Canyon Road Solar Energy Project

Draft Initial Study/ Mitigated Negative Declaration

OCTOBER 2023

PREPARED FOR

Merced County
Community and Economic Development Department

PREPARED BY

SWCA Environmental Consultants

CANYON ROAD SOLAR ENERGY PROJECT
DRAFT INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

Prepared for

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Acronyms and Abbreviations

AB	Assembly Bill
AFY	acre-feet per year
APE	Area of Potential Effects
APN	Assessor's Parcel Number
Applicant	Renewable Properties, LLC
BESS	battery energy storage system
BMP	best management practice
BRA	*Canyon Road Solar Project Biological Resources Assessment*
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
California Water Boards	State Water Resources Control Board
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCIC	Central California Information Center
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Merced
CRPR	California Rare Plant Rank
CUP	Conditional Use Permit
dB	decibels
DPW	County of Merced Department of Public Works
DTSC	California Department of Toxics Substances Control
DWR	California Department of Water Resources
FAA	Federal Aviation Administration
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GAMAQI	*Guidance for Assessing and Mitigating Air Quality Impacts*
GHG	greenhouse gas
GSAs	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
I-	Interstate

IPaC	Information for Planning and Consultation
IRWMP	Merced Integrated Regional Water Management Plan
lbs/day	pounds per day
Ldn	day-night average noise level
LRA	Local Responsibility Area
LUST	Leaking Underground Storage Tank
MCDEH	Merced County Department of Public Health, Division of Environmental Health
MID	Merced Irrigation District
MRZ	Mineral Resource Zone
MW	megawatt
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
OES	Merced Office of Emergency Services
PG&E	Pacific Gas and Electric
Phase 1 ESA	*Phase 1 Environmental Site Assessment: Undeveloped Parcel of Land North of Canyon Road, Los Banos, California*
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PM_{10}	particulate matter 10 microns or less in diameter
PPA	Power Purchase Agreement
PRC	Public Resources Code
project	Canyon Road Solar Project
PV	photovoltaic
ROG	reactive organic gases
ROW	right-of-way
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCP	Sediment Control Plan
SJKF	San Joaquin kit fox
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxides
SO_X	sulfur oxides
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
THPOs	Tribal Historic Preservation Officers (THPOs)
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles traveled
WUI	wildland–urban interface

CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY AND CHECKLIST

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "potentially significant impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Greenhouse Gas Emissions	☐ Public Services
☐ Agriculture and Forestry Resources	☐ Hazards and Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Energy	☐ Noise	☐ Wildfire
☐ Geology and Soils	☐ Population and Housing	☐ Mandatory Findings of Significance

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions 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 (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENT 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

CHAPTER 1. PROJECT DESCRIPTION

1.1 INTRODUCTION

Project Title:	Canyon Road Solar Project Initial Study/Mitigated Negative Declaration
Lead Agency:	County of Merced Community and Economic Development Department 2222 M Street, 2nd Floor, Merced, CA 95340
Lead Agency Staff Contact:	Tiffany Ho, Planner III (209) 385-7654 x4407
Project Applicants:	RPCA Solar 6, LLC

RPCA Solar 6, LLC (Applicant) is proposing to construct and operate a utility solar-generating and energy storage project in unincorporated Merced County, in the community of Los Banos. The proposed Canyon Road Solar Project (project) would be located on approximately 33 acres of a 318.1-acre parcel in Merced County, California.

1.2 CEQA STATUTE AND GUIDELINES

According to California Environmental Quality Act (CEQA) Statute Section 21064.5:

> MITIGATED NEGATIVE DECLARATION
>
> "Mitigated negative declaration" means a negative declaration prepared for a project when the initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

According to State CEQA Guidelines Article 6. Negative Declaration Process:

> 15070. DECISION TO PREPARE A NEGATIVE OR MITIGATED NEGATIVE DECLARATION
>
> A public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:
>
> (a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or
>
> (b) The initial study identifies potentially significant effects, but:
>
> (1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial

study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

15071. CONTENTS

A Negative Declaration circulated for public review shall include:

(a) A brief description of the project, including a commonly used name for the project, if any;

(b) The location of the project, preferably shown on a map, and the name of the project proponent;

(c) A proposed finding that the project will not have a significant effect on the environment;

(d) An attached copy of the Initial Study documenting reasons to support the finding; and

(e) Mitigation measures, if any, included in the project to avoid potentially significant effects.

1.3 PROJECT LOCATION

The approximately 318-acre project site is located in Merced County on Canyon Road in the Los Banos area and is approximately 0.4 miles north of Los Banos Reservoir (Figure 1). The Assessor's Parcel Number (APN) is 088-020-039. The project site is approximately 6 miles southwest of the city of Los Banos and located in an area characterized by sloping topography, grazing activities, and other existing solar facilities (Figure 2). The northeastern corner of the project site is adjacent to Interstate 5 (I-5), which runs northwest to southeast east of the project site. The proposed 32-acre solar facility would be located in the southeast corner of the parcel. The center of the project site is approximately 37°00'23.3" north latitude -120°55'57.3" west longitude.

1.4 EXISTING CONDITIONS

The site contains an irrigation pond near its western border, with a connecting irrigation canal that crosses from the northern border to the west, then reenters from the west and crosses to the southern border. The irrigation canal and pond are located west of the proposed solar panels. There are areas of steep slopes on the western side of the site (Figure 3). The site is bounded by existing Pacific Gas and Electric Company (PG&E) electrical lines to the south. The majority of the site is fallow grazing land. Various accessory structures exist on-site, including a livestock paddock and troughs, and two farm ponds are located along the southeast and northwest property lines. Existing access is provided from a ranch driveway and gate off Canyon Road to the southern portion of the site and another ranch driveway and gate off Volta Road to the northern portion of the site. Historical access to the site has primarily been from the north via Volta Road, beginning from its intersection with Highway 33/152 heading south to the I-5 underpass to the northern property boundary.

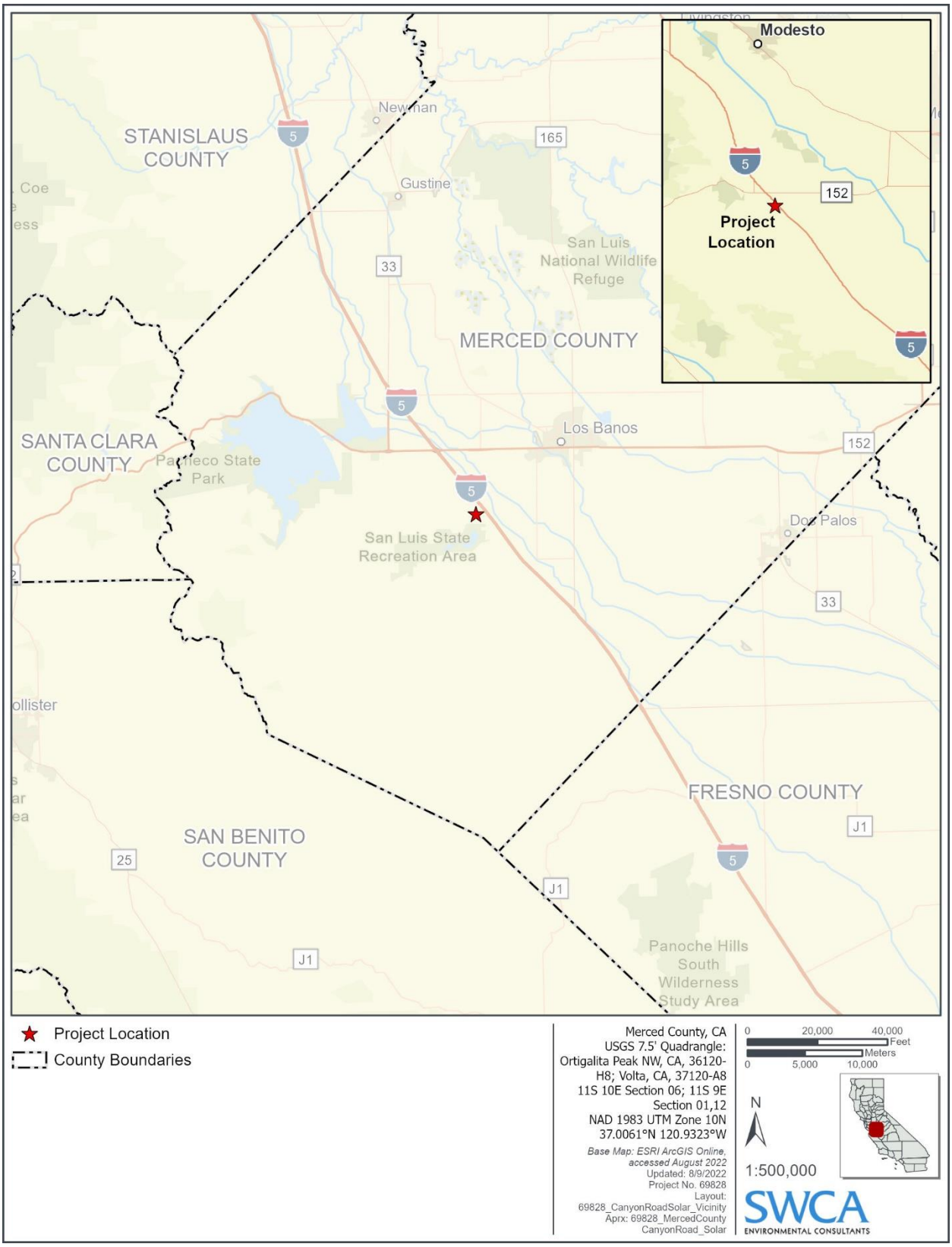
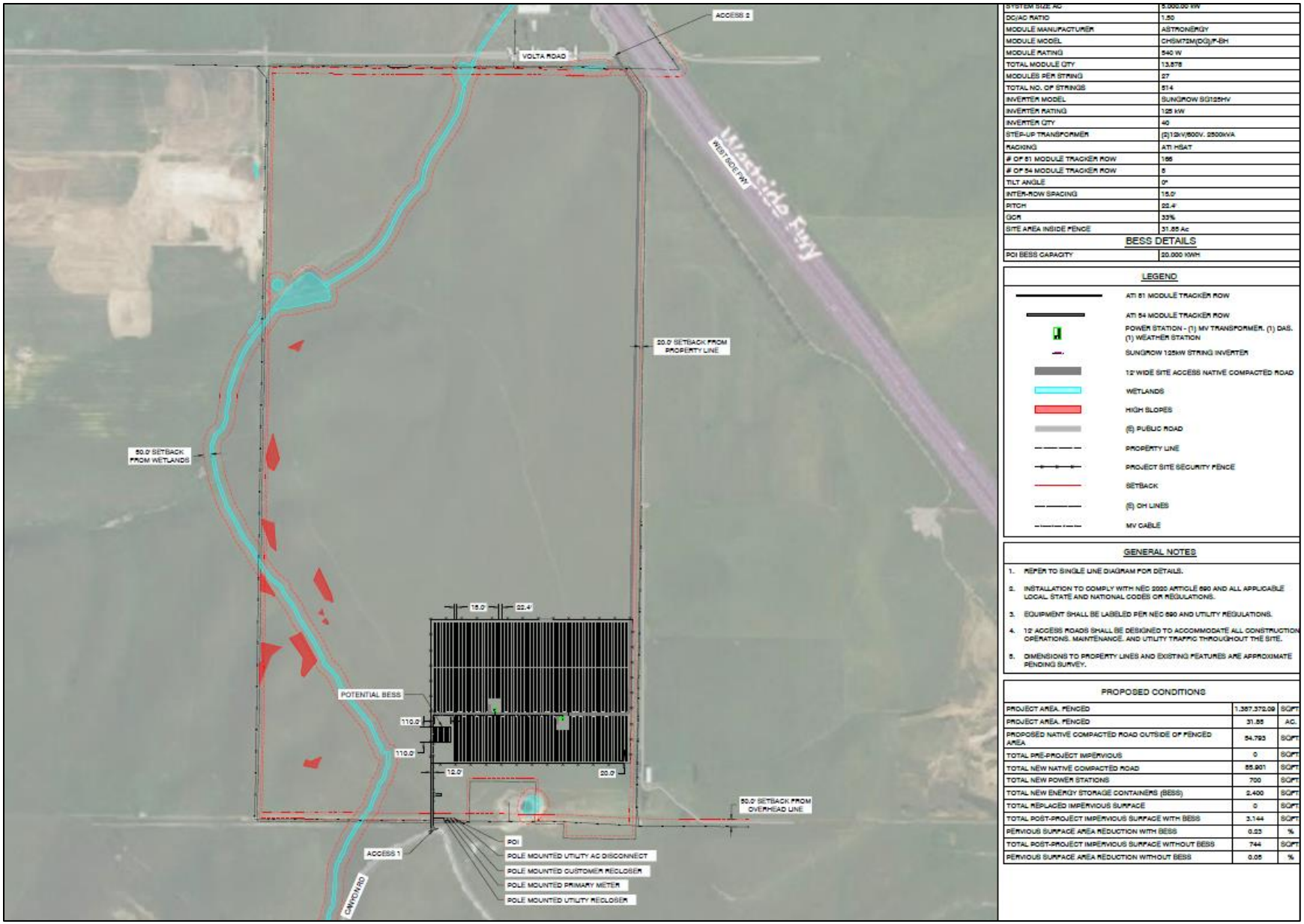


Figure 1. Project Vicinity.

Figure 2. Project Location.



SYSTEM SIZE AC	5,000.00 kW
DC/AC RATIO	1.50
MODULE MANUFACTURER	ASTRONERGY
MODULE MODEL	CHSM72M(DG)/F-BH
MODULE RATING	540 W
TOTAL MODULE QTY	13,878
MODULES PER STRING	27
TOTAL NO. OF STRINGS	514
INVERTER MODEL	SUNGROW SG125HV
INVERTER RATING	125 kW
INVERTER QTY	40
STEP-UP TRANSFORMER	(2)12kV/600V, 2500kVA
RACKING	ATI HSAT
# OF 81 MODULE TRACKER ROW	186
# OF 54 MODULE TRACKER ROW	5
TILT ANGLE	0°
INTER-ROW SPACING	15.0'
PITCH	22.4'
GCR	33%
SITE AREA INSIDE FENCE	31.85 Ac

BESS DETAILS

POI BESS CAPACITY	20,000 kWh

LEGEND

- ATI 81 MODULE TRACKER ROW
- ATI 54 MODULE TRACKER ROW
- POWER STATION - (1) MV TRANSFORMER, (1) DAS, (1) WEATHER STATION
- SUNGROW 125kW STRING INVERTER
- 12' WIDE SITE ACCESS NATIVE COMPACTED ROAD
- WETLANDS
- HIGH SLOPES
- (E) PUBLIC ROAD
- PROPERTY LINE
- PROJECT SITE SECURITY FENCE
- SETBACK
- (E) OH LINES
- MV CABLE

GENERAL NOTES

1. REFER TO SINGLE LINE DIAGRAM FOR DETAILS.
2. INSTALLATION TO COMPLY WITH NEC 2020 ARTICLE 690 AND ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES OR REGULATIONS.
3. EQUIPMENT SHALL BE LABELED PER NEC 690 AND UTILITY REGULATIONS.
4. 12' ACCESS ROADS SHALL BE DESIGNED TO ACCOMMODATE ALL CONSTRUCTION OPERATIONS, MAINTENANCE, AND UTILITY TRAFFIC THROUGHOUT THE SITE.
5. DIMENSIONS TO PROPERTY LINES AND EXISTING FEATURES ARE APPROXIMATE PENDING SURVEY.

PROPOSED CONDITIONS

PROJECT AREA, FENCED	1,387,372.09	SQFT
PROJECT AREA, FENCED	31.85	AC
PROPOSED NATIVE COMPACTED ROAD OUTSIDE OF FENCED AREA	54,793	SQFT
TOTAL PRE-PROJECT IMPERVIOUS	0	SQFT
TOTAL NEW NATIVE COMPACTED ROAD	55,901	SQFT
TOTAL NEW POWER STATIONS	700	SQFT
TOTAL NEW ENERGY STORAGE CONTAINERS (BESS)	2,400	SQFT
TOTAL REPLACED IMPERVIOUS SURFACE	0	SQFT
TOTAL POST-PROJECT IMPERVIOUS SURFACE WITH BESS	3,144	SQFT
PERVIOUS SURFACE AREA REDUCTION WITH BESS	0.03	%
TOTAL POST-PROJECT IMPERVIOUS SURFACE WITHOUT BESS	744	SQFT
PERVIOUS SURFACE AREA REDUCTION WITHOUT BESS	0.05	%

Figure 3. Project Site Plan.

