigation Incorporation. The Project does not require large-scale grading for construction and implementation. It is expected the only grading on site would occur for the construction of all-weather roads, the substation, and O&M facility. Trenching machines would be used to bury cables; trenching would occur within the proposed aisles between panel rows, and trenches would be refilled once the cables are buried.

The Project site is located within the Panoche Valley, and is crossed by multiple intermittent streams and washes, including Clough Canyon Creek, Bitterwater Creek, Las Aguilas Creek, and Panoche Creek. Multiple unnamed intermittent streams and washes drain from the Panoche Hills to the northeast, the Las Aguilas Mountains to the northwest, and the Diablo Range to the south and southeast (see Figure 6). All are tributary to Panoche Creek, which drains the Panoche Valley and flows west into the Great Valley.

Streams and washes crossing the Project will be protected by a buffer of no less than 50 feet. Applicable permits may include:

- Section 1602 Lake and Streambed Alteration Agreement (California Department of Fish and Game)
- Section 401 Water Quality Certification (California Water Resources Control Board)
- Section 404 Nationwide Permit (U. S. Army Corps of Engineers)

To minimize potential for erosion or siltation resulting from construction, operation, and maintenance activities, the following mitigation measures are recommended:

HYD – 1: For Project construction, maintenance, and operation, existing crossings shall be utilized at streams, wetlands, and washes to the extent feasible. If new roads are required, they shall be built as near as possible to right angles to the streams and washes. All construction and maintenance activities shall be conducted in a manner that would minimize disturbance to the banks, channels, or existing vegetation. In addition, road construction would include dust-control measures during construction in sensitive areas, or when water is flowing.

HYD – 2: Drainage control features will be installed, as appropriate, to minimize amount of stormwater flow from areas of active construction.

With the implementation of HYD-1 and HYD-2, impacts are less than significant.

- 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 on- or off-site?**

Less than Significant with Mitigation Incorporation. Please refer to response 2.7 c.

- e) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

Less than Significant Impact. The Project would result in a minimal increase of impervious surfaces on the site. The photovoltaic panels would be mounted on a single pole that would minimize grading

and amount of impervious surface for each structure. An understory of native vegetation will be planted beneath the panels to reduce potential for sheet flow off the site. Stormwater flow will be directed along natural contours into existing intermittent streams and washes flowing off the site into Panoche Creek.

The Project site would remain vegetated with the exception of all-weather roads and the substation/O&M facility; thus there would be no significant change in stormwater runoff characteristics (peak discharge rates) and, therefore, no special measures are required to control peak flow from the site.

The 10 acres dedicated for the substation/O&M facility would be paved, introducing impervious surfaces into the Project site. Stormwater drainage features inside the substation would be designed to control stormwater flow from the substation. Internal runoff would be released from the substation by means of surface drainage structures designed to filter contaminants from water flow. Drainage from the property would be collected and controlled by surface improvements.

Examples of stormwater drainage and control features include retention vegetation swales, detention ponds, and check dams. Examples of structural water quality control measures include oil containment curbs drained by petro-pipes.

No mitigation measures are required.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. Please refer to response 2.7-a.

No mitigation measures are required.

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?

No Impact. The Project does not involve the placement of housing, thus there would be no impact.

No mitigation measures are required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less than Significant with Mitigation Incorporation. Bitterwater Canyon Creek, Las Aguilas Creek, and Panoche Creek have associated 100-year floodplains. In addition, several unnamed streams draining from the Glaucothane Ridge to the north and the Las Aguilas Mountains have associated 100-year floodplains, which broaden as they join the 100-year floodplain of Panoche Creek.

Structures placed within 100-year floodplains could potentially impede flood flows, or redirect flows to areas not currently within a flood hazard area. Implementation of recommended mitigation measures could minimize impacts to a less than significant level.

HYD – 3: The Project will be designed so that panels and other required infrastructure are not placed within the 100-year floodplain.

With the implementation of HYD-3, impacts are less than significant.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant. The Project site is not located in an area that would experience direct impacts as a result of a seiche or tsunami. The Project site is a gently sloping valley bordered by the Panoche Hills on the north, the Las Aguilas Mountains to the west, and the Diablo Range to the south and southeast. Precipitation in the area averages approximately 7.37, with the 100-year 24-hour precipitation being three inches. In addition, no historic landslides have been mapped in the area.

As part of Project design, photovoltaic modules will be mounted on steel support structures, with the panels approximately four feet off the ground. Although potential exists for mudflow within the Project site, the risk of inundation by mudflow is less than significant.

No mitigation measures are required.

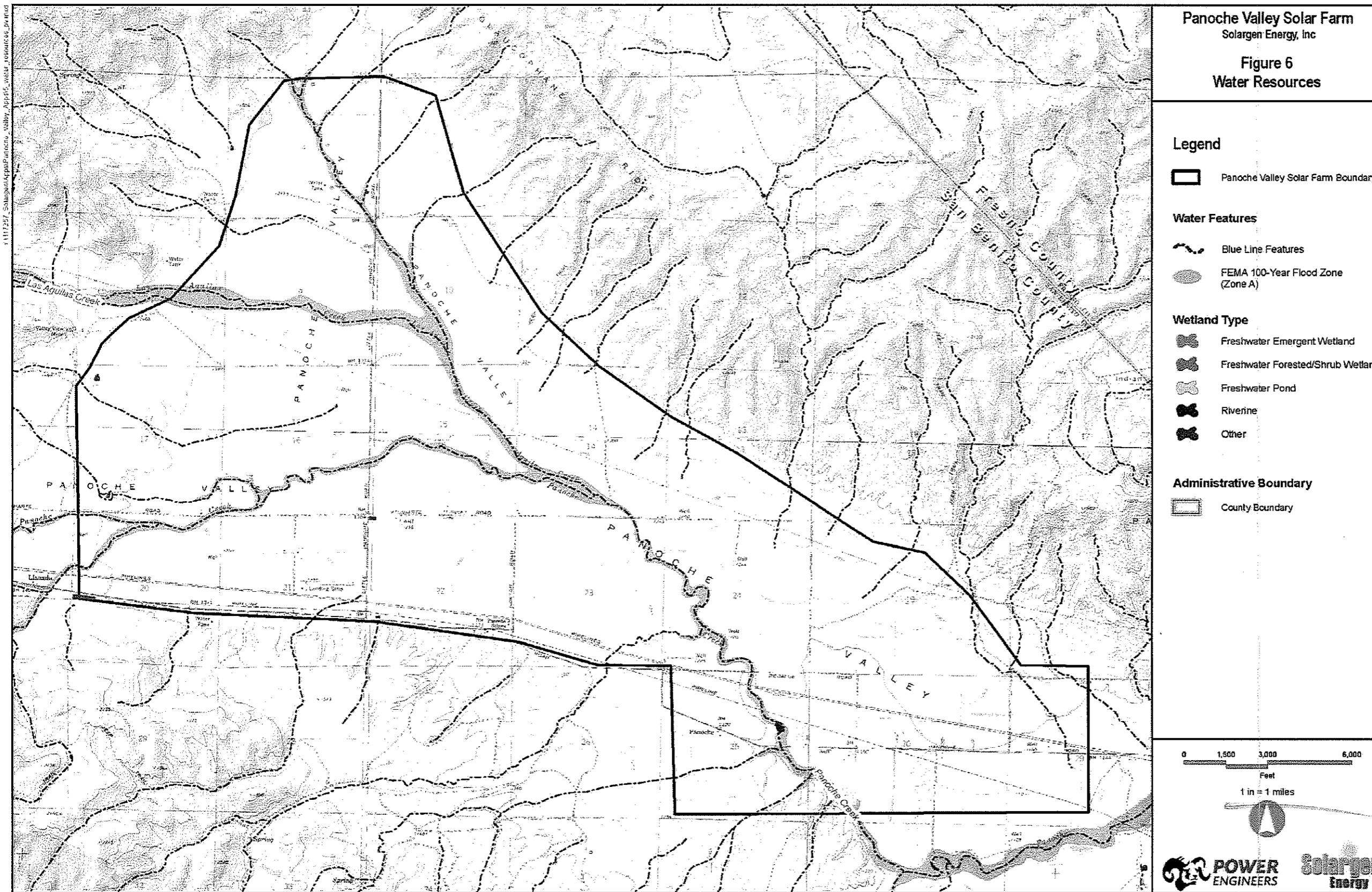


FIGURE 6. WATER RESOURCES MAP.

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2.9 LAND USE AND PLANNING

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

a) Physically divide an established community?