Surrounding Land Uses

The project site is located off Canyon Road and bounded primarily by hilly grazing land and grasslands on all sides. Surrounding land uses include agricultural lands and farm buildings to the north; I-5 to the northeast; agricultural lands and a sand and gravel mining operation to the east; Canyon Road, Los Banos Creek Reservoir State Park, and Los Banos Reservoir to the south; and agricultural lands and Wright Solar Facility to the west. Los Banos Creek Reservoir State Park allows camping, hiking, boating, fishing, and gliders on Los Banos Reservoir.[1] Rural two-lane roads provide regional access to the surrounding areas.

Zoning and General Plan Land Use

The project site is currently zoned by the County of Merced (County) as A-2 (Exclusive Agricultural), and in the *2030 Merced County General Plan*, is classified as Foothill Pasture.[2,3] As outlined in Merced County Zoning Code Section 18.10.010 – Purpose of Agricultural Zones, the A-2 zoning district has a160-acre minimum parcel size. Zoning Code Section 18.10.010 of the identifies "Energy Generation Facilities, Wind Farms, Biomass Fuel Manufacturing" (off-site energy use) as uses that would require a Conditional Use Permit (CUP) on Exclusive Agricultural land.

Section 9.30.020 of the County Code notes that "Productive Agricultural Land" means land designated "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland" by the State Department of Conservation as shown on their latest Important Farmland Map, prepared in accordance with the Farmland Mapping and Monitoring Program.[4] The project site is mapped as Grazing Land by the Department of Conservation and is not considered "Productive Agricultural Land."

As identified by Merced County Land Use and Zoning Maps, the project site is adjacent to the south of the Fox Hills Community Specific Plan Update Area.[5] The purpose of the Specific Plan Update is to expand and diversify the County's range of housing stock, provide local-serving commercial uses for new residential development, and expand on the recreation opportunities in the original Specific Plan. The Specific Plan Update contains the following policy regarding solar development in the area:

- **PF Policy 2-6:** Ensure the provision of energy and communications for future development within the Plan Area.

The project is also located in the Dutchman Creek Conservation Bank service area, which spans much of Stanislaus, Merced, Fresno and Tulare Counties.[6] Dutchman Creek Conservation Bank is a 501-acre vernal pool landscape that contributes to a matrix composed of several existing conservation banks, conservation easements, and the Merced National Wildlife Refuge. The mitigation bank is approved by

[1] California Department of Parks and Recreation. 2022. Los Banos Creek Reservoir. Available at: https://www.parks.ca.gov/?page_id=670. Accessed August 10, 2022.

[2] Merced County. 2009. Merced County General Plan Land Use Designation Map. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=31a7197f80cc4c729c0c559ca08150a5. Accessed July 27, 2022.

[3] Merced County. 2022. Merced County Zoning Designation Map with Parcel Look Up. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=8c1725dd20594ea4b7129c9d097c048a. Accessed June 27, 2022.

[4] California Department of Conservation (CDOC). 2022. Important Farmland Finder. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/ Accessed June 27, 2022

[5] Merced County. 2006. *Draft Fox Hills Community Specific Plan Update*. Available at: https://web2.co.merced.ca.us/pdfs/planning/complans/foxhills/SpecificPlan_O.pdf. Accessed August 1, 2022.

[6] Westervelt Ecological Services. 2022. Projects. Available at: https://wesmitigation.com/projects/. Accessed August 1, 2022.

the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). The mitigation bank has accepted credits for California tiger salamander, San Joaquin kit fox, Vernal Pool Invertebrate Preservation, western burrowing owl, and western spadefoot toad. There are no easements related to the Bank on the project site.

1.5 PROJECT DESCRIPTION

The project would construct an approximately 5-megawatt (MW) solar photovoltaic (PV) electric-generating facility (facilities) on approximately 33 acres of the 318-acre parcel (project site), at the southern edge of the parcel (see Figure 3). The facilities would consist of a ground-mounted, single-axis tracking system featuring 13,905 PV panels and 40 string inverters. Additionally, the project would be equipped with energy storage technology (battery energy storage system [BESS]) that would allow on-site renewable energy generation to be stored and dispatched onto the grid when needed. The BESS would be located in the southwest corner of the parcel, accessible from the proposed access road. The facility would have a 20-year lease term with an option to extend for three additional 5-year terms (potential for a total lease term of 35 years). The project would connect to existing PG&E distribution lines on the southern boundary of the project. Other site improvements include construction of two transformers, utility poles, perimeter fencing, signage, and construction of a formalized 12-foot access point off either Canyon Road or a private road via Volta Road, which would provide access throughout the site. The project does not propose to remove any buildings or trees, as none currently exist within the proposed footprint of the project.

The following sections describe the proposed project, including information on the project layout, surrounding land uses, anticipated permitting and approval process, and preliminary plans for construction.

Site Access, Parking, and Circulation

Two roads provide access to the project site. Access to the project site would be provided either by a formalized 12-foot access point off of Canyon Road from the south or the ranch driveway via Volta Road from the north. The new access road would provide access throughout the site and to the two proposed transformers. The project would be operated remotely, however unpaved parking is proposed on-site in the middle of the array field near the two proposed transformers, allowing for occasional service vehicle access. The facility would have a perimeter fence with a Knox box for emergency personnel to access the site.

Whether access is provided by Canyon Road or Volta Road, construction contractors would obtain all necessary temporary encroachment and construction permits for transportation-related elements of the proposed project from the County and the California Department of Transportation (Caltrans) as required. Site plans are provided in Appendix A.

Utilities

The project would connect to PG&E's existing electrical distribution system, located on the southern edge of the parcel. New utilities infrastructure includes a service meter and several poles, including a utility pole, customer pole, and riser pole. Power generated from this facility would be sold to PG&E through a long-term Power Purchase Agreement (PPA).

The site would be remotely operated and would not require water or sewer service. On-site electricity would be provided by PG&E.

Lighting

The source, intensity, and type of exterior lighting for the project site would be typical for industrial and safety needs. The proposed project would include minimal high-efficiency lighting features near the proposed energy storage equipment and inverters. All on-site lighting would meet County regulations, be low-level illumination, and be shielded with hoods to reduce light spill or glare.

Construction

The construction of the proposed project is anticipated to begin within six months of receipt of the Conditional Use Permit. Once initiated, construction-related activities are expected to last approximately 6 months. Under the current outlook, construction is anticipated to take place from July through December 2024. The temporary construction staging areas would be located on the project site. Planned earthwork and grading activities would be balanced on-site. Utility trenches are required for the sun-tracking panels and remote monitoring cameras. Approximately 10 to 12 round-trip truck trips per day are anticipated during peak construction activities.

Construction of the project, from mobilization of the site to final completion, is expected to last approximately 6 months. No construction phasing is proposed. Construction would proceed following receipt of all permits and agency approvals and would include the following activities, listed in approximate sequential order (some construction activities would occur simultaneously):

1. Surveying, staking, and installation of erosion control measures;
2. Access road construction within the site;
3. Site grading/grubbing;
4. Assembling array foundation;
5. Testing and commissioning; and,
6. Restoring any temporarily disturbed areas.

Construction would generally occur between 7:00 a.m. and 6:00 p.m., as required by Section 18.40.050, Noise, of the Merced County Zoning Code.[7] During construction, workers would park in the temporary staging area on-site. Construction vehicles and equipment would be stored in the temporary staging area when not in use.

Operation

Once operational, the project would connect to PG&E's existing distribution network located on the southeastern corner of the parcel. The power generated from this facility would be sold to PG&E through a PPA. The project would be remotely operated during daytime hours. The facility would require remote monitoring and occasional visits from one to two technicians for maintenance purposes. Six routine inspections throughout the year are anticipated.

Maintenance would include vegetation management that could temporarily interfere with solar panel movement. Panel washing is proposed to occur approximately twice per year. The proposed project would be designed for an operational life of up to 35 years. At the end of the project life, the facility would be decommissioned over 1- to 2-month period.

[7] County of Merced. 2019. *Merced County Zoning Code, Noise*. Available at: http://www.qcode.us/codes/mercedcounty/view.php?topic=18-3-18_40-18_40_050&frames=on. Accessed June 21, 2022.

Employment

The on-site construction workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The construction workforce is expected to be a maximum of 40 workers.

The proposed facility would be remotely operated but would require routine maintenance, including vegetation management that could interfere with panel movement. Operations personnel associated with the project would conduct routine inspections at regularly scheduled intervals throughout the year.

At the end of the lease term, the facility would be decommissioned, and the site would be returned to existing conditions. Decommissioning would involve up to approximately 10 construction workers and between 7 and 10 round trips per day.

1.6 DISCRETIONARY APPROVALS

The potential authorizations, permits, reviews, and approvals from federal, state, and local agencies that would be required for the project are listed in Table 1.

Table 1. Potential Authorizations, Permits, Reviews, and Approvals

Permit / Approval / Consultation	Authorizing Agency
State	
CEQA Environmental Compliance	County of Merced Community and Economic Development Department
Native American Consultation	County of Merced Community and Economic Development Department
National Pollutant Discharge System Storm Water Permit for Construction Activities	Regional Water Quality Control Board
Authority to Construct and Permit to Operate	County of Merced Community and Economic Development Department
Oversized/Heavy Load Permit	California Department of Transportation
California Endangered Species Act Compliance	California Department of Fish and Wildlife
Authority to Construct Compliance with District Rules & Regulations	San Joaquin Valley Air Pollution Control District
Local	
Hazardous Materials Business Plan	County of Merced Community and Economic Development Department
Use Permit	County of Merced Community and Economic Development Department
Building Permit	County of Merced Department and Economic Development Department
Encroachment Permit	County of Merced Department of Public Works

CHAPTER 2. ENVIRONMENTAL CHECKLIST AND RESPONSES

2.1 AESTHETICS

Environmental Issues		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:					
(a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
(b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
(c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
(d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project have a substantial adverse effect on a scenic vista?

A scenic vista generally provides focal views of objects, settings, or features of visual interest, or panoramic views of large geographic areas of scenic quality, from a fixed vantage point or linear corridor, such as a roadway or trail. A significant impact would occur if a project introduced incompatible scenic elements within a field of view containing a scenic vista or substantially block views of an existing scenic vista.

The *2030 Merced County General Plan Natural Resources Element* lists scenic vistas, including the Los Banos Creek, Coastal and Sierra Nevada Mountain ranges, and Merced, San Joaquin, and Bear Creek River corridors.[8] The Los Banos Creek feeds into the Los Banos Reservoir, located 2,000 feet south of the project site. While the project is located near scenic resources, the project is adjacent to the 200 megawatt Wright Solar development located northwest from the proposed project site and is generally consistent with the surrounding visual character that already includes solar generation facilities, and agriculture. Therefore, the project would not have a substantial adverse effect on a scenic vista and impacts would be *less than significant*.

[8] Merced County. 2013. *2030 Merced County General Plan*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed September 14, 2022.

(b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway?

The Natural Resources Element of the General Plan designates the rural and agricultural landscapes as the primary scenic resources in Merced County.[9] Areas of high scenic value are mapped in the *2030 Merced County General Plan Aesthetics and Visual Resources Element* in Figure 5-1 along the intersection of SR 152 and I-5, in the western portion of Merced County approximately 5 miles north of the project site.[10] The portion of I-5 adjacent to the project site is not designated as a state scenic highway and the project would not remove or damage trees, rock outcroppings, or historic buildings. Given the distance of scenic areas to the project site, project facilities would not substantially damage scenic resources like trees, rock outcroppings, and historic buildings. Changes to visual character would include the introduction of a low and dark horizontally displayed rows of solar panels. The project would be located adjacent to the existing Wright Solar Development, a utility-scale development northwest of the proposed project. The project is compatible with the existing features of the built environment in the project vicinity, and compatible with the zoning and land use designations. Impacts would be *less than significant*.

(c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project site is located in a rural area of Merced County. Primary changes to the visual character of the site and its surroundings would be related to the addition of rows of solar panels, which would be visible from public views along Canyon Road. Due to existing topography, the site is not visible from I-5. Because the overall appearance of the project site would remain consistent with the surrounding area (see section 2.1.b, above) and would be consistent with the land use and zoning designations for the area, potential impacts would be *less than significant*.

(d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would involve installation of sun-tracking solar panels. Reflected light can cause glint (a quick reflection) and glare (reflections that last for longer durations), which can create hazards for pilots, air-traffic control personnel, motorists, and other potential receptors.

The project would increase the potential for light and glare in the vicinity of the project site during the day. However, the project would adhere to County Zoning Code Section 18.40.080 (“Vibration, Heat, Electrical Disturbance, and Glare”), which states, “No use shall create any disturbing ground vibration, heat, glare, and electrical disturbances based on typical human reaction beyond the boundaries of the

[9] Merced County. 2013. *2030 Merced County General Plan*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed September 14, 2022.

[10] Merced County. 2013. *2030 Merced County General Plan Aesthetics and Visual Resources Element*. December. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed December 5, 2022.

subject parcel."[11] There are no County policies regarding dark sky or nighttime views in the area, nor are there policies regarding glare in the General Plan. However, County Code requires all new exterior lighting to be hooded or shielded to minimize glare and light spillage. Therefore, project impacts regarding new source of light or glare that would adversely affect day or nighttime views would result in impacts that are *less than significant*.

Mitigation Measures

No mitigation is required.

2.2 AGRICULTURE AND FORESTRY RESOURCES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. 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?	☐	☐	☐	☒
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

A significant impact may occur if a project were to result in the conversion of State of California-designated agricultural land from agricultural use to another non-agricultural use. The CDOC Division of

[11] Merced County. 2019. *Merced County Unified Development Ordinance, Title 18: Zoning Code*. Available at: http://online.encodeplus.com/regs/mercedcounty-ca/doc-viewer.aspx?secid=1277&keywords=glare#secid-1277. Accessed December 5, 2022.

Land Resource Protection lists Prime Farmland, Unique Farmland, and Farmland of Statewide Importance under the general category of "Important Farmland".

Section 9.30.020 of the County Code notes that "Productive Agricultural Land" means land designated "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland" by the State Department of Conservation as shown on their latest Important Farmland Map, prepared in accordance with the FMMP.[12] The project site is mapped as Grazing Land by the Department of Conservation and is not considered "Important Farmland" or "Productive Agricultural Land" per CDOC and County designations; therefore, there would be *no impacts* related to the conversion of farmland.

(b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Williamson Act, also known as the California Land Conservation Act of 1965, allows local governments to enter into agreements with local landowners with the purpose of limiting specific parcels of land to agricultural or other related open space use. Per the County Code, Energy Generation facilities like the proposed project are an allowed use in the zoning district and does not conflict with zoning.

The project site is not subject to a Williamson Act contract.[13] As stated above in 2.2(a), the project site is mapped as Grazing Land by the CDOC and is not considered "Important Farmland" or "Productive Agricultural Land." Therefore, *no impact* would occur with respect to land zoned for agricultural use or under a Williamson Act contract.

(c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

"Forest land" is defined as land that "can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." "Timberland" is defined as land "which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees." Timberland zoned for Timber Production is defined as land that "is devoted to and used for growing and harvesting timber."[14] The project site does not contain any trees and is not zoned for management of forest or timberland resources; therefore, the project would not conflict with zoning for, or cause the rezoning of, forest land, timberland, or timberland zoned Timberland Production, and *no impacts* would occur.

[12] California Department of Conservation (CDOC). 2022. Important Farmland Finder. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed December 19, 2022.

[13] County of Merced. 2022. Williamson Act Lands. Available at: https://www.countyofmerced.com/DocumentCenter/View/2339/Williamson-Act?bidId=. Accessed December 19, 2022.

[14] California Legislative Information. 2007. *Public Resources Code, Division 10.5 California Forest Legacy Program Act of 2007, Chapter 1, Article 3, Section 12220*. Available at: https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=10.5.&title=&part=&chapter=1.&article=3. Accessed December 19, 2022.

(d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The project site is surrounded by fallow grazing land, the Los Banos Reservoir, and the Wright Solar facility. As discussed in Impact Discussion 2.2(c), the project site is not located on forest land; therefore, *no impacts* related to the loss of forest land or conversion of forest land would occur.

(e) Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The project site and surrounding parcels are used for grazing and ranching. The proposed project would not involve other changes in the environment that would result in the conversion of farmland or surrounding farmland to a non-agricultural use or conversion of forest land to non-forest use would occur. There would be no substantial increased demand on agricultural water supplies and no impact to adjacent agricultural operations or transport. Therefore, impacts would be *less than significant*.

Mitigation Measures

No mitigation is required.

2.3 AIR QUALITY

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
(a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
(c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Evaluation

This section relies on the *Canyon Road Solar Project Air Quality & Greenhouse Gas Emissions Calculations Technical Memorandum*[15] prepared for the project (Appendix B).

[15] AMBIENT Air Quality & Noise Consulting. 2023. *Canyon Road Solar Project Air Quality & Greenhouse Gas Emissions Calculations Technical Memorandum*. January 18.

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

The project is located within the San Joaquin Air Basin under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD).[16] The SJVAPCD regulates air pollutant emissions, enforces regulations, administers permits governing stationary sources, inspects stationary sources, monitors air quality and meteorological conditions, and assists local governments in addressing climate change.

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI), dated March 2015.[17] This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction and long-term operational air quality impacts. SJVAPCD's recommended mass-emissions thresholds of significance for short-term construction and long-term operational emissions of criteria air pollutants (reactive organic gases [ROG], nitrogen oxides [NO_X], carbon monoxide [CO], sulfur oxides [SO_X], particulate matter 10 microns or less in diameter [PM_{10}], particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]) are summarized in Table 2.[18]

Table 2. SJVAPCD Significance Thresholds for Criteria Air Pollutants and Precursors

Pollutant/Precursor	Construction Emissions (Tons/Year)	Operational Annual Emissions (Permitted and Non-Permitted Equipment) (Tons/Year)
CO	100	100
NO_X	10	10
ROG	10	10
SO_X	27	27
$PM_{2.5}$	15	15
PM_{10}	15	15

In addition to the above mass-emissions thresholds, the SJVAPCD also recommends the use of average daily emissions thresholds for the evaluation of project impacts on localized ambient air quality conditions. Accordingly, the project would also be considered to result in a significant contribution to localized ambient air quality if on-site emissions of ROG, NO_X, PM_{10}, $PM_{2.5}$, CO, or SO_X associated with either short-term construction or long-term operational activities would exceed a daily average of 100 pounds per day for each of the pollutants evaluated. It is important to note that the SJVAPCD's recommended thresholds of significance were developed taking into account the achievement and maintenance of applicable ambient air quality standards. As previously noted, these standards represent the upper limits deemed necessary to adequately protect public health and welfare. Therefore, projects that do not exceed SJVAPCD's recommended significance thresholds would also be considered to have a less-than-significant impact with regard to potential health-related impacts.

The project would generate temporary emissions from the use of construction vehicles and equipment. Project construction activities are required to be conducted in compliance with applicable SJVAPCD

[16] Ibid.

[17] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. Available at: https://www.valleyair.org/transportation/GAMAQI.pdf. Accessed December 19, 2022.

[18] Ibid.

rules and regulations.[19] SJVAPCD *Regulation VIII Control Measures for Construction Emissions of PM10* provides mitigation measures to reduce emissions of fugitive dust.[20] The SJVAPCD standard mitigation measures pertaining to PM_{10} includes:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall implement measures to prevent carryout and trackout.

A project is conforming with applicable adopted plans if it complies with the applicable SJVAPCD rules and regulations and emission control strategies in the applicable air quality attainment plans. The project would comply with the applicable rules and regulations, including the use of standard mitigation measures for construction equipment and fugitive dust.

Construction and operational emissions of criteria air pollutants and GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.2. The project implementation would generate emissions of criteria air pollutants during construction, operation, and decommissioning. Construction the facility was assumed to occur over an estimated 6-month period, commencing in July 2023. The project-generated annual and daily construction emissions are summarized in Tables 3 and**Error! Reference source not found.** 4. The detailed assumptions and calculations, as well as CalEEMod outputs, are provided in Appendix B of this report.

[19] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2006–2012. *Current District Rules and Regulations*. Available at: https://www.valleyair.org/rules/1ruleslist.htm. Accessed December 19, 2022.

[20] SJVAPCD. 2002. *San Joaquin Valley Air Pollution Control District Mitigation Measures.* Available at: http://www.valleyair.org/transportation/GAMAQI-Mitigation-Measures.pdf. Accessed December 19, 2022.

Table 3. Annual Construction Emissions Summary

Construction Phase	Pollutant Emission (Tons per Year)					
	ROG	**NO_X**	**CO**	**PM_{10}[1]**	**$PM_{2.5}$[1]**	**SO_X**
2023	0.16	1.47	1.5	0.14	0.08	<0.005
SJVAPCD Significance Thresholds	*10*	*10*	*100*	*15*	*15*	*27*
Threshold Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

[1] Particulate matter emissions assume compliance with SJVAPCD Regulation VIII for the control of fugitive dust.

Table 4. Daily Construction Emissions Summary

Construction Phase Maximum Daily Emissions	Pollutant Emission (Pounds per Day)					
	ROG	**NO_X**	**CO**	**PM_{10}[4]**	**$PM_{2.5}$[4]**	**SO_X**
Staging[1]	5.51	53.91	50.5	9.7	5.68	0.07
Site Preparation[1]	7.71	75.83	67.29	9.97	5.75	0.09
Grading/Excavation[1]	4.5	44.11	36.62	4.56	2.19	0.07
Construction/Infrastructure Installation[1]	1.87	24.24	67.29	0.69	5.75	0.03
Total Maximum Daily Emissions[2, 3]	**7.71**	**75.31**	**67.29**	**9.97**	**5.75**	**0.1**
SJVAPCD Significance Thresholds	*100*	*100*	*100*	*100*	*100*	*100*
Threshold Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

[1] Breakdown of each construction phase is provided in Appendix B.

[2] Maximum daily emissions based on the highest modeled emissions for winter or daily conditions. Represents emissions associated with Phase I development. Emissions associated with Phase II development would be similar and, likewise, would not exceed applicable significance thresholds. Maximum daily emissions assumes multiple activities could potentially occur simultaneously.

[3] Totals may not sum due to rounding.

[4] Particulate matter emissions assume compliance with SJVAPCD Regulation VIII for the control of fugitive dust.

As Tables 3 and 4 show, estimated annual and daily maximum construction emissions for all pollutants are below SJVAPCD significance thresholds. Construction-generated emissions were quantified for initial project staging, site preparation/clearing, grading/excavation, road improvements, trenching/solar PV cell installation, and installation of the BESS. In CalEEMod, particulate matter emissions assume compliance with SJVAPCD Regulation VIII for fugitive dust control. Calculated maximum-daily emissions assume some construction activities (e.g., grading, installation) could occur simultaneously on any given day based on the anticipated construction schedule provided. Emissions modeling assumptions and CalEEMod output files are included in Appendix B.

Project-generated annual and daily operational emissions are summarized in Tables 5 and 6. As shown, the project emissions during operations of the facility would be well below the SJVAPCD significance thresholds.

Table 5. Annual Operations Emissions Summary

Construction Phase	Pollutant Emission (Tons per Year)					
	ROG	NO_X	CO	PM_{10}[1]	$PM_{2.5}$[1]	SO_X
Routine Maintenance	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SJVAPCD Significance Thresholds	*10*	*10*	*100*	*15*	*15*	*27*
Threshold Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

NOTE: Assumes two workers/day, two trips/worker/day, eight days/year. Water use for cleaning of PV panels not required.

[1] Particulate matter emissions assume compliance with SJVAPCD Regulation VIII for the control of fugitive dust.

Table 6. Daily Operational Emissions Summary

Operation Maximum Daily Emissions	Pollutant Emission (Pounds per Day)					
	ROG	NOx	CO	PM_{10}[1]	$PM_{2.5}$[1]	SOx
Routine Maintenance	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SJVAPCD Significance Thresholds	*100*	*100*	*100*	*100*	*100*	*100*
Threshold Exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Note: Assumes two workers/day, two trips/worker/day. Water use for cleaning of PV panels not required. Breakdown of each construction phase is provided in Appendix B.

[1] Particulate matter emissions assume compliance with SJVAPCD Regulation VIII for the control of fugitive dust.

Operational emissions included routine maintenance and solar panel washing activities. Decommissioning activities are assumed to require similar construction requirements as those identified for trenching/solar PV panel installation. As a result, emissions associated with the trenching/solar PV panel installation activities are also anticipated to be reflective of emissions associated with project decommissioning.

Project emissions were calculated and are below all SJVAPCD significance thresholds, and, as stated above, would not conflict with implementation of any air quality plan. In addition, project construction and operations are required to be conducted in compliance with applicable SJVAPCD rules and regulations. Therefore, impacts would be *less than significant*.

(b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The proposed project is located in an air basin that is nonattainment for ozone, $PM_{2.5}$, and state PM_{10}. Concurrent construction of other projects in close proximity to project activities could result in increased local air quality impacts for the duration of simultaneous construction activities; however, this would be limited to the circumstances of an approved or proposed project occurring in the same timeframe and location as the project. Simultaneous construction activities occurring in close proximity to the proposed work sites would also need to comply with SJVAPCD rules regarding dust control. Construction-related ozone precursors would not be at a cumulatively considerable level. Mandatory compliance with SJVAPCD Regulation VIII for fugitive dust control would ensure the project would not result in a cumulatively considerable net increase of any criteria pollutants for which the project region in is nonattainment. Operational emissions would result from vehicle use related to workers, maintenance, repair, and inspection of the project components. The associated emission levels (see Tables 5 and 6)

would be below all SJVAPCD thresholds, and these emissions would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, impacts would be *less than significant*.

(c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Some population groups, such as children, the elderly, and acutely and chronically ill persons are considered more sensitive to air pollution than others. Sensitive receptor locations typically include residential areas, hospitals, elder-care facilities, rehabilitation centers, daycare centers, and parks. The project site is in a rural area surrounded by grazing land. The closest sensitive receptor is the Los Banos Creek Campground, located approximately one mile south of the project site.

Implementation of the proposed project would not result in the long-term operation of any emission sources that would adversely affect nearby sensitive receptors. Short-term construction activities, lasting approximately 6 months would result in temporary increases in pollutant concentrations. The construction-related emissions would be short term and dispersed throughout the 33-acre proposed development area. Due to the limited duration, nature, and quantities of construction emissions, and distance to sensitive receptors, no individual receptor would be exposed to substantial pollutant concentrations.

The SJVAPCD's thresholds of significance for toxic air contaminant emissions from the operations of both permitted and non-permitted sources are included in Table 7.[21]

Table 7. SJVAPCD Significance Thresholds for Toxic Air Contaminants

Contaminant	Threshold
Carcinogens	Maximally Exposed Individual risk equals or exceeds 20 in one million
Non-Carcinogens	Acute: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual
	Chronic: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual

During construction, emissions of all criteria pollutants would be below the SJVAPCD thresholds and would not have any significant impact. The project's emissions of toxic air pollutants would be minimal and consist of diesel particulate matter (DPM) emissions during construction activities. The employees commuting to the site during project construction or operation would use gasoline-fueled vehicles.

During project operations, emissions would result from use of vehicles for workers, routine maintenance, repair, and inspection that would not expose sensitive receptors to substantial concentrations of air pollutants.

During construction and operation activities, the applicant would be required to comply with SJVAPCD Regulation VIII for fugitive dust control as a uniformly applied development standard. This standard ensures receptors in the project vicinity would not be impacted by the project's dust emissions during construction. Impacts would be *less than significant*.

Airborne asbestos is classified as a known human carcinogen and was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1986. The California Geological Survey (CGS) prepared maps and lists of the naturally occurring asbestos (NOA) areas within California

[21] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. *San Joaquin Valley Air Pollution Control District Air Quality Thresholds of Significance – Toxic Air Contaminants*. Available at: http://www.valleyair.org/transportation/0714-GAMAQI-TACs-Thresholds-of-Significance.pdf Accessed September 3, 2022.

counties. According to the 2011 report, NOA is known to exist in Merced County near the Mariposa County border; however, the proposed project location is not within an area of NOA.[22]

The project is located in an area known to have reports of Valley Fever cases. Valley Fever is caused by the *Coccidioides immitis* fungus in the soil, which gets disturbed by digging, driving and high winds.[23] There is no vaccine to prevent Valley Fever. If it is determined that the project site is located in an area with the fungus, MM AIR-1 would be implemented. The following BMPs outlined in MM AIR-1 would limit impacts to be *less than significant with mitigation*.

(d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

During construction, some odors and hazardous pollutants could result from vehicles and equipment using diesel fuels. Construction vehicles would be required to limit idling time compliant with the CARB guidelines. The nearest sensitive receptor is located approximately one mile south of the project site. Because the level of overall emissions would be low, and the duration of emissions would be limited to an approximately 6-month construction period, odors from diesel exhaust during construction would be less than significant. Operation of the project does not include any component with the potential to generate odorous emissions that could affect a substantial number of people. Therefore, impacts would be *less than significant*.

Mitigation Measures

AIR-1 **Best Management Practices for Valley Fever Prevention**. The applicant shall incorporate the following controls and work practices that reduce workers' exposure, which may include:

1. Minimize the area of soil disturbed.
2. Use water, appropriate soil stabilizers, and/or re-vegetation to reduce airborne dust.
3. Stabilize all spoils piles by tarping or other methods.
4. Provide enclosed air conditioned cabs for vehicles that generate dust and make sure workers keep windows and outside air vents closed.
5. Suspend work during heavy winds.
6. Keep workers upwind of digging and other dust-producing activities, such as grading, driving, dumping soil, drilling, or blasting.
7. Use vacuums equipped with HEPA filters, water, wet towels, or other wet methods to clean soiled equipment, tools, and surfaces. Do not use compressed air, dry sweeping, or other methods that create dust when cleaning.
8. Keep break areas, eating areas, and sleeping quarters, if provided, clean and protected from sources of dust.

[22] Van Gosen, B.S., and J. P. Clinkenbeard. 2011. *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California*. U.S. Geological Survey Open-File Report 2011-1188. Available at: https://pubs.usgs.gov/of/2011/1188/pdf/Pamphlet.pdf. Accessed September 3, 2022.

[23] California Department of Industrial Relations. 2022. Protection from Valley Fever. April. Available at: https://www.dir.ca.gov/dosh/valley-fever-home.html. Accessed February 10, 2023.

9. When exposure to dust is unavoidable, provide NIOSH-approved respiratory protection with particulate filters rated as N95, N99, N100, P100, or HEPA. Employers must develop and implement a respiratory protection program in accordance with Cal/OSHA's Respiratory Protection standard (8 CCR 5144). Face coverings and masks do not protect against Valley Fever.

Take measures to reduce transporting spores offsite, such as:

1. Clean tools, equipment, and vehicles safely before transporting offsite.
2. At dusty worksites, provide coveralls and change rooms, and showers where possible. Ensure workers change into clean clothes and shoes before leaving the worksite.
3. Identify a health care provider for occupational injuries and illnesses who is knowledgeable about the diagnosis and treatment of Valley Fever
4. Train workers and supervisors about the risk of Valley Fever, the work activities that may increase the risk, and the measures used onsite to reduce exposure. Also train on how to recognize Valley Fever symptoms.
5. Encourage workers to report Valley Fever symptoms promptly to a supervisor. Not associating these symptoms with workplace exposures can lead to a delay in appropriate diagnosis and treatment.

2.4 BIOLOGICAL RESOURCES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
(c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

	Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(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?	☐	☐	☐	☒

Environmental Evaluation

This section relies on the *Canyon Road Solar Project Biological Resources Assessment* (BRA)[24] (Appendix C) prepared for the project.

(a) Would the project have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The project site contains habitat that was identified as potentially suitable for four special-status wildlife species and no special-status plant species (see Appendix C). A field survey was conducted by a Kleinfelder biologist on June 16, 2022, in support of the BRA to evaluate botanical and wildlife resources within the project area, including habitat suitability for special-status species. The BRA evaluated the entire approximately 318-acre project parcel, and the field survey focused on the approximately 33-acre project area.