No Impact. The Project is located on contiguous parcels that are currently being used for grazing. Project implementation would not preclude the existing grazing activities from occurring onsite.

The Project is located in an area dominated by livestock grazing and not within an established community. No existing roadways or pathways would be blocked that would be considered detrimental to this agricultural use. Therefore, no impact is anticipated.

No mitigation measures are required.

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?

No Impact. The applicable land use planning document associated with the Project area is the San Benito County General Plan. The San Benito County General Plan (adopted 1992 and amended 2005) is intended to guide the strategic planning and future development of land within unincorporated areas of the County. The General Plan is composed of the minimum state required elements, including Land Use, Open Space and Conservation, Transportation, Noise, Housing, and an additional Seismic Safety and Scenic Highways Element. The General Plan is currently being updated.

The "Land Use Goals and Objectives" of the San Benito County General Plan emphasize managing growth to maintain the county's rural atmosphere, character, and amenities. The General Plan also emphasizes a diversified economic base with commercial developments that are compatible with other land uses. No policies or objectives outlined in the Land Use Element specifically address the development of solar photovoltaic projects.

The Land Use Element Map identifies eight major categories of land use: urban, residential, agricultural, commercial, industrial, park, flood and public/quasi-public. The agricultural category applies to the majority of the land area within San Benito County. This land is presently used for

agricultural, hillsides over 30%, rangeland and open space purposes. The uses allowed within this category include agriculture, grazing, land in its natural state, wildlife refuges, very low intensity residential, and uses that, by their nature, must be located in undeveloped areas. Conditional uses include mineral extraction, low-density recreational facilities and institutional land uses.

The Land Use Element of the General Plan designates the Project area as Agricultural Rangeland (40 acre-minimum lot size) (see Figure 7). This designation is assigned to the remote hillside areas, watershed and rangeland, such as Williamson Act land, many of which have been classified as some form of open space within the Open Space and Conservation Elements. These areas are typified by a lack of transportation access, high to very high fire hazard, and the lack of utility services to allow for more dense types of development. Many of these areas are found within the critical fire hazard area or in the "out back" areas of the many isolated canyons throughout the County.

Chapter 25.07, Article I, of the San Benito County Municipal Code reflects the zoning and development standards for properties within the boundaries of the AR District (see Figure 7). While the use of a solar farm is not expressly allowed as permitted by right in the AR District, Section 25.29.106 (M) of the Municipal Code lists *Additional Uses Permitted* stating that public utility facilities are permissible, wherein "the commission may, after a public hearing, permit the following uses in districts from which they are prohibited by this title where the uses are deemed essential or desirable to the public convenience or welfare, and are in harmony with the various elements or objectives of the general plan." Thus, the County would need to support the findings of the Project, demonstrating that its purpose is consistent with the overall intent and provisions of the AR zone.

Further, the Project is consistent with § 19.01.023 (B) (5) of the Municipal Code, which states that public utility facilities are compatible uses on properties subject to Land Conservation Act Contracts, subject to the approval of a Land Conservation Act Compatible Use Permit. Therefore, the proposed Project is consistent with the San Benito General Plan and the Municipal Code.

No mitigation measures are required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. No adopted natural community conservation plans or habitat conservation plans are in effect on the Project site. Implementation of the Project would have no impact on any adopted natural community conservation plan or habitat conservation plan.

No mitigation measures are required.

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2.10 MINERAL RESOURCES

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- 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?**

No Impact. Sections 2761(a) and (b) and 2790 of the Surface Mining and Reclamation Act (SMARA) provide for a mineral lands inventory process termed classification-designation. The California Geological Survey and the State Mining and Geology Board are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies, such as cities and counties, with information on the location, need, and importance of minerals within their respective jurisdictions. Areas are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four Mineral Resource Zones (MRZs). Of the four categories, lands classified as MRZ-2 are of the greatest importance because they identify significant mineral deposits of a particular commodity. MRZ-3 areas are also of interest because they identify areas that may contain additional resources of economic importance. Areas designated by the Mining and Geology Board as "regionally significant" are incorporated by regulation into Title 14, Division 2 of the California Code of Regulations.