Results of the United States Fish and Wildlife Service (USFWS) IPaC database, California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) searches indicated 21 special-status plant species known to occur within the two-mile/nine quad search radius of the project area. None of these species are expected to occur within or adjacent to the project area due to a lack of suitable habitat, a lack of occurrences in close proximity to the project area, or because the project area is outside of the species' known range. Therefore, the potential for special-status plant species to be located within the project site is low and impacts would be *less than significant*.

Results of the CNDDB and IPaC searches indicated 30 special-status wildlife species known to occur within the two-mile/nine quad search radius of the project area. Of these, four have a moderate potential to occur within the project site, including burrowing owl (*Athene cunicularia*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Swainson's hawk (*Buteo swainsoni*; state threatened), and San Joaquin kit fox (SJKF) (*Vulpes macrotis mutica*; federally endangered, state threatened).

San Joaquin coachwhip, a California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC), occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub. It avoids dense vegetation where it cannot move quickly, including mixed oak chaparral woodland, and takes refuge in rodent burrows, under shaded vegetation, and under surface objects. Suitable habitat for this species is present within and adjacent to the project area, and there are documented occurrences within one mile of the site.

Burrowing owl, a CDFW SSC, utilizes abandoned ground squirrel burrows in open habitats, grasslands, and disturbed areas, typically on levees, mounds or areas where there are unobstructed views of possible

[24] Kleinfelder. 2022. *Canyon Road Solar Project Biological Resources Assessment*. Prepared for Renewable Properties, RPCA Solar 6, LLC. August.

predators such as raptors or foxes. Prey items include insects, small mammals, reptiles and amphibians. Suitable habitat for this species is present within and adjacent to the project area, and there are documented occurrences of this species within 4.5 miles of the project area.

Swainson's hawk, a state threatened species, spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Their diet consists of insects, small mammals, and reptiles. Suitable foraging habitat for this species occurs within the project area during part of the year, and suitable nest trees are located along the eastern edge of the project area. There are several documented occurrences in the vicinity of the project area.

San Joaquin kit fox, a federally endangered and state threatened species, occurs in grasslands and agricultural areas along the edges of the San Joaquin Valley. It uses dens created by other mammals, as well as larger pipes and culverts for cover. It is primarily a nocturnal species and feeds on small mammals, birds and reptiles. No suitably sized dens for this species were observed within the project area during the field survey; however, the project area is located within suitable habitat, potentially suitable dens occur adjacent to the project area, and there are several documented occurrences within 5 miles of the project area.

All native birds in California are protected by the federal MBTA, and Section 3503.5 of the California Fish and Game Code specifically protects raptors. Ground disturbance, noise, or removal of vegetation that would result in destruction of active bird nests or disruption of breeding/nesting activity could be a violation of the MBTA and the California Fish and Game Code, as well as a significant impact under CEQA. The project has the potential to impact foraging habitat.

Mitigation has been identified to avoid and/or minimize potential impacts to special-status wildlife species and nesting birds. With the implementation of Mitigation Measures **MM BIO-1** through **MM BIO-6**, impacts to special-status wildlife would be *less than significant with mitigation*.

(b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in the local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Using the classifications described in *A Manual of California Vegetation*,[25] one vegetation community and one land cover type was mapped within the project site:

- **Non-Native Annual Grassland (32.14 acres).** This single vegetation community was mapped throughout the project area. The grasses and forbs had been grazed so heavily that only one species, wild oat (*Avena sp*.) was identifiable.
- **Developed/Disturbed (0.79 acres).** The shed and cattle holding area located along the eastern edge of the project area are considered developed/disturbed habitat, as they contain bare ground, fencing, and debris, which provide little habitat that would support special-status or common wildlife or plant species.

While there are wetlands on the 318-acre project parcel, there is no sensitive natural community nor riparian habitat within the 33-acrea area proposed for the solar development. The irrigation canal would be setback by over 50 feet from project improvements and the existing internal access road from the north

[25] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. Sacramento, CA: California Native Plant Society. 1,300 pp.

via Volta Road. None of the communities listed above are identified by CDFW or USFWS as sensitive. Impacts to sensitive natural communities would be *less than significant*.

(c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No wetlands or other waters that could be considered jurisdictional by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWCQB), or CDFW were observed within the project site during the survey. A small channel feature (0.07 acre) is located in the southwestern portion of the project parcel, which conveys runoff or overflow from a pump station located on the adjacent parcel south of the project site, which supports the Los Banos Reservoir. During periods of overflow due to pumping activities or during rain events when the holding pond is full, the overflow results in erosion into a channelized feature caused by the sporadic and sudden high flows. This feature does not contain any characteristics of wetlands (i.e., hydric soils, hydrophytic vegetation or wetland hydrology), but it connects to a drainage feature offsite west of the project classified as Riverine in the National Wetlands Inventory (NWI). However, there is no ordinary high-water mark (OHWM) within the channel and there is no downstream connection to a traditional navigable waterway.

Impacts to wetlands and waters under jurisdiction of the USACE, RWQCB and CDFW in the form of increased sedimentation and potential spills from construction equipment could be considered significant in the context of CEQA. Although no potentially jurisdictional wetlands or other waters were observed within the 33-acre project site during the field survey, impacts to the nearby channel should be avoided, as this ditch connects to a Riverine feature offsite, which could be considered jurisdictional by the USACE and RWQCB.

The project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP), which would prescribe best management practices (BMPs) to control sediment and other pollutants during construction from possibly entering stormwater. The SWPPP must address grading and erosion impacts, as well as non-point source pollution impacts from the proposed project, including post-construction operations. See **MM GEO-1,** which requires preparation of a Sediment Control Plan (SCP), or a SWPPP. These BMPs may include, but are not limited to, biodegradable straw wattles free from weed seed, silt fencing, hydroseeding, or biodegradable erosion control mats/blankets. Specific BMPs shall be defined prior to construction to protect the irrigation canal, and spill kits shall be available to all workers on the site during construction activities.

A feature that connects to a riverine feature has been identified on the project parcel. The proposed project, including the internal access road, is located over 50 feet from the feature. Because project activities have the potential to impact wetlands, the impact would be *less than significant with mitigation incorporated*.

(d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is not within any mapped wildlife movement corridor, and there are no terrain features present that would concentrate wildlife movement into and through the project. The project site likely supports local movement patterns and provides food and cover resources for common wildlife species.

Temporary effects due to noise and increased human activity during project activities would not interfere with these local movement patterns over time or affect the ability of these species to forage or reproduce; therefore, impacts would be *less than significant*.

(e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The majority of the site is fallow grazing land. Various accessory structures exist on-site, including a livestock paddock and troughs, and two farm ponds are located along the southeast and northwest property lines. The site is located at approximately 320-380 feet above sea level and contains hilly, rural grazing land. The surrounding area is characterized by grazing land, reservoir, and the Wright Solar development.

The following policies contained in the General Plan are applicable to the proposed use:[26]

- **Policy NR-2.1: Renewable Energy Use.** Promote the development and use of renewable energy resources to reduce dependency on petroleum-based energy sources.
- **Policy NR-2.4: Solar Power.** Encourage on-site solar power use in residential, commercial, and industrial buildings, and solar power facilities in rural locations that do not harm long-term agricultural productivity and habitat values.
- **Policy NR-3.2: Soil Erosion and Contamination**. Require minimal disturbance of vegetation during construction to improve soil stability, reduce erosion, and improve stormwater quality.

The project does not conflict with the General Plan and is not subject to any tree preservation policies or ordinances; therefore, the impact is *less than significant*.

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

The project does not conflict with any HCPs, Natural Conservation Plans, or other approved local, regional, or state habitat conservation plan; therefore, there would be *no impact*.

Mitigation Measures

The project shall comply with all measures listed below.

MM BIO-1: **Preconstruction Nesting Bird Survey.** Construction shall be scheduled to avoid the bird breeding season, if feasible. If construction or vegetation removal activities must occur during the bird breeding season (February 1–August 31), surveys for active nests shall be conducted by a qualified biologist no more than 30 days prior to the start of construction. For raptors, an initial no-disturbance buffer of 500 feet shall be established around active nests and demarcated with fencing or flagging. This buffer shall be increased to 0.5-mile for Swainson's hawk. For non-raptors, an initial no-disturbance buffer of 250 feet shall be established around active nests and demarcated with fencing or flagging. No project-related activities shall occur within the buffer zone until a qualified biologist has determined that the birds have fledged and are no longer reliant on the nest or parental

[26] Merced County. 2013. *2030 Merced County General Plan*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed December 19, 2022.

care for survival. The buffer distance for species not listed under the CESA or ESA may be reduced at the discretion of a qualified biologist who has extensive experience observing bird behavior and monitoring nests, if the biologist observes that the birds' behavior is not disturbed by activity closer to the nest, depending on the sensitivity of the species and nest location. Buffer sizes for species listed under the CESA and/or ESA may be reduced in consultation with the responsible state and/or federal agency: CDFW and/or USFWS.

If a historic nest site of barn owl (*Tyto alba*) or other species not listed under CESA, FESA, or having Fully Protected status is identified in or adjacent to the work area, the biologist may passively evict the historic nest site, provided that the biologist can verify that the historic nest does not support active nesting. If eggs, chicks, or fledglings are present, the nest site shall not be disturbed, and the no-work buffers as described above apply. Passive eviction methods may include modifications to the nesting substrate (owl box, structure ledges, etc), use of netting to exclude individuals from entering the nest site, or use of pyrotechnics (bangers or screamers). The historic nest sites of any Fully Protected Species shall not be disturbed.

MM BIO-2: **Trash Receptacles**. All trash and waste items generated by construction or crew activities shall be properly contained in a covered trash receptacle and removed from the project site daily. This includes biodegradable items, such as apple cores and banana peels, that attract predators such as raccoons and American crows that could prey upon sensitive wildlife species.

MM BIO-3: **Common Wildlife Awareness.** During construction activities, all project personnel shall visually check for animals in any pipes, culverts, or other open-ended materials and equipment stored on site for one or more overnight periods prior to moving, burying, or capping to ensure that no animals are present within the materials and equipment. To prevent accidental entrapment of wildlife during construction, all excavated holes, ditches, or trenches greater than six (6) inches deep will be covered at the end of each workday by suitable materials that cannot be displaced or escape ramps shall be placed in excavations. After opening and before filling, such holes, ditches, and trenches shall be thoroughly inspected by project personnel for trapped animals.

MM-BIO-4: **San Joaquin Kit Fox.** Approximately 60 days prior to the construction start date, a qualified biologist shall perform early evaluation surveys in accordance with the current USFWS-approved protocol for SJKF for the Northern Range, prepared by the Sacramento Fish and Wildlife Office (June 1999). Early evaluation surveys will determine the potential for presence of SFKF onsite. Upon completion of early evaluation surveys, informal consultation with the USFWS shall be initiated to determine proper techniques to avoid impacts to this species during project construction, which would be considered significant under CEQA.

Security fences installed on the project site shall be designed to enable passage of SJKF and their prey, while impeding the passage of larger predators, such as coyotes (*Canis latrans*) and larger domestic dogs. All fencing shall leave a 4- to 6-inch opening between the fence mesh and the ground. The bottom of the fence fabric shall be knuckled (wrapped back to form a smooth edge) to protect wildlife that pass under the fence. Fences shall be monitored quarterly to ensure that any damage or vandalism is quickly repaired.

MM BIO-5: **BIO-5: San Joaquin Coachwhip.** Prior to the start of construction, or on the day construction begins, a qualified biologist shall perform a survey of the project area to ensure no San Joaquin coachwhips are present. If coachwhips are detected during the survey or during construction, the coachwhips shall not be handled or harassed and shall be allowed to move off the site on their own. A 30-foot no work buffer shall be enacted around the species until they move offsite on their own.

MM-BIO-6 **Worker Environmental Awareness Training**. A qualified biologist will conduct an environmental education program for all persons working on the Project prior to the onset of construction. A discussion of the biology and general behavior of any sensitive species which may be in the area, how they may be encountered within the work area, and procedures to follow when they are encountered will be included in the training. The status of CESA-listed species, including legal protection, penalties for violations, and Project-specific protective measures will also be discussed. Interpretation shall be provided for non-English speaking workers, and the same instruction shall be provided for any new workers prior to on-site Project activity. Copies of the training will be maintained at the worksite with the Project supervisor, and a handout containing this information will be distributed for workers to carry on-site. Upon completion of the program, employees shall sign an affidavit stating they attended the program and understand all protective measures.

2.5 CULTURAL RESOURCES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines 15064.5?	☐	☐	☒	☐
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines 15064.5?	☐	☒	☐	☐
(c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Environmental Evaluation

This section relies on the *Cultural Resources Identification Project for the Canyon Road Solar Project, Merced County, California* prepared for the project.[27] The Area of Potential Effects (APE) included the area of proposed project improvements/disturbance. The project site is within territory ethnographically attributed to the Northern Valley Yokuts, which were comprised of approximately 60 tribelets, each with a few hundred to several thousand members, living throughout the San Joaquin Valley. The site has historically been used for livestock grazing.

[27] Kleinfelder. 2022. *Cultural Resources Identification Project: Canyon Road Solar Project, Merced County, California*. Prepared for RPCA Solar 6, LLC, Renewable Properties, LLC. September.

(a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines 15064.5?

A records search of the APE and a 0.5-mile buffer around the APE was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus. The purpose of the records search was to identify if any prehistory and/or historic-period cultural resources or studies had been previously documented in the APE to better understand the cultural sensitivity of the area. The CCIC records search indicated that no previously recorded historic resources or historic resources studies were identified within the APE.

Historic properties associated with agriculture in the San Joaquin Valley include ranches and farms. Historic maps and aerial photography show the vicinity around the project site as undeveloped until 1921, when an unimproved access road was developed outside of the project area and passed near the southwest corner of the project. No buildings, structures, or other locations of previous historic activities were noted. By 1946, a second road or trail was developed in a west to east alignment that intersected with the southern termination of the north-to-south road near the southwestern corner of the project. A wide alignment became present in the northwest corner of the project, for future construction of I-5. No buildings, structures, or other locations of previous historic activities were noted. By 1956, a powerline was constructed approximately 1200 feet west from the southwest corner of the project site, and in 1960, a pipeline was developed passing through the northwest corner of the project site. By 1981, a circular water storage area adjacent to the southeast corner of the site.

On June 6, 2022, Kleinfelder archaeologists completed a pedestrian survey of the APE; one prehistoric isolate, called a mano (CRSP-ISO-2) and a historic era isolate, which was an amber glass liquor bottle finish (CRSP-ISO-3), were observed within the APE. Each of the items lack context, with no associated materials, and appear to have been displaced from original location and/or represent an isolated, singular event. Neither of the isolates are eligible for the NRHP or CRHR. The project does not propose demolition of any potentially historic structures or facilities. Therefore, impacts to historic resources would be *less than significant*.

(b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines 15064.5?

Background research and archaeological surveys were conducted in support of the *Cultural Resources Identification Project* to identify cultural resources that could be affected by ground-disturbing activities associated with the proposed project and to provide the data necessary to ensure that the project avoids impacts to any potentially significant resources during implementation.

Kleinfelder's pedestrian survey identified one prehistoric and one historic era isolate within the APE, neither of which is eligible for inclusion in the NRHP or CRHR. Kleinfelder considers the APE to have a moderate sensitivity for buried cultural resources based on the presence of previously recorded cultural resources within the project site.

Due to the moderate sensitivity for cultural resources in the APE, there is a potential to encounter unknown subsurface cultural materials. With implementation of **MM CUL-1**, impacts associated with the inadvertent discovery of archaeological resources would be *less than significant with mitigation*.

(c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

No formal cemeteries or other places of human interment are known to exist within the APE, and no evidence of human remains was observed on the surface during the archaeological survey. While the

results of the Sacred Lands File search were negative, there is always a possibility that human remains could be encountered during construction. If human remains or related funerary resources are discovered, appropriate state law would be followed.

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, existing state law requires that there be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the County Coroner has determined, in accordance with California Government Code Title 3, Division 2, Part 3, Chapter 10 (commencing with Section 27460), that the remains are not subject to the provisions of California Government Code Section 27491 or any other related provisions of law concerning investigation of the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or their authorized representative, in the manner provided in Public Resources Code (PRC) Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Due to the moderate sensitivity for cultural resources in the APE, there is a potential to encounter unknown subsurface cultural materials, including human remains. With implementation of **MM CUL-1**, impacts associated with the inadvertent discovery of historic archaeological resources would be *less than significant with mitigation*.

Mitigation Measures

MM CUL-1: **Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources are Encountered.** If archaeological resources are exposed during construction, work in the immediate vicinity of the find shall stop until a qualified archaeologist can evaluate the significance of the find. Construction activities may continue in other areas. If the find is determined to be significant under CEQA (14 California Code of Regulations [CCR] 15064.5(f); PRC Section 21082), and if avoidance is not feasible, additional work such as project relocation, excavation plan, and/or protective cover, in consultation with culturally affiliated tribes or other descendant groups may be warranted. the archaeologist shall design and carry out a data recovery plan consistent with the Public Resources Code (PRC) Section 5097.98.

2.6 ENERGY

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Environmental Evaluation

(a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

CONSTRUCTION-RELATED ENERGY CONSUMPTION

Project construction would consume energy in two general forms: fuel energy consumed by construction vehicles and equipment, and bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials, such as lumber and glass.

Construction of the project would involve on-site energy demand and consumption related to the use of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting and welding, and for supplying energy to areas of the sites where energy supply cannot be met through a hookup to the existing electricity grid. Project construction would not involve the use of natural gas appliances or equipment. Project construction methods would be typical of current construction practices and would not require the use of more energy intensive machinery or higher than normal volumes of trucks and worker vehicle trips.

Construction of the project would occur over a 6-month duration, and would include site preparation (site grubbing, staking, and installation of erosion control measures); grading (to establish access roads and pads for electrical equipment); assembling array foundation/installation of solar array and associated facilities, testing, and commissioning; and restoring temporarily disturbed areas. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle Regulation administered by the CARB. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to the CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. As another benefit of these restrictions, off-road diesel-powered vehicles would consume less fuel and combust fuel more efficiently.

In addition, technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to reduce demand on oil and emissions associated with construction in California, over the next few years. Therefore, temporary energy use during construction of the project would not result in a significant increase in peak or base demands on regional energy supplies or require additional capacity from local or regional energy

supplies, and project construction activities would not result in a wasteful, inefficient, or unnecessary consumption of energy resources.

Further, substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials.

OPERATIONAL ENERGY CONSUMPTION

Maintenance activities during operations, such as landscape maintenance and cleaning, and operation of the BESS would involve the use of electrical or gas-powered equipment. In addition to on-site energy use, the project would result in the consumption of oil-based fuels associated with vehicle trips generated by the employees and maintenance workers. Due to the CARB's increasing vehicle efficiency standards, it is assumed the long-term transportation fuel consumption from project operations would steadily decline over time and ensure that vehicle fuel consumption is not wasteful or inefficient.

The project would be subject to all relevant provisions of the most recent current standards of the Building Energy Efficiency Standards (Title 24) and the California Green Building Standards Code (CALGreen). Compliance with these standards would ensure that the building energy use associated with the project would not be wasteful, inefficient, or unnecessary. Thus, project impacts would be *less than significant*.

(b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The County has not adopted a Climate Action Plan (CAP) or energy plan. Merced County is in the process of preparing a CAP, with a currently unknown anticipated completion date. Development of a CAP would outline specific strategies to reduce GHG emissions and is required by the General Plan.[28]

The proposed solar facility would generate renewable energy and help reduce GHG emissions to 40% below 1990 levels by 2030, a target established by Senate Bill (SB) 32. Therefore, the project would not conflict with implementation of a local plan for renewable energy or energy efficiency, and there would be *no impact*.

Mitigation Measures

No mitigation is required.

[28] Merced County, 2022. Merced County Climate Action Plan. Available at: https://mercedcap.rinconconsultants.com/ Accessed December 22, 2022.

2.7 GEOLOGY AND SOILS

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
(ii) Strong seismic ground shaking?	☐	☐	☒	☐
(iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
(iv) Landslides?	☐	☐	☒	☐
(b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Environmental Evaluation

(a) Would the project directly or indirectly cause 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.

Surface rupture is defined as surface displacement that occurs along the surface trace of the causative fault during an earthquake. The project site is approximately 7 miles east of the Ortigalita Fault, which

runs in a North/West direction west of I-5.[29] No known active faults or surface expression of fault traces cross the project site, and the project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone.[30] The potential for surface rupture at the project site is considered low, and impacts related to rupture of a known earthquake fault would be *less than significant*.

(ii) Strong seismic ground shaking?

The entire state of California is a seismically active region; however, the project is located in an area mapped as a moderate level of shaking during earthquakes.[31] The site is located about 7 miles from the nearest fault zone, which means it would likely experience moderate ground shaking from future earthquakes.

The proposed solar facility would be required to comply with the 2019 California Building Code (Merced County Zoning Code Section 16.16.010),[32] which provides a minimum standard for building design and construction. The project design would adhere to requirements related to seismic loads, structural design, foundation design, and excavation and grading. By adhering to state and County building code requirements, the direct or indirect impacts from development of the proposed project as they relate to strong seismic ground shaking would be *less than significant*.

(iii) Seismic-related ground failure, including liquefaction?

Primary factors that trigger liquefaction are moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Although the entire state is within a seismically active zone, the project is not located within a liquefaction zone,[33] and impacts would be *less than significant*.

(iv) Landslides?

The project site and surrounding vicinity are generally level, and the proposed solar facility is proposed to be remotely operated. No habitable structures currently exist on the site, and with implementation of the proposed project construction workers would only be present during work hours for approximately 6 months, and for brief periods of time during maintenance activities. The site is not located within a CDOC mapped landslide hazard zone.[34] Therefore, impacts related to landslides would be *less than significant*.

[29] California Department of Conservation (CDOC). 1974, 2019. Earthquake Zones of Required Investigation. CDOC, California Geological Survey. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/. Accessed January 12, 2022.

[30] Ibid.

[31] California Geological Survey (CGS) and U.S. Geological Survey (USGS). 2016. Earthquake Shaking Potential for California, Map sheet 48. Available at: https://www.conservation.ca.gov/cgs/Documents/Publications/Map-Sheets/MS_048.pdf. Accessed January 13, 2023.

[32] Merced County. 2022. *Merced County Zoning Code Section 16.16.010*. Available at: https://library.qcode.us/lib/merced_county_ca/pub/county_code/item/title_16-chapter_16_16-16_16_010. Accessed June 28, 2022.

[33] California Geologic Survey (CGS). 2022. CGS Seismic Hazards Program: Liquefaction Zones. Available at: https://gis.data.ca.gov/datasets/b70a766a60ad4c0688babdd47497dbad_0/explore?location=35.720844%2C-119.759465%2C8.10. Accessed January 13, 2023.

[34] California Department of Conservation (CDOC). 1974, 2019. Earthquake Zones of Required Investigation. CDOC, California Geological Survey. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/. Accessed January 12, 2022.

(b) Would the project result in substantial soil erosion or the loss of topsoil?

The project site is generally level, and project grading is expected to be balanced, which limits the potential for substantial soil erosion. Project-related ground-disturbing activities would include excavation and grading for foundations, access roads, and utility trenches. Temporary erosion could occur during project construction. Impacts related to erosion and loss of topsoil would be mitigated by compliance with BMPs identified in the grading permits. These practices typically include sediment control measures, such as silt fences, straw wattles, or sediment traps, during construction; dust suppression; and the installation of soil stabilization measures, including erosion control blankets, slope drains with outlet protection, and establishment of vegetative cover.

With implementation of site-specific BMPs, including those listed above, and compliance with **MM GEO-1**, impacts associated with soil erosion and the loss of topsoil would be *less than significant with mitigation*.

(c) Would the project 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?

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, and topography. Per the CDOC maps, the project is not located on a geologic or soil unit that is unstable.

The project contains no features that would create instability in the soil or result in landslides, lateral spreading, subsidence, liquefaction, or collapse. The project impacts related to unstable soils are *less than significant*.

(d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils can undergo significant volume changes in moisture content, causing the soils to shrink and harden when dried and expand when wet. Per the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, the project site contains soils comprised mostly of 109 Apollo clay loam, 2 to 8% slopes, and 207 Los Banos clay loam, 2 to 8% slope. The soils are well drained and have limited frequency of flooding or ponding, which reduce the potential for expansion.[35] Because the project does not propose development of habitable structures, and the project would be designed and constructed in accordance with the CBC and professional engineering standards, the project impacts related to expansive soils are reduced to *less than significant*.

[35] U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. Available at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm Accessed February 10, 2023.

(e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project includes development of a solar energy facility on a vacant portion of an agricultural site and would not include components requiring the use of septic tanks or wastewater disposal systems; therefore, *no impacts* would occur.

(f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The proposed project area is immediately underlain by Pleistocene and Holocene alluvial deposits (Q) that have low potential to contain significant paleontological resources.[36] Based on review of the Geologic Map of California, the project site is located in an area mapped as Pliocene-Pleistocene nonmarine sedimentary rock deposits (QPc).[37] While there are no known paleontological resources or unique geologic features present in the proposed project area, there is a chance that currently unknown paleontological resources may exist below the ground surface and could be encountered during ground-disturbing activities.

Although the project has the potential to impact paleontological resources if the work affects sensitive, previously undisturbed surficial sediment or sedimentary rock, the potential for significant paleontological discovery and impact is anticipated to be low within the proposed project area because ground disturbance would be minimal and there are no known paleontological resources within the project area. With implementation of **MM GEO-2**, impacts to paleontological resources or unique geologic features would be considered *less than significant with mitigation*.

Mitigation Measures

MM GEO-1: **Erosion and Sediment Control Plan or Stormwater Pollution Prevention Plan**. Prior to issuance of a grading permit, the applicant shall submit an Erosion and Sediment Control Plan or SWPPP prepared by a registered professional engineer or Qualified SWPPP Developer (QSD) as an integral part of the grading plan. The plan shall be subject to review and approval of the County prior to the issuance of a grading permit. The plan shall include all erosion control measures and BMPs to be used during project construction and operation, including runoff control, sediment control, and pollution control measures for the entire site to prevent discharge of sediment and contaminants into the drainage system. Post-construction measures include maintenance of the bioretention areas and vegetative landscaping. The plan shall include the following measures, as applicable:

1. Throughout the construction process, ground disturbance shall be minimized, and existing vegetation shall be retained to the extent possible to reduce soil erosion. All construction and grading activities, including short-term needs (equipment staging areas, storage areas, and field office locations) shall minimize the amount of land area disturbed. Whenever possible, existing disturbed areas shall be used for such purposes.

[36] California Department of Conservation (CDOC). 2015. Geologic Map of California, California Geological Survey. Available at: https://maps.conservation.ca.gov/cgs/gmc/. Accessed January 20, 2023.

[37] Ibid.

2. All drainage ways, wetland areas, and stream areas shall be protected from silt and sediment in storm runoff using appropriate BMPs, such as silt fences, diversion berms, and check dams. Fill slopes shall be stabilized and covered when appropriate. All exposed surface areas shall be mulched and reseeded. All cut and fill slopes shall be protected with hay mulch and/or erosion control blankets, as appropriate.
3. During construction, all erosion control measures shall be installed according to the approved plans prior to the onset of the rainy season but no later than October 15. Construction erosion control measures shall remain in place until the end of the rainy season but may not be removed before April 15. The County shall be responsible for notifying construction contractors about erosion control requirements.
4. Example design standards for erosion and sediment control include, but are not limited to, the following: avoiding disturbance in especially erodible areas; minimizing disturbance on slopes; using berms, swales, ditches, vegetative filter strips, and catch basins to prevent the escape of sediment from the site; conducting development in increments; and planting bare soils to restore vegetative cover.
5. The County shall develop an inspection program to evaluate if there is any significant on-site erosion as a result of rainfall. If problems arise at the site after rainfall, the engineer or contractor shall enhance methods to manage onsite erosion.

MM GEO-2: **Paleontological Resources Inadvertent Discovery.** In the event that a paleontological resource is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist in accordance with Society of Vertebrate Paleontology standards. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

2.8 GREENHOUSE GAS EMISSIONS

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Evaluation

This section relies on the *Canyon Road Solar Project Air Quality & Greenhouse Gas Emissions Calculations Technical Memorandum*[38] prepared for the project (see Appendix B).

(a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHGs are compounds in the earth's atmosphere that play a critical role in determining the earth's surface temperature. Specifically, these gases allow high-frequency solar radiation to enter the earth's atmosphere but retain the low-frequency energy, which is radiated back from the earth to space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Increased concentrations of GHGs in the earth's atmosphere are thought to be linked to global climate change, causing rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increasing frequency and magnitude of severe weather. GHGs include carbon dioxide (CO_2), methane, ozone, water vapor, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Although CO_2 is the most abundant GHG, other GHGs are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. GHGs are the result of natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

The SJVAPCD has not yet adopted updated significance thresholds for project-generated GHG emissions, an relied on the Bay Area Air Quality Management District (BAAQMD) threshold of 1,100 metric tons of CO2e per year. The project-related direct and indirect emissions of GHGs were calculated using CalEEMod, version 2020.4.0, and are summarized in Table 8. Detailed assumptions and calculations, as well as CalEEMod outputs, are provided in Appendix B.

GHG emissions would be generated from the proposed project during construction and operation. Temporary GHG emissions would occur during construction activities, predominantly from heavy-duty construction equipment exhaust and worker commute trips. Based on the construction activity forecast, emissions would be below the threshold level of 1,1000 metric tons adopted by the SJVAPCD. [39] Table 8 shows total project construction emissions of approximately 6.8 metric tons of CO_2e amortized over the

[38] AMBIENT Air Quality & Noise Consulting. 2023. *Canyon Road Solar Project Air Quality & Greenhouse Gas Emissions Calculations Technical Memorandum*. January 18.

[39] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2009. *Staff Report: Addressing GHG impacts under CEQA*. December 9. Available at: http://www.valleyair.org/Programs/CCAP/12-17-09/1%20CCAP%20-%20FINAL%20CEQA%20GHG%20Staff%20Report%20-%20Dec%2017%202009.pdf. Accessed December 3, 2022.

35-year project life; therefore, construction-related GHG emissions would not have a significant impact on the environment, and impacts would be less than significant.

Table 8. Annual GHG Emissions Summary

Emissions Source	GHG Emissions (metric tons CO2e/year)
Routine Maintenance	1.15
Construction emissions – amortized[1]	6.8
Total	**7.95**
Displaced emissions (from project operation)[2]	−3,160.92
Total Annual Emissions	**−3,152.97**
Significance threshold	1,100
Threshold exceeded?	No

[1] Total construction emissions amortized over project life of 35 years and includes GHG emissions associated with project decommissioning, which is estimated to be roughly equivalent to GHG emissions generated during trenching/solar PV installation

[2] Displaced GHG emissions assumes an equivalent 5 MW (10,075,000 kWh/year) would otherwise be generated by fossil fuels. Net displaced GHG emissions accounts for project generated GHG emissions associated with routine maintenance activities, as well as construction-generated GHG emissions amortized over an assumed 35-year project life.

Operations and maintenance of the proposed project would result in low-level GHG emissions from the off-site motor vehicle worker, vendor, and haul trips and the operation of the facility and BESS. Table 8 shows total project operations emissions are approximately 1.15 metric tons CO_2e. Therefore, operation related GHG emissions would not have a significant impact on the environment, and impacts would be less than significant.

The project would offset GHG emissions through renewable energy generation and thereby result in environmental benefits by lessening the impacts of global climate change; as such, the annual displaced GHG emissions were estimated to include all direct and indirect emissions associated with implementation of the project. As described above, it is anticipated that the decommissioning emissions would be comparable to the construction emissions.

As Table 8 shows, the amount of GHGs potentially displaced by the proposed project would more than offset estimated annual GHG emissions associated with project construction and operational activities and would be considered a beneficial impact of the project. Therefore, the proposed project would have a beneficial GHG emissions impact.

(b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Currently, there are no federal, state, or local climate change or GHG emissions regulations that address the GHG emissions from project construction. There are a number of federal, state, and local plans and policies, and GHG emissions reduction strategies, that are potentially applicable to the proposed project, either directly or indirectly. The project operation is consistent with the following:

- The project is consistent with the SB 32 scoping plan strategies to increase the total amount of renewable energy sources consistent with the goal of the State's Renewable Portfolio Standard (RPS).
- The project is consistent with the CARB's emission reduction strategy presented in the scoping plans. The 2008 Scoping Plan specifically addresses critical measures directed at emission sources that are included in the cap-and-trade program that are designed to achieve cost-effective emissions reductions while accelerating the necessary transition to the low-carbon economy.