The Project is located in MRZ-3; however, there is no active reclamation occurring at the Project site or in the surrounding areas, and the Project site is not zoned or designated for reclamation activities. The Project site and surrounding lands contain gypsum, a valued non-metal resource. Project implementation would not result in a depletion of any mineral resources contained within the Project site. Project implementation would not preclude future mineral extraction; however, the Project site is not zoned for such activities and, as such, would require discretionary action to approve permitting.

No mitigation measures are required.

- 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?**

No Impact. The San Benito County General Plan does not identify the Project site and surrounding area as important mineral resource recovery sites.

No mitigation measures are required.

2.11 NOISE

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:

- 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 Impact. Sound propagation is influenced by many factors, including atmospheric absorption, interceding barriers, and reflective surfaces.

Construction activities, especially from heavy equipment, may create substantial short-term noise increases near the Project site. Project implementation would not require large-scale grading of the site for construction and operation. However, implementation would require the construction of all-weather roads, and the substation/O&M facility. Graded all-weather roads would be constructed in selected locations, to bring equipment and materials from the staging areas to the construction areas, and for long-term operation and maintenance. These roads will be heavily used during construction and rarely used during operation.

Therefore, the most noise-intensive period will be when rough grades are established for the substation/O&M facility and the construction of all-weather access roads. Typical of this type of development, construction equipment noise is estimated to reach 90 dB at a distance of 50 feet when it operates under full load. Under normal atmospheric spreading losses, peak levels up to 65 dB may be heard as far as 1,000 feet from the operating equipment. A level of 65 dB is considered intrusive in normal conversation. Construction activity impacts during the noisiest activities could thus extend as far as 1,000 feet from the activity.

There are no receptors within 1,000 feet of the Project site and the nearest rural community is greater than fifteen miles from the Project site; therefore, any construction-related noise associated with the Project will not have a significant impact.

During operation, the sole source of noise generation would be from the substation. The most common noise disturbances associated with substations is a result of noise generated by cooling fans and the resonance from the vibrations of the transformer core. Activities associated with the operation of the substation would primarily be conducted in the enclosed structure. Generally, a masonry structure would result in a noise attenuation of 20 dB from outside to inside and vice versa. The noise generated from the operation of the equipment would be fully contained on the Project site and would not create a permanent increase in ambient noise levels.

No mitigation measures are required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Please refer to item 2.11a. No mitigation measures are required.

c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less than Significant Impact. Please refer to item 2.11a. No mitigation measures are required.

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. Please refer to item 2.11a. No mitigation measures are required.

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 Project is not located within the boundaries of an airport land use plan and the Project is not located within two miles of a public airport or a public use airport. No mitigation measures are required.

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?

Less than Significant Impact. There is a private air strip located northwest of the intersection of Panoche Road and Little Panoche Road, within Phase 4 of the Project. The 2,000 foot grass air strip is in active use for recreational gliders; however, there is no regularly scheduled use of the air strip, so any noise emanating from flights varies. The air strip operations would cease once the Project is operational. Therefore, activities associated with this private air strip would only occur during the first phases of construction and would not impact the operation of the Project.

2.12 POPULATION AND HOUSING

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- 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)?**

No Impact. The project would not directly increase growth in the project area by providing housing; however, the project would require a staff for periodic maintenance and security patrols. The project would require a staff of approximately 10 people once operational; employment opportunities would most likely be staffed with the local workforce, rather than being a source of employment generation that would attract workers from farther distances that would require a new source of housing.

In the event that some employees re-locate, the existing available inventory of housing within the nearby communities would be able to adequately serve any in-migration to the area. According to the Regional Housing Needs Plan prepared by the Council of San Benito County Governments, the vacancy rate in the County is 3.7%. However, a recently lifted moratorium on development has increased housing in the Hollister. Thus adequate housing would be available to accommodate any employees that relocate.

The project would not provide infrastructure to an area that would indirectly increase population growth. The project would supplement the existing electrical grid and serve the current service area customers as well as forecasted growth as outlined in adopted planning documents. As increasing number of renewable energy projects become viable, traditional fossil fuel generating sources will be de-commissioned. Thus, the outcome is a transition from one energy source to another, rather than an overall increase in supply that would indirectly contribute to accommodating future growth.

No mitigation measures are required.

- b) **Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

No Impact. There are no housing units on the Project site. Thus, the Project would not displace any housing units, and would not require the replacement of housing at another location.