- The proposed project implementation will help California meet its RPS requirements.

The project would help promote California's GHG policies by creating renewable energy resources and would not exceed applicable GHG screening levels. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions. Moreover, projects that are consistent with applicable plan, policy, or regulation adopted to reduce GHG emissions are considered less than significant during construction, operation, and reclamation.

Mitigation Measures

No mitigation is required.

2.9 HAZARDS AND HAZARDOUS MATERIALS

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
(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?	☐	☐	☒	☐
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	☐	☒
(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

A significant impact may occur if a project would involve the use or disposal of hazardous materials as part of its routine operations or would have the potential to generate toxic or otherwise hazardous emissions that could adversely affect sensitive receptors.

Construction of the project would involve the transport, use, and disposal of potentially hazardous materials. These materials include lime, paints, adhesives, surface coatings, cleaning agents, fuels, and oils. As described in Chapter 1, *Project Description*, construction activities would be temporary and last approximately 6 months. These temporary construction activities involving the use, transport, storage, and disposal of hazardous materials would be conducted in compliance with all health and safety requirements, such as General Plan policies, California Code of Regulations (CCR) Sections 337 through 340, Chapter 6.95 of California Health and Safety Code Article 1, and CCR Title 19, Public Safety, Division 2 (if required).

Project operation would involve use of a BESS, which would require the applicant to obtain a Hazardous Materials Business Plan.

Because the project does not require the use of hazardous materials beyond those commonly used for construction activities and is not located in proximity to sensitive receptors or resources, and because the Applicant would comply with applicable regulations and laws pertaining to the transport, storage, use, and disposal of potentially hazardous materials, the exposure of the public, construction workers, and environment to hazardous materials would be *less than significant*.

(b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

A significant impact may occur if a project could create an upset or accident condition involving hazardous materials. Construction of the project would use small amounts of hazardous materials, such as diesel fuel or solvents. Project operation would not use hazardous materials but would require operation of battery storage. As stated in section 2.9(a), the project would not 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, and the impact would be *less than significant*.

(c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

A project-related significant adverse effect may occur if a project site is within 0.25 mile of an existing or proposed school site, and the project is projected to release hazardous emissions that would exceed regulatory thresholds and would pose a health hazard. The closest school is Charleston Elementary School, located approximately 5 miles east of the project. There are no schools within 0.25 mile of the project, and *no impacts* would occur.

(d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

California Government Code Section 65962.5 requires various state agencies to compile lists of hazardous waste disposal facilities, unauthorized release from underground storage tanks, contaminated drinking water wells, and solid waste facilities from which there is known migration of hazardous waste, and to submit such information to the Secretary for Environmental Protection on at least an annual basis. In meeting the provisions in California Government Code Section 65962.5, commonly referred to as the "Cortese List," database resources such as the California Department of Toxics Substances Control (DTSC) EnviroStor and State Water Resources Control Board (California Water Boards) GeoTracker databases provide information regarding identified facilities.

The *Phase 1 Environmental Site Assessment: Undeveloped Parcel of Land North of Canyon Road, Los Banos, California* (Phase 1 ESA) completed by HEI Corporation concluded that the project site is not on any governmental databases, and there are no sites on any databases within 0.125 miles of the project site.[40] The Phase 1 ESA concluded that given the lack of structures and development in the project area, the project and any surrounding properties are unlikely to be listed on any databases.[41]

[40] HEI Corporation. 2022 *Phase 1 Environmental Site Assessment: Undeveloped Parcel of Land North of Canyon Road, Los Banos, California*. Prepared for RPCA Solar 6. March 30, 2022.

[41] Ibid.

The proposed project site is not listed on a hazardous materials list and would not create a significant hazard to the public; therefore, impacts would be *less than significant*.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?

The project site is not located with an airport land use plan, and there are no public airports within 2 miles of the project site. The nearest airport is the Los Banos Municipal Airport, located over 5 miles east of the project site. The project would not result in a safety hazard for people residing or working in the project area, and *no impacts* would occur.

(f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Merced Office of Emergency Services (OES) was established in 1971 and is tasked to coordinate emergency activities between the county, cities, and special districts and serve as a communications link focusing on the collection, processing, and dissemination of vital disaster information.[42] Additionally, the Merced County Community and Economic Development oversees state-mandated programs in Merced County, including hazardous materials generators and the California Accidental Release Prevention (CalARP) Program.

The proposed project would not include any characteristics (e.g., permanent road closures, etc.) that would physically impair or otherwise interfere with implementation of any adopted emergency response plan or emergency evacuation plan for the project vicinity; additionally, the facility would be remotely operated, except for routine maintenance. Therefore, it would not substantially impair an adopted emergency response plan or emergency evacuation plan, and impacts would be *less than significant*.

(g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. The project area is located in a rural grassland area and is within a Moderate Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA).[43] The nearest Very High FHSZ is located approximately eight miles west of the project site. The facility would be remotely operated, and there would not be a significant risk of loss, injury, or death involving wildland fires.[44] Therefore, impacts would be *less than significant*.

Mitigation Measures

No mitigation is required.

[42] Merced County. 2013. *2030 Merced County General Plan Background Report*. December. Available at: https://www.countyofmerced.com/DocumentCenter/View/6768/2030-Merced-County-General-Plan-Background-Report?bidId= Accessed September 13, 2022.

[43] California Department of Forestry and Fire Protection (CAL FIRE). 2022. FHSZ Viewer. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed December 21, 2022.

[44] Ibid.

2.10 HYDROLOGY AND WATER QUALITY

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	☐	☒	☐	☐
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
(iii) 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; or	☐	☒	☐	☐
(iv) Impede or redirect flood flows?	☐	☐	☒	☐
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?

The site is currently undeveloped and pervious, and the proposed project would generate stormwater runoff from increased impervious surfaces. The project would add impervious surface, even though pervious areas would be located beneath the panels. The proposed BESS would be located on a gravel pad in the southeast corner of the parcel, and both potential access roads and parking areas may be covered with gravel.

The California RWCQBs are responsible for regulating stormwater discharge associated with project construction activities, such as clearing, grading, and excavation. Because the project would disturb over 1 acre of land, the Applicant would be required to obtain the State's General Construction Permit and prepare a SWPPP as a uniformly applied development standard. The purpose of the SWPPP is to describe and prescribe BMPs to control sediment and other pollutants during construction from possibly entering stormwater. The SWPPP must address grading and erosion impacts, as well as non-point source pollution impacts from the proposed project, including post-construction operations. BMPs implemented to address commercial pollutant sources generally involve maintenance of storm drain facilities, parking lots,

vegetated areas, and dissemination of educational materials. Construction impacts must comply with the erosion/pollution control plan, which would include site-specific BMPs designed to prevent runoff from construction areas, impacting surface water quality. The SWPPP would not allow construction to occur during major rain events, minimizing any chance of runoff from the site. Post-construction measures may include maintenance of the bioretention areas and vegetative landscaping.

Additionally, project design would comply with Chapter 9.53 (Regulation of Stormwater) of the County Code. Per Regulations and Requirements, Section 9.53.030A(2),[45] operators of a construction project would be required to prepare and submit a Sediment Control Plan (SCP) to the County Department of Public Works (DPW) for review and approval as a uniformly applied development standard.

Conformance with the State's General Construction Permit, the County Stormwater Ordinance, and **MM GEO-1** would ensure the project would not violate any water quality standards or waste discharge requirements and would not otherwise substantially degrade surface water or groundwater quality. Therefore, impacts would be *less than significant with mitigation*.

(b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Groundwater for local, domestic, and commercial use is obtained from the Delta Mendota Basin, which encompasses most of eastern Merced County.[46] There are no water connections to existing services or groundwater use proposed as part of the project. The project is estimated to use approximately 756,000 gallons (approximately 2.3 acre-feet per year [AFY]) during 6 months of construction, which would be delivered to the site by truck. During peak construction, the project is anticipated to use 12,000 gallons per day for 6 weeks, and 6,000 gallons per day during non-peak construction for dust control. The project's operational water use is expected to be approximately 15,000 gallons (0.04 AFY) per year for biannual panel washing.

Water would occasionally be trucked in for panel washing, provided by the San Luis & Delta Mendota Water Authority (SLDMWA), who would be the water supplier for the proposed project.[47] SLDMWA provides water pumped from the Delta Mendota basin. The Delta Mendota basin groundwater elevations have been monitored by various agencies since 1970. Average groundwater levels have increased by 2.2 feet from 1970 through 2000, with an increase between 1970 through 1985 and a decrease from 1985 to 1994, when the water reached the 1970 groundwater level.[48]

The proposed project would not represent a substantial decrease of groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin; therefore, impacts would be considered *less than significant*.

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[45] Merced County. 2022. Storm Water Management. Available at: https://www.countyofmerced.com/998/Storm-Water-Management. Accessed December 19, 2022.

[46] Merced County. 2012. *2030 Merced County General Plan Draft PEIR, Section 13 Hydrology and Water Resources*. November. Available at: https://web2.co.merced.ca.us/pdfs/planning/generalplan/DraftGP/DEIR/13_hydro_mcgpu_eir_2012_11_23f.pdf . Accessed January 20, 2023.

[47] San Luis & Delta Mendota Water Authority (SLDMWA). 2015. Member Agencies Map. October 15. Available at: https://sldmwa.org/OHTDocs/Maps/SLDMWA%20Member%20Agencies%20Map2.jpg Accessed January 20, 2023.

[48] California Regional Water Quality Control Board (RWQCB). 2006. San Joaquin Valley Groundwater Basin Delta-Mendota Subbasin. *California Groundwater Bulletin 18*. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_022_07_Delta-MendotaSubbasin.pdf Accessed January 20, 2023.

(c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) Result in substantial erosion or siltation on- or off-site?

As mentioned in Impact Discussion 2.10(a), because the project would disturb over 1 acre of land, the applicant would be required to obtain the State's General Construction Permit and prepare a SWPPP or SCP. All project components would be required to implement erosion control measures as discussed under Impact Discussion 2.10(a) and as required in **MM GEO-1.**

Improper project grading activities, both during and post-construction, have the potential to increase the volume of runoff from a site and subsequently increase erosion. As discussed in Impact Discussion 2.7(b) in Section 2.7, *Geology and Soils*, the potential soil erosion impact of the project would be less than significant through implementation of **MM GEO-1**, which would require the applicant to prepare and implement a SWPPP or SCP. Because of these regulatory standards and this mitigation measure, substantial siltation and erosion is not anticipated; therefore, the impact would be *less than significant with mitigation*.

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

A significant impact may occur if a project results in increased runoff volumes during construction or operation of the project that would result in flooding conditions affecting the project site or nearby properties. The project would result in an increased rate of runoff over existing conditions.

As described in Impact Discussions 2.10(a) and 2.10(b), the applicant would be required to implement BMPs to manage runoff and stormwater. Temporary pollution prevention and permanent stormwater BMPs have been designed to minimize the introduction of pollutants into streambeds and drainages. During construction, the contractor would be required to use filter fabric, gravel bags, straw wattles, or similar measures to collect sediment and filter water before allowing its discharge to downstream facilities. This would also require that disturbed areas be seeded to help stabilize unvegetated areas. Permanent BMPs and post-construction measures include maintenance of the bioretention areas, and vegetative landscaping management.

With these design measures and BMPs in place, the project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding, and the impact would be *less than significant*.

(iii) 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?

As mentioned in Impact Discussion 2.10(a), because the project would disturb over 1 acre of land, the Applicant would be required to obtain the State's General Construction Permit and prepare a SWPPP or SCP.

All project components would be required to implement erosion control measures as discussed under Impact Discussion 2.10(a). There are not existing drainage facilities and stormwater would be managed and detained onsite consistent with current RWQCB post-construction requirements. Additionally, compliance with **MM GEO-1** would ensure that the project would not increase the rate or amount of

surface runoff in a manner that would exceed the capacity of onsite drainage systems, and the impact would be *less than significant*.

(iv) Impede or redirect flood flows?

A significant impact may occur if a project were located in a flood hazard area and would impede or redirect flood flows. The flood map for the project area has a status of "not printed."[49] Per the FEMA Map, the area has been designated Zone D, or area of undetermined Flood Hazard.[50] The project is not mapped in a flood hazard zone and is not located in an area with known localized flooding. Therefore, the project would not impede or redirect flood flows and impacts would be *less than significant*.

(d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site is not located in a tsunami hazard area, as mapped by the CDOC.[51] The project would not risk the release of pollutants due to project inundation from a tsunami or seiche and *no impacts* would occur.

(e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

There are no water connections to existing services or groundwater use proposed as part of the project. The project is estimated to use approximately 756,000 gallons (approximately 2.3 acre-feet per year [AFY]) during 6 months of construction, which would be delivered to the site by truck. During peak construction, the project is anticipated to use 12,000 gallons per day for 6 weeks, and 6,000 gallons per day during non-peak construction for dust control. The project's operational water use is expected to be approximately 15,000 gallons (0.04 AFY) per year for biannual panel washing.

The project is located in the Merced Integrated Regional Water Management Plan (IRWMP) Region in the Los Banos Resources Conservation District.[52] The region boundaries were developed cooperatively by water management agencies in the region and approved by the California Department of Water Resources (DWR).[53] The Merced Groundwater Sustainability Agencies (GSAs) intend to continue activities necessary to implement the Groundwater Sustainability Plan (GSP) and put the basin on a path toward sustainable management. After the DWR determined on January 28, 2022, that the GSP was "incomplete," the GSP was updated in July 2022, which included responses to corrective actions laid out by DWR.[54]

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[49] Federal Emergency Management Agency (FEMA). 2021. FEMA Flood Map Service Center. Available at: https://msc.fema.gov/portal/search?AddressQuery. December 22, 2022.

[50] National Flood Hazard Layer FIRMette. 2022. Available at: FIRMETTE_997513a9-8b71-44ce-a7de-92f58c223191.pdf (fema.gov) Accessed December 22, 2022.

[51] California Department of Conservation (CDOC). 2021. Tsunami Hazard Area Map. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/. Accessed January 12, 2023.

[52] Merced County. 2009. *Draft Merced IRWMP, Conservation and Irrigation Districts*. Available at: https://www.countyofmerced.com/DocumentCenter/View/2484/Draft-IRWMP---Water-Conserv-and-Irrigation-Dist?bidId=. Accessed January 20, 2023.

[53] Merced Integrated Regional Water Management (IRWM). 2013. *Agricultural Water Management Plan*. Available at: https://www.mercedirwmp.org/index.html. Accessed September 29, 2022.

[54] Woodard & Curran. 2022. *Merced Groundwater Subbasin Groundwater Sustainability Plan: Water Year 2021 Annual Report*. Available at: http://mercedsgma.org/assets/pdf/reports/Merced-Subbasin-GSP-Annual-Report-Water-Year-2021.pdf. Accessed September 29, 2022.

The General Plan policies require groundwater resources to be protected, as required by a sustainable groundwater management plan. Project operations would incrementally increase demands for groundwater for panel washing. As part of complying with permit requirements during ground-disturbing or other construction activities, water quality control measures and BMPs would be implemented to ensure that water quality standards would be achieved, including water quality objectives that protect designated beneficial uses of surface water and groundwater, as defined in the GSP.

As noted previously, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The project would not conflict with or obstruct implementation of the IRWMP, GSP or other groundwater management plan, and impacts would be *less than significant*.

Mitigation Measures

No mitigation is required.

2.11 LAND USE AND PLANNING

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Physically divide an established community?	☐	☐	☒	☐
(b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Evaluation

The project site is currently zoned by the County of Merced (County) as A-2 (Exclusive Agricultural), and in the *2030 Merced County General Plan*, is classified as Foothill Pasture.[55,56] As outlined in Merced County Zoning Code Section 18.10.010 – Purpose of Agricultural Zones, the zoning district is to provide for areas with considerably expanded agricultural enterprises, due mainly to the requirement of large parcels, which are more economically suitable to support farming activities. The 160-acre minimum parcel size facilitates farming and ranching operations and a variety of open space functions that are typically less dependent on soil quality and are often connected more with foothill and wetland locations.

Zoning Code Section 18.10.010 of the identifies "Energy Generation Facilities, Wind Farms, Biomass Fuel Manufacturing" (off-site energy use) as uses that would require a Conditional Use Permit (CUP) on Exclusive Agricultural land.

[55] Merced County. 2009. Merced County General Plan Land Use Designation Map. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=31a7197f80cc4c729c0c559ca08150a5. Accessed September 29, 2022.

[56] Merced County. 2022. Merced County Zoning Designation Map with Parcel Look Up. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=8c1725dd20594ea4b7129c9d097c048a. Accessed September 29, 2022.

(a) Would the project physically divide an established community?

The project site is undeveloped and is not in proximity to any established community. The proposed development, including improvements to roadway patterns and vehicle site access and circulation, would not introduce physical features that create divisions or barriers. The project would not physically divide an established community and the impact would be *less than significant*.

(b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

A project would have a significant impact related to land use consistency if it would be inconsistent with the General Plan or its elements, or applicable environmental goals or policies.

The following policies contained in the General Plan are applicable to the project site's zoning of A-2 Exclusive Agriculture lands:[57]

- **Policy AG-2.2: Agricultural Land Mitigation (RDR).** Protect productive agricultural areas from conversion to non-agricultural residential uses by establishing and implementing an agricultural mitigation program that matches acres converted with farmland acres of similar quality to those converted preserved at a 1:1 ratio.
- **Program AG-J: Agricultural Conservation Easement Program (MPSP).** The County shall develop and adopt and Agricultural Land Mitigation Program ordinance. The ordinance shall ensure that agricultural mitigation is required for the conversion or change from an agricultural use to a predominantly non-agricultural use prior to, or concurrently with, approval of a zone change from agricultural to nonagricultural zoning designation, or other discretionary action by the County.
- **Policy AG-3.11: Solar and Wind Energy Production Facilities (RDR)** Encourage the installation of solar and wind energy production facilities in agricultural areas so long as they do not result in a tax burden to the County, do not result in permanent water transfers off of productive agricultural land, or do not require cancellation of Williamson Act contracts. In addition, these facilities should include dedications of agricultural land and habitat mitigation, measures to control erosion, and assurances for financing decommissioning activities

The project does not propose any new, expanded, or modified land use in the project area and would not conflict with the existing and surrounding uses; therefore, impacts would be *less than significant*.

Mitigation Measures

No mitigation is required.

[57] Merced County. 2013. *2030 Merced County General Plan*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed December 19, 2022.

2.12 MINERAL RESOURCES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐
(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?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The project is located in an area characterized by grazing operations and sloping grassland. The project proposes construction of an approximately 5 MW solar PV electric generating facility on approximately 33 acres of the 318-acre parcel. While the project is not located on a mapped Mineral Resources Zone, the project is located between a mapped MRZ-1 area, which indicates areas where little likelihood exists for the presence of significant concrete aggregate resources, and an MRZ-2 area, which indicates the presence of significant concrete aggregate resources.[58]

In 1999, California Geologic Survey (CGS) published a report (OFR 99-08) to classify mineral resources within Merced County including concrete aggregate, gold, clay, and diatomite/gypsite. OFR 99-08 noted that the aggregate met quality specifications for use in PCC and AC (concrete aggregate). Because of its importance to economic growth in Merced County, a subsequent report was developed in 2021 titled *Update of the Mineral Land Classification for Concrete Aggregate Resources of Merced County, California Special Report 252*,[59] which updates the status of concrete aggregate resources detailed in the 1999 report. The 2021 Update report includes major finding such as:

- There are approximately 1.189 billion tons of concrete aggregate resources available in Merced County.
- The 50-year demand through 2068 is estimated to be approximately 149 million tons of construction aggregate; 120.6 million tons of which will be required for concrete aggregate.
- Concrete aggregate reserves are projected to be depleted by 2048 if no new mines are permitted, and current production trends continue.

Per the *Update of the Mineral Land Classification for Concrete Aggregate* report, there are known mineral resources on or surrounding the project site.[60] Because the project would not require substantial

[58] California Geologic Survey. 2021. *Special Report 252 – Plate 1. Mineral Resource Zone Map for Concrete Aggregate in Merced County*. Parrish. 2021

[59] California Department of Conservation (CDOC). 2021. *Mineral Land Classification of Merced County, California*. Update of the Mineral Land Classification for Concrete Aggregate Resources of Merced County, California Special Report 252. California Department of Conservation Division of Mines and Geology.

[60] California Department of Conservation (CDOC). 1999. *Mineral Land Classification of Merced County, California*. DMG Open-file Report 99-08. California Department of Conservation Division of Mines and Geology.

ground disturbance and proposes balanced grading where all materials would be retained onsite, there would be no loss of availability of a known mineral resource, and the impact would be *less than significant*.

(b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

A significant impact may occur if a project site is located in a County-designated Mineral Resource Zone (MRZ). As stated in section 2.12(a), the project site is not located on an MRZ. The project is located between a mapped MRZ-1 area and an MRZ-2 area.[61]

The project site is located approximately 2,000 feet west of two identified mines; the Canyon Rock Pit Mine, operated by Canyon Rock Pit, and the Valley Sand & Gravel, operated by the Valley Sand & Gravel Company.[62] Per the General Plan, sand and gravel aggregate mines are located near existing major rivers and creeks.[63] The deposits being mined are the Banos Creek Fan and the Los Banos Valley, as shown in the Natural Resources Element Figure 8-10.[64]

As stated in section 2.12(a), the project is not located in the MRZs, would involve balanced grading, and would not result in the loss of availability of a locally important mineral resources recovery site; therefore, the impact would be *less than significant.*

Mitigation Measures

No mitigation is required.

[61] California Geologic Survey. 2021. *Special Report 252 – Plate 1. Mineral Resource Zone Map for Concrete Aggregate in Merced County*. Parrish. 2021

[62] Ibid.

[63] Merced County. 2012. *2030 Merced County General Plan, Chapter 8: Natural Resources*. Available at: https://web2.co.merced.ca.us/pdfs/planning/generalplan/DraftGP/BackroundRpt_2030/MCGPU_BR_Ch8_NatRes-2012-11-30.pdf. Accessed December 19, 2022.

[64] Ibid.

2.13 NOISE

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in:				
(a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
(b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
(c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	☒

Environmental Evaluation

(a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The General Plan identifies the major sources of noise in Merced County to be traffic on I-5, state highways and local roads, railroad operations, aircraft operations, commercial uses, active recreation areas, and outdoor play areas.[65] The proposed project is located in a rural area zoned by the County as A-2 (Exclusive Agriculture) and classified as Foothill Pasture in the General Plan.[66,67] Construction of the project would increase noise in the project vicinity and involve site preparation, grading, construction, and architectural coating work. The noise generated from project construction would be temporary and is anticipated to last approximately 6 months.

There are no sensitive receptors in the project area. The nearest sensitive noise receptors are campers at the Los Banos Creek Campground, located approximately 4,800 feet (0.9 miles) southwest of the project site. Per General Plan Implementation Goal HS-7, the project would be required to limit noise levels at transient residential land uses to 65 decibels (dB) day-night average noise level (Ldn).[68]

[65] Merced County. 2013. *2030 Merced County General Plan Health and Safety Element*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed December 21, 2022.

[66] Merced County. 2009. Merced County General Plan Land Use Designation Map. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=31a7197f80cc4c729c0c559ca08150a5. Accessed December 21, 2022.

[67] Merced County. 2022. Merced County Zoning Designation Map with Parcel Look Up. Available at: https://mercedcounty.maps.arcgis.com/apps/webappviewer/index.html?id=8c1725dd20594ea4b7129c9d097c048a. Accessed December 21, 2022.

[68] Merced County. 2013. *2030 Merced County General Plan Health and Safety Element*. December 10. Available at: https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId=. Accessed December 21, 2022.

Per County Code Section 10.60.030 ("Sound Level Limitations"), the County sets limitations on noise levels at the property line of affected parcels and states the following: No person shall cause, suffer, allow, or permit the operation of any sound source on private property in such a manner as to create a sound level that results in any of the following, when measured at or within the real property line of the receiving property: Exceed the background sound level by at least ten (10) dBA during daytime hours (7:00 a.m. to 10:00 p.m.) and by at least five dBA during nighttime hours (10:00 p.m. to 7:00 a.m.). The background sound level is not permitted to exceed 65 dBA Ldn on transient residential real property or 70 dBA Ldn on nonresidential real property; or exceed 75 dBA Lmax on transient residential real property or 80 dBA Lmax on nonresidential real property.

Pile driving is proposed during construction and may exceed noise levels outlined in County Code Section 10.60.030 ("Sound Level Limitations"). However, the nearest noise-sensitive receptors are located at the Los Banos Creek Campground, almost one mile from the project site's southeast corner. Campground visitors would not stay at the campground for an extended period. Additionally, installation of the solar facility's foundation would be short term during the 6 months of construction and minimized through the BMPs outlined in MM N-1.

County Code exempts several noise sources, including emergency signaling devices, exterior burglar alarms, domestic power tools, and construction activity between 7:00 a.m. and 6:00 p.m., if all construction equipment is properly muffled and maintained.[69] Therefore, project construction noise would be exempt from applicable standards, if conducted between 7:00 a.m. and 6:00 p.m. Implementation of **MM N-1** has been identified which set forth construction BMPs and quiet construction technology for abating noise and would reduce construction noise impacts to *less than significant with mitigation*.

Operationally, the project would not generate noise that would result in a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the General Plan or County Code. The facility would be remotely operated and would passively generate solar power; therefore, impacts would be *less than significant*.

(b) Generation of excessive groundborne vibration or groundborne noise levels?

Construction activities (e.g., ground-disturbing activities, including movement of heavy construction equipment and hauling of construction debris from the project site) may generate localized groundborne vibration and noise. Most proposed activities are consistent with other types of standard construction activities and would not be excessive. Groundborne noise and vibration resulting pile driving activities would be minimized through implementation of **MM N-1**; therefore, impacts would be *less than significant with mitigation*.

(c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 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?

The project is not located within the vicinity of a private airstrip or an airport land use plan and would not expose people residing or working in the project area to excessive noise levels; therefore, *no impacts* would occur.

[69] Merced County. *County Code Chapter 10.60 NOISE CONTROL*. Available at: https://library.qcode.us/lib/merced_county_ca/pub/county_code/item/title_10-chapter_10_60. Accessed December 21, 2022.

Mitigation Measures

MM N-1: **Construction Noise Control Best Management Practices:** During construction, the applicant shall follow the construction noise best management practices below:

1. Construction work hours shall be limited to the hours of 7:00 a.m. to 6:00 p.m., every day. No construction shall be permitted on Sundays and federal and state holidays.
2. Heavy equipment engines shall be covered, and exhaust pipes shall include a muffler in good working condition.
3. Stationary equipment such as compressors, generators, and welder machines shall be located as far away from surrounding residence and sensitive receptors as possible. The project shall connect to existing electrical service at the site to avoid the use of stationary, diesel-fueled, or other alternatively fueled power generators, if feasible.
4. Impact tools such as jack hammers shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. When use of pneumatic tools is unavoidable, it shall be ensured the tool will not exceed a decibel limit of 85 dBA at a distance of 50 feet. Pneumatic tools shall also include a noise suppression device on the compressed air exhaust.
5. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.

2.14 POPULATION AND HOUSING

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Evaluation

(a) Would the project induce substantial unplanned 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)?

Construction job opportunities created as a result of the project are not expected to result in substantial population growth in the area. The on-site construction workforce would consist of laborers, craftsmen, and supervisory, support, and construction management personnel. Up to 40 workers would be on-site at the peak. These workers would be on-site during the 6 months of construction. Construction workers are anticipated to be local or regional and would not be likely to relocate their household due to project work.

Operation of the project would require two staff that may choose to move to the area. Therefore, significant housing or population impacts would not result from construction of the project and the project would not induce substantial unplanned population growth; therefore, impacts would be *less than significant*.

(b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project includes construction of a solar facility on agricultural land. No housing is proposed and the project would not involve the demolition or displacement of substantial numbers of existing people or housing; therefore, *no impacts* would occur.

Mitigation Measures

No mitigation is required.

2.15 PUBLIC SERVICES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
(a) Fire protection?	☐	☐	☒	☐
(b) Police protection?	☐	☐	☒	☐
(c) Schools?	☐	☐	☒	☐
(d) Parks?	☐	☐	☒	☐
(e) Other public facilities?	☐	☐	☒	☐

Environmental Evaluation

(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection?

The Merced County Fire Department provides fire protection services to the County, which includes fire suppression, hazardous materials mitigation, paramedic response, and urban search and rescue, through Station 72, located at 525 H Street, Los Banos, approximately 6.5 miles east of the project site (approximately 19 minutes trip by vehicle).

The project would involve industrial uses and would be required to conform to the 2019 California Fire Code, as adopted by the County in County Code Section 16.30.010. The project would represent an expansion and intensification of industrial uses and square footage, but the increase would not result in a

substantial change to service ratios for Fire Station 72 and would not require the need for new facilities or to physically alter Fire Station 72 to maintain performance objectives. Therefore, the project would not substantially increase the demand for fire protection services, and impacts would be *less than significant*.

(b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

The Merced County Sheriff's Office provides police service to the project site and is located at 445 I St, Los Banos, approximately 6.5 miles east of the project site, and approximately 19 minutes by vehicle. The Sheriff's Office provides court protection, jail administration, and coroner service for the entire county, and provides patrol, detective, and other police services for the unincorporated parts of the county.

The proposed project would be fenced, and access would be restricted. The project would represent an expansion and intensification of development on-site but would not increase the number of residents, require the need for new facilities, or substantially increase the demand for police protection services; therefore, impacts would be *less than significant*.

(c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools?

As discussed in Section 2.14, Population and Housing, the project does not involve residential uses and would not add substantial population to the project area. There could be a negligible increase in the number of students if any permanent staff with children relocate to the area. Due to the limited number of permanent staff, impacts would be *less than significant*.

(d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?

As discussed in Section 2.14, Population and Housing, the project does not involve residential uses and would not add substantial population to the project area. Therefore, the project would not substantially increase demand for recreational resources, and impacts would be *less than significant*.

(e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

As discussed in Section 2.14, Population and Housing, the project does not involve residential uses, the project would not add substantial population, and the facility would operate with limited staff. Impacts to stormwater, wastewater, and water facilities are discussed in Section 2.19, Utilities and Service Systems. The project would not substantially increase demand for governmental facilities or other public facilities, and impacts would be *less than significant*.

Mitigation Measures

No mitigation is required.

2.16 RECREATION

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
(b) 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?	☐	☐	☐	☒

Environmental Evaluation

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The project would construct and operate a solar energy facility and does not contain any residential or recreational components. The project would result in increased levels of activity on the site, but there would not be a substantial increase in new residents or permanent support staff associated with the project. Accordingly, the project would not result in a substantial increase of the use of any existing neighborhood, regional parks, or other recreational facilities, and impacts would be *less than significant*.

(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 recreational or recreation-related facilities are included with the project; therefore, *no impacts* would occur.

Mitigation Measures

No mitigation is required.

2.17 TRAFFIC AND CIRCULATION

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	☒
(b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
(c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
(d) Result in inadequate emergency access?	☐	☐	☒	☐

Environmental Evaluation

Conclusions in this chapter are based upon findings in the *Draft Transportation Impact Analysis* prepared for the project by the Central Coast Transportation Consulting on January 13, 2023 (Appendix D).

(a) Would the project conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The project would construct an approximately 5 MW solar PV electric generating facility on approximately 33 acres of a 318-acre privately owned parcel. The solar facilities would consist of a ground-mounted, single-axis tracking system featuring 13,905 PV panels and 40 string inverters. Other site improvements include perimeter fencing, signage, construction of a 12-foot-wide gravel access point on Canyon Road, or Volta Road.

Construction of the proposed project would be considered temporary over an approximate 6-month period. There would be a maximum of 40 employees during construction. Employee trips and construction deliveries would be considered temporary construction traffic. Following implementation of the proposed project, project operations would result in a small increase in trips by support staff.

There are no transit, bicycle, or pedestrian facilities in the project area. The solar facility would be remotely operated, and the proposed project would not conflict with a plan, ordinance, or policy addressing circulation, transit, roadway, or bicycle facilities; therefore, *no impacts* would occur.