No mitigation measures are required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would not displace any residents within the Panoche Valley, thus the Project would not necessitate the construction of replacement of housing elsewhere.

No mitigation measures are required.

2.13 PUBLIC SERVICES

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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 following public services:				
Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- a) **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 following public services:**

Fire protection?

Less than Significant Impact. The Project site is located in a State Responsibility Area (SRA) and it is the responsibility of the California Department of Forestry and Fire Protection to define the application of various mitigation measures to reduce the risk of wildland fires (Public Resources Code, Section 4102).

Additionally, the State enacted legislation that requires local jurisdictions with SRAs to adopt minimum recommended standards pertaining to the road standards for fire equipment access, roadway and structural identification, minimum private water supply reserves for emergency fire use, and fuel breaks to achieve fuel reductions. The substation/O&M facility would pose the greatest structural fire hazard. The main components of most substations that pose a fire hazard are the electrical cables and the mineral oil-insulated electrical equipment. Cables are a major source because they provide a source of fuel supply and ignition. The potential hazards related to mineral oil-insulated equipment, such as

transformers, reactors and circuit breakers, is that oil is a significant fuel supply that can be ignited by an electrical failure within the equipment.

A combination of passive, active and manual fire prevention/suppression methods will be installed and/or employed as required by IEEE Standard 979 and the Uniform Building Code. Passive measures are the most frequently used and are designed to confine a fire to a limited area or ensure that the building remains sound for a designated period of fire exposure. Active fire protection measures are fire protection measures that warn occupants of the existence of a fire and/or automatically extinguish or control a fire. Manual fire prevention measures include various fire extinguishers, fire hydrants and fire hazards requiring active participation by staff or the fire department.

Proper fire-safety standards will be followed relative to construction and operations. The applicant would coordinate with the California Department of Forestry and Fire Protection personnel to ensure that construction activities and any associated lane closures will not significantly affect emergency response vehicles. The Project would not result in substantial adverse impacts to fire protection and emergency response services.

No mitigation measures are required.

Police protection?

Less than Significant Impact. The San Benito Sheriff's Department provides police protection for the Project area. The Project would not introduce any uses or an increase in population, which would typically require additional police services during operation.

The Project may require the occasional use of sheriff services during construction. Theft of construction equipment and/or vandalism might occur during the construction period, requiring a response. Solargen would implement standard precautionary measures, such as securing equipment when left unattended, to minimize theft and vandalism.

Construction may require temporary closure or partial closure of roadways for the substation construction. Such actions are typically coordinated with the local department and optimally take place during off-peak commute hours. During construction, construction vehicles may temporarily slow traffic but would not prevent passage of vehicles, including emergency vehicles. Any use of sheriff services would be temporary construction-related conditions and would not be expected to affect sheriff services substantially. The Project would also include a private security service that would conduct night-time patrols of the site. The Project would have a less than significant effect related to police services.

No mitigation measures are required.

Schools?

No Impact. The Project would not result in a direct or indirect increase of population growth or increased housing. Therefore, the Project will not increase the demand for school services.

No mitigation measures are required.

Parks?

No Impact. The Project would not result in a direct or indirect increase of population growth or increased housing. Therefore, the Project would not affect existing parks nor necessitate the need for additional parks in the area.

No mitigation measures are required.

Other public facilities?

No Impact. No Project impacts to other government services are anticipated. The Project would not require additional maintenance of public facilities during its operation.

No mitigation measures are required.

2.14 RECREATION

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- a) **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?**

No Impact. In general, the increase in use of recreational facilities is spurred by project-induced population growth, which increases demand on existing recreational resources. However, the proposed Project is not expected to induce significant short-term or long-term population growth, either during Project construction or operation. As a result, there would not be an increased need for recreational resources and the Project would not lead to the physical deterioration of recreational facilities due to increased use.

No mitigation measures are required.

- 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 any recreational facilities or require the construction of any recreational facilities.

No mitigation measures are required.

2.15 TRANSPORTATION AND TRAFFIC

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

- 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. Traffic impacts would be most considerable during the construction of the Project. The construction workforce is estimated to be 45 to 80 persons. Currently, Panoche Road and Little Panoche Road are paved in the vicinity of the Project site. However, in the Project area, portions of both of these roads are unpaved. These roadways and the surrounding transportation network serve to provide ranchers to access to their rangeland, and to provide access for rural residents. The network is not designed to be a transportation route(s). The introduction of 45-80 daily trips into and out of the Project site and construction equipment and delivery traffic would be a marked increase in the existing traffic load. Project design includes the use of employee shuttles to and from the Project site, which would mitigate any construction employee traffic trip impacts.

Construction equipment and deliveries would be direct to the Project site. Existing roadways would need to be reinforced to accommodate the heavy loads of the equipment. Material deliveries would

result in approximately five trips per day which, while an increase, would not have a significant impact on the transportation network.

No mitigation measures are required.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. The roadways surrounding the Project site, which would provide direct access, are not identified on any congestion management plan.

No mitigation measures are required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

No Impact. The Project does not include any structures that would interfere with traffic patterns. Additionally, the Project would not result in any increase in traffic levels.

No mitigation measures are required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project would not involve the construction of any new public roadways. To accommodate heavy loads, the Project would require some upgrades to existing County bridges or roadways, but these upgrades would not alter roadway design or capacity. It is likely that ranch and farm equipment vehicles travel along the surrounding County roads; however, the Project would generate at a maximum 10 daily trips plus nighttime security patrols. Since the permanent increase in daily trips is low, hazards between new sources of automobile and truck traffic and ranch or farm equipment is not anticipated to occur with Project implementation.

e) Result in inadequate emergency access?

No impact. Prior to the issuance of a grading permit, Project site plans are subject to the review and approval of the California Department of Forestry and Fire Protection. The California Department of Forestry and Fire Protection would review the plans to ensure consistency with the Uniform Fire Code (UFC), which establishes the industry standards for emergency access. Grading permits would not be issued until the applicant has demonstrated to the satisfaction of the California Department of Forestry and Fire Protection that Project design is compliant with the UFC.

No mitigation measures are required.

f) Result in inadequate parking capacity?

No Impact. Adequate parking will be provided to accommodate maintenance vehicles. The Project includes 10 parking spaces for employees. The Project would comply with all County policies regarding parking.

No mitigation measures are required.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. There are no other alternative transportation system facilities located in the Project area.

No mitigation measures are required.

2.16 UTILITIES AND SERVICE SYSTEMS

Would the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 Projects projected demand in addition to the providers existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Projects solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The Project does not include the installation of any sanitary facilities that would require a connection to wastewater facilities.

No mitigation measures are required.

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?

No Impact. Please refer to item 2.16 a.

No mitigation measures are required.

- 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?**

No Impact. The Project would not require the construction of any off-site drainage facilities.

No mitigation measures are required.

- d) **Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?**

Less than Significant Impact. The Project's direct conversion of sunlight to electricity through the photovoltaic effect does not require water to generate electricity. Water would be required for the routine washing of the panels. The Project would use approximately 10.5 acre feet of water per year and there are sufficient supplies from local wells to manage this increase in water use.

No mitigation measures are required.

- 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 Projects projected demand in addition to the providers existing commitments?**

No Impact. Please refer to item 2.16 a.

No mitigation measures are required.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the Projects solid waste disposal needs?**

Less than Significant Impact. During construction, the Project would generate solid waste from construction debris. As required, the Project would comply with the County's Ordinance Code, Title 8, Section 8.25, which bans the disposal of construction and demolition debris at the American Avenue and Coalinga Landfills except for individual loads consisting of three cubic yards or less and mixed loads where construction debris represents less than 20 percent of the load. The Project would also comply, as mandated, with Assembly Bill 939, supporting the solid waste reduction goals.

Once operational, the Project would not be a source of frequent waste generation. Periodically, during maintenance and inspection, some waste would be disposed of by staff; however, this would be minimal and intermittent.

No mitigation measures are required.

- g) **Comply with federal, state, and local statutes and regulations related to solid waste?**

No Impact. Please refer to item 2.16 f.

No mitigation measures are required.

2.17 MANDATORY FINDINGS OF SIGNIFICANCE

Does the Project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Does the Project:

- a) **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?**

Less than Significant Impact with Mitigation Incorporation. Please refer to responses 2.1 through 2.16.

- b) **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 probable future projects)?**

Less than Significant Impact with Mitigation Incorporation. Please refer to responses 2.1 through 2.16.

- c) **Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

Less than Significant Impact with Mitigation Incorporation. Please refer to responses 2.1 through 2.16.

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