(b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The proposed project would not increase the capacity of Canyon Road or, in the alternative, Volta Road and is not anticipated to increase operational-related vehicle miles traveled (VMT). The County has not adopted VMT thresholds at this time but is expected to consider and possibly adopt the November 2022

VMT Thresholds and Implementation Guidelines prepared for the Merced County Association of Governments (MCAG). These Guidelines recommend a screening threshold of 1,000 trips per day for projects consistent with the lead agency's General Plan, which are the same as the California Office of Planning and Research (OPR) VMT thresholds.

The estimated project trip generation is well below the recommended screening thresholds from both OPR and MCAG. A temporary minor increase in VMT would occur during the 6 months of project construction resulting from worker trips to the site, materials delivery, and material hauling. The completed project would not increase VMT permanently, and given the low trip generation rate, impacts would be *less than significant*.

(c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project does not propose a change in roadway alignment. However, in the Canyon Road access route there is a sharp curve in the proposed driveway that is in close proximity to the southern gate where the existing site access is located. This new driveway on Canyon Road is just west of an existing shared driveway. Per the Draft TIA, two adjacent driveways on a curve are not recommended on Canyon Road. CCTC recommends implementation of MM TRANS-1 to improve traffic safety on Canyon Road. If the Applicant uses Canyon Road for project access, MM TRANS-1 requires the applicant to utilize the existing Canyon Road shared driveway or provide a new shared driveway on Canyon Road that maximizes sight distance. A second access route is available from an unpaved north/south access road, which would connect Volta Road to the area where the proposed facilities would be constructed, crossing the project site. The historic access route is connected to Volta Road where it intersects with San Luis Canal on the eastern side of Interstate 5. This privately-owned access route is approximately 20 feet in width and does not contain any sharp turns. Construction-related impacts from any upgrades would not introduce sensitive receptors to the project area and would not be significant.

Additionally, as part of MM TRANS-1, the existing 15 mile per hour curve warning signs on Canyon Road east and west of the project access may not meet current California Manual on Uniform Traffic Control Devices (CAMUTCD) retro-reflectivity standards, and replacement is recommended by CCTC.

Typical operations of the proposed project would produce very few trips and have a less-than-significant impact to transportation. However, construction traffic could impact traffic operations by adding employee and construction vehicles. Implementation of MM TRANS-2 requires the applicant to prepare and submit a Construction Traffic Management Plan (TMP), which would include information on construction area signage; timing and routes for deliveries of heavy equipment and building materials; and employee and emergency vehicle access to the project site.

With implementation of MM TRANS-1 and TRANS-2, the project would not increase hazards due to a geometric design. Impacts would be considered *less than significant with mitigation incorporated*.

(d) Would the project result in inadequate emergency access?

The project proposes construction of a solar energy facility. The facility will be remotely operated, and no person would be on-site during project operation, except for routine maintenance. The facility would have a perimeter fence with a Knox box for emergency personnel to access the site.

The Merced County Fire Department maintains standards for access roadways to provide for adequate emergency access. Encroachment Permits issued by the County would be required for construction of the proposed facility within public ROW. During construction and installation of underground pipeline within

public ROW, there may be temporary lane closures that could cause delays and queuing of vehicle traffic, and thereby interfere with emergency services. However, there are adequate alternative routes, emergency vehicles would be expedited through the construction zone, and emergency service providers would be informed of the project so they could choose alternate routes as needed. All impacts related to lane closures would cease after project completion.

As stated in Impact Discussion 2.9(f) in Section 2.9, *Hazards and Hazardous Materials*, emergency response coordinated by the County fire and sheriff protection would remain the same as under existing conditions because the response time and distance would remain the same. Therefore, the proposed project would not result in inadequate emergency access, and impacts would be *less than significant*.

Mitigation Measures

TRANS-1 **Access Road Safety.** The applicant shall avoid construction of a new driveway onto Canyon Road. The applicant shall, if using the southern access entrance to project site, utilize existing Canyon Road shared driveway or provide new shared driveway on Canyon Road maximizing sight distance. As part of traffic safety on Canyon Road, the applicant shall replace the existing 15 mile per hour curve warning (W1-1 and W13-1P) signs on Canyon Road to meet current California Manual on Uniform Traffic Control Devices (CAMUTCD) retro-reflectivity standards.

TRANS-2 **Prepare a Construction Traffic Management Plan (TMP)** Prior to the start of construction, the applicant shall, with input from Caltrans District 10 and County Public Works, provide construction area signage, access routes, and timing. The TMP shall be prepared in accordance with both the California Department of Transportation Manual on Uniform Traffic Control Devices (CAMUTCD) and the Work Area Traffic Control Handbook and shall include, but not be limited to, the following items:

1. Construction area signage;
2. Timing and routes for deliveries of heavy equipment and building materials;
3. Employee and emergency vehicle access to the project site.

2.18 TRIBAL CULTURAL RESOURCES

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Evaluation

(a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

(i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

The County has not received notification from any Native American tribes requesting notification of project per the requirements of AB 52. Therefore, no notices were provided under AB 52 related to Tribal Cultural Resources.

Kleinfelder, through preparation of the *Cultural Resources Identification Project for the Canyon Road Solar Project, Merced County, California*,[70] contacted the Native American Heritage Commission (NAHC) and requested a Sacred Lands File search of the APE. The NAHC responded on June 28, 2022, that the SLF search returned negative results and provided a list of Native American contacts. Kleinfelder distributed letters to the list of Native American contacts on July 5, 2022, requesting information on tribal cultural resources in or near the APE. A response was received from the following contact:

- Southern Sierra Miwuk Nation: Sandra Chapman, Chairperson. The tribe requested to proceed with consultation on July 31, 2022, based on the location of the project area. A follow-up email on September 12, 2022, stated that the tribe had negative results for known tribal resources within the APE and no monitors were available. The tribe requested information on the protocol for inadvertent findings, which Kleinfelder provided via email.

No responses were received from the following contacts:

- Amah Mutsun Tribal Band: Valentin Lopez, Chairperson
- Dumna Wo-Wah Tribal Government: Robert Ledger, Chairperson.
- North Valley Yokuts Tribe: Timothy Perez and Katherine Perez, Chairperson
- Santa Rosa Rancheria Tachi Yokut Tribe: Leo Sisco, Chairperson

[70] Kleinfelder. 2022. *Cultural Resources Inventory Report: Canyon Road Solar Project, Merced County, California*. Prepared for RPCA Solar 7, LLC, Renewable Properties, LLC. July.

- Tule River Indian Tribe: Neil Peyron, Chairperson, Kerri Vera, Environmental Department, Neil Peyron, Chairperson and Joey Garfield, Tribal Archaeologist
- Wuksache Indian Tribe/Eshom Valley Band: Kenneth Woodrow, Chairperson

With implementation of **MM CUL-1**, impacts with regards to accidental discovery of tribal cultural resources would be *less than significant with mitigation*.

(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Background research, survey results, and Native American coordination identified one prehistoric isolate, a mano (CRSP-ISO-2) and one historic era isolate, an amber glass bottle top (CRSP-ISO-3) within the APE, neither of with is eligible for the NRHP or CRHR. If appropriate, the archaeologist and Tribal Historic Preservation Officer (THPO) may introduce archaeological and tribal cultural monitoring on-site, and an archaeological report should be written detailing all archaeological finds and submitted to the County in consultation with the tribe's THPO.

With implementation of **MM CUL-1**, impacts to tribal cultural resources would be *less than significant with mitigation*.

Mitigation Measures

Implement Mitigation Measure **MM CUL-1**.

2.19 UTILITIES AND SERVICE SYSTEMS

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the project:				
(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
(d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Evaluation

(a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

WATER

The project proposes construction of a solar energy facility. Construction activities and operation of the solar energy facility would not result in the relocation or construction of new or expanded water treatment facilities, and *no impacts* would occur.

WASTEWATER

The facility would operate autonomously and would not require wastewater facilities. The project would not result in the relocation or require construction of wastewater treatment facilities, and *no impacts* would occur.

STORMWATER

The project is not required to implement an erosion/pollution control plan under the General National Pollution Discharge Elimination System (NPDES) Permit, as the site is located outside the Municipal Separate Storm Sewer System (MS4) stormwater boundary. All stormwater would remain on-site; therefore, impacts would be *less than significant*.

ELECTRICITY

The project is proposed to connect to PG&E's pre-existing electrical distribution system located on the southeast side of the parcel. The power generated from this facility would be sold to PG&E through a long-term PPA, and impacts would be *less than significant*.

TELECOMMUNICATIONS

No telecommunications are proposed as part of this project; therefore, *no impacts* would occur.

(b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed solar facility would operate autonomously, and up to two staff persons would be on-site for repairs as needed, and to wash the solar panels up to twice a year. There are no water connections to existing municipal services proposed as part of the project. However, water would occasionally be trucked in for panel washing, provided by SLDMWA, who would be the water supplier for the proposed

project.[71] SLDMWA provides water pumped from the Delta Mendota basin and would provide water services to the proposed project.[72] The water required for the infrequent washing of equipment at the proposed solar facility would be sourced from offsite and would not require the development of new onsite water facilities.

The project is estimated to use approximately 756,000 gallons (approximately 2.3 acre-feet per [AF]) during 6 months of construction, which would be delivered to the site by truck. During peak construction, the project is anticipated to use 12,000 gallons per day for 6 weeks, and 6,000 gallons per day during non-peak construction for dust control. The project's operational water use is expected to be approximately 15,000 gallons (0.04 AFY) for biannual panel washing. This amount of use is negligible, and the 2019 Westside-San Joaquin Integrated Regional Water Management Plan shows adequate supply to meet demand in Los Banos through 2040.[73] Impacts would be *less than significant*.

(c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As discussed under Impact Discussion 2.19.a, the solar facility would not add any additional demand to existing wastewater systems, and *no impacts* would occur.

(d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Solid waste pickup is provided to the project area and by private vendors such as Gilton Solid Waste,[74] which is a full-service waste management company that specializes in the collection, transport, processing, and diversion of waste generated by residents and businesses. Solid waste goes to the Billy Wright Landfill (located at 17173 South Billy Wright Road in Los Banos) for recycling, composting, and disposal. The landfill is permitted and has an anticipated closure date of 2054.[75] As of September 2010, the landfill has a remaining capacity of 11,370,000 cubic yards.[76] The project would generate solid waste during construction and negligible amounts of solid waste during operation. Billy Wright Landfill has adequate capacity to manage the solid waste disposal needs of the project. Therefore, impacts would be *less than significant*.

[71] San Luis & Delta Mendota Water Authority Available at: https://sldmwa.org/OHTDocs/Maps/SLDMWA%20Member%20Agencies%20Map2.jpg Accessed January 20, 2023.

[72] Ibid.

[73] San Luis & Delta-Mendota Water Authority (SLDMWA). 2019. *2019 Westside-San Joaquin Integrated Regional Water Management Plan*. January. Available at: https://sldmwa.org/IRWMP/WSJ%20IRWMP%202019%20Final_ADA-OK.pdf Accessed February 10, 2023.

[74] Merced County Regional Waste Authority (RWA). 2022. Merced County Refuse Disposal Contact Information. Available at: https://mcrwma.org/DocumentCenter/View/66/Merced-County-Refuse-DisposalRecycling-Contact-Information-PDF?bidId= Accessed September 13, 2022.

[75] California Department of Resources Recycling and Recovery (CalRecycle). 2019. SWIS Facility Detail. Billy Wright Disposal Site (24-AA-0002). Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2909?siteID=1864. Accessed September 13, 2022.

[76] Ibid.

(e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would be required to comply with all federal, state, and local ordinances for water, energy, and waste reduction and management. CALGreen requires that all a minimum of 65% of nonhazardous construction and demolition waste be recycled and/or salvaged for reuse as a condition of approval on all building and/or demolition permits. The Billy Wright Landfill accepts construction and demolition waste, which would be generated by project construction. The project would comply with all federal, state, and local management and reduction statutes and regulations, and *no impacts* would occur.

Mitigation Measures

No mitigation is required.

2.20 WILDFIRE

Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
(a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
(c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☒	☐	☒	☐
(d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Environmental Evaluation

(a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

A significant impact may occur if a project is located in proximity to wildland areas and would pose a potential fire hazard, which could affect persons or structures in the area in the event of a fire. The project area is located in a rural grassland area and is within a Moderate Fire Hazard Severity Zone (FHSZ) in a State Responsibility Area (SRA).[77] The nearest Very High FHSZ is located approximately eight miles west of the project site. The project is not located in a wildland–urban interface (WUI).[78] Implementation

[77] California Department of Forestry and Fire Protection (CAL FIRE). 2022. FHSZ Viewer. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed December 21, 2022.

[78] Association of Bay Area Governments (ABAG). 2020. *Wildland-Urban Interface Fire Threat Interactive Map*. Available at: https://www.arcgis.com/apps/mapviewer/index.html?layers=a4985d64969743db8feddf01c96c9435. Accessed December 21, 2022.

of the proposed project would not generate traffic trips, would not include habitable structures and would ensure roadways remain accessible via I-5. The project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and impacts would be *less than significant*.

(b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

As noted in Section 2.9 Hazards and Hazardous Materials, the nearest Very High FHSZ is located approximately eight miles west of the project site. The facility would be remotely operated, and there would not be a significant risk of loss, injury, or death involving wildland fires.[79] The site is sloped and adjacent to I-5 and would therefore not exacerbate wildfire risks. Additionally, the project does not propose habitable structures and would not require frequent onsite presence; therefore, it would not expose occupants to pollutant concentrations or other risk from a wildfire, and impacts would be *less than significant*.

(c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Development of the proposed project would require installation of roads and utility infrastructure. The existing PG&E powerlines that cross the project site's southeastern corner would be connected to the proposed project during construction. The project is located in a FHSZ rated as Moderate,[80] and the nearest Very High FHSZ is located approximately eight miles west of the project site. The project has the potential to exacerbate risk during construction and operation. Because the project site is located in a moderate FHSZ and is located along an accessible road, impacts would be considered *less than significant.*

(d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project is not land classified as a very high FHSZ. There are no habitable structures in the project vicinity and the project does not propose development of habitable structures onsite. The project site does and immediately surrounding areas are not subject to significant slope, flooding, or landslide risk. Therefore, project implementation would not expose people or structures to significant risks and impacts would be *less than significant*.

[79] California Department of Forestry and Fire Protection (CAL FIRE). 2022. FHSZ Viewer. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed December 21, 2022.

[80] Ibid.

Mitigation Measures

No mitigation is required.

2.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Environmental Issues	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
(a)	Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
(b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
(c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Environmental Evaluation

(a) Does the project have the potential to substantially 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, substantially 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?

The project site is located in Merced County on Canyon Road and near the Los Banos Reservoir. The project site contains habitat that was identified as moderately suitable for 4 special-status wildlife species. Impacts to special-status plant and wildlife species would be less than significant with implementation of **MM BIO-1** through **MM BIO-6** and **MM GEO-1**. Therefore, the project would have a less than significant impact on biological resources.

The project site is not known to have any association with an important example of California's history or prehistory. Construction phase procedures would be implemented in the event any archaeological or paleontological resources are discovered during grading and excavation, consistent with **MM CUL-1** and **MM GEO-2**. Implementation of these mitigation measures would ensure that impacts related to cultural, tribal cultural, and paleontological resources would be *less than significant with mitigation*.

(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

The project would have less-than-significant impacts to aesthetics, agriculture, air quality, energy, GHGs, hazards and hazardous materials, hydrology and water quality, land use, minerals, noise, population and housing, public services, recreation, utilities and service systems, and wildfire.

The project's contribution to long-term, cumulative impacts would be less than significant, primarily because project impacts would be confined to the approximately 33-acre site, the project would be required to implement the required mitigation measures, and the project is consistent with General Plan goals and policies as well as County development standards. Given the size of the project, its limited duration, and the implementation of mitigation measures to reduce all potential impacts, the incremental construction effects of the proposed project would not contribute to a cumulatively considerable impact. Therefore, impacts would be *less than significant with mitigation*.

(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The new solar facility would provide renewable energy for PG&E through a PPA. The project lessens the use of fossil fuels, improving air quality and community health. Therefore, there would be no substantial, adverse impacts on human beings, directly or indirectly, and impacts would be *less than significant*.

CHAPTER 3. PREPARERS OF THE INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

3.1 LEAD AGENCY

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APPENDIX A

Site Plans

APPENDIX B

Air Quality & Greenhouse Gas Emissions Calculations Technical Memorandum

APPENDIX C

Biological Resources Assessment

APPENDIX D

Draft Transportation Impact Analysis