

Draft Environmental Impact Report

SCH# 2022110558

Volume 2
Appendices A through E

PELICANS JAW HYBRID SOLAR PROJECT by Pelicans Jaw Solar, LLC (*PP21124*)

Conditional Use Permit No. 3, Map No. 5
General Plan Amendment No. 2, Map No. 5



Kern County
Planning and Natural Resources Department
Bakersfield, California

August 2023

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General Plan Amendment No. 2, Map No. 5



Kern County
Planning and Natural Resources Department
Bakersfield, California

Technical Assistance by:
Kimley-Horn

August 2023

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Appendices – Volume 2

NOTE TO REVIEWER OF ELECTRONIC FILES:

To assist you in reviewing this electronic document, “bookmarks” and/or “links” have been provided for easier navigation between sections. When available, bookmarks are located in the panel to the left. Links are highlighted in **BLUE** in the Table of Contents. Clicking on either the bookmarks or links will take you to the selected item. This document may consist of multiple linked PDF files. If saving this document to your computer, you must save all corresponding files to a directory on your hard drive to maintain the manner in which these PDF documents are linked.

Appendix A: [Initial Study/Notice of Preparation and Notice of Preparation Responses](#)

Appendix B: [Agricultural Conversion Technical Study](#)

Appendix C: [10 Year Farming History](#)

Appendix D-1: [Air Quality, Greenhouse Gas Emissions, and Energy Technical Report](#)

Appendix D-2: [Optical Ground Wire Desktop Environmental Analysis](#)

Appendix E: [SJVAPCP and SCAQMD Amicus Curiae Brief](#)

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Appendix A
Initial Study/Notice of Preparation and Notice of Preparation
Responses

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Lorelei H. Oviatt, AICP, Director
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Bakersfield, CA 93301-2323
Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: <http://kernplanning.com/>



**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

DATE: November 23, 2022

TO: See Attached Mailing List

FROM: Kern County Planning and Natural
Resources Department
Attn: Matthew Hall
2700 "M" Street, Suite 100
Bakersfield, CA 93301
(661)862-8611; hallmat@kerncounty.com

SUBJECT: NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE PELICAN'S JAW HYBRID SOLAR PROJECT BY PELICAN'S JAW SOLAR, LLC

The Kern County Planning and Natural Resources Department as Lead Agency (per CEQA Guidelines Section 15062) has determined that preparation of an Environmental Impact Report (per CEQA Guidelines 15161) is necessary for the proposed project identified below. The Planning and Natural Resources Department solicits the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval of the project.

You are invited to view the NOP and Initial Study and submit written comments regarding the scope and content of the environmental information in connection with the proposed project should you wish to do so. Due to the limits mandated by State law, your response must be received by **December 23, 2022 at 5:00 p.m.** Comments can be submitted to the Kern County Planning and Natural Resources Department at the address shown above or to hallmat@kerncounty.com. A Scoping meeting will be held on **December 14, 2022 at 1:30 p.m.**

PROJECT TITLE: Pelican's Jaw Hybrid Solar Project by Pelican's Jaw Solar, LLC (PP21124); GPA No. 2, Map No. 5; CUP No. 3, Map No. 5

PROJECT LOCATION: The project site is located northwest of the Twisselman Road and Lost Hills Road intersection and immediately south of the Kern County/Kings County border, approximately 8 miles north of the community of Lost Hills, approximately 2 miles east of Interstate 5. The proposed project is located in the northwestern portion of the Kern County Valley Region.

The project site is located in Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East in the Mount Diablo Base and Meridian (MDB&M).

PROJECT DESCRIPTION: The proposed Pelicans Jaw Hybrid Solar Project is a proposal by Pelicans Jaw Solar, LLC (project proponent) to construct and operate a photovoltaic (PV) solar facility and associated infrastructure to generate up to 500 megawatts (MW) of renewable electrical energy on 3,756.46 acres of privately-owned land. The project will include a Battery Energy Storage System (BESS) capable of storing approximately 2,000 megawatt hours (MWh) of energy within approximately 100 acres of the overall project site.

The project would consist primarily of PV panels, a single-axis tracker system, inverters and transformers, electrical cabling and communication lines, on-site switchgear, a collector substation, a generation interconnection (gen-tie) line, a BESS, access roads, a security fence, an operations and maintenance (O&M) facility, and a supervisory control and data acquisition (SCADA) system. The project would also include a Pacific Gas and Electric (PG&E) switching station that would interconnect with the existing PG&E 230-kilovolt (kV) overhead transmission lines that traverse the project site. The PG&E switching station would be located on-site, within the project boundaries.

Implementation of the project as proposed includes the following requests:

- a) Conditional Use Permit (CUP No. 3, Map No. 5) to allow for the construction and operation of solar facilities with a total generating capacity of approximately 500 MW, and up to 2,000 MWh of energy storage, on 3,756.46 acres, with the energy storage located on an area encompassing no more than 100 acres as an accessory use, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance.

- b) General Plan Amendment to the Circulation Element of the Kern County General Plan (GPA No. 2, Map No. 5) to remove future road reservations on the section and mid-section lines within the project boundaries.

The project has an anticipated construction time of 12 months, and an overall project lifespan of at least 35 years.

Documents can be viewed online at: <https://kernplanning.com/planning/notices-of-preparation/>

Signature:



Matthew Hall, Supervising Planner

Caltrans/Dist 6
Planning/Land Bank Bldg.
P.O. Box 12616
Fresno, CA 93778

State Dept of Conservation
Director's Office
801 "K" Street, MS 24-01
Sacramento, CA 95814-3528

State Dept of Conservation
Geologic Energy Management Division
11000 River Run Boulevard
Bakersfield, CA 93311

California Energy Commission
James W. Reed, Jr.
1516 Ninth Street
Mail Stop 17
Sacramento, CA 95814

California Fish & Wildlife
1234 East Shaw Avenue
Fresno, CA 93710

California Highway Patrol
Planning & Analysis Division
P.O. Box 942898
Sacramento, CA 94298-0001

Public Utilities Comm Energy Div
505 Van Ness Avenue
San Francisco, CA 94102

California Regional Water Quality
Control Board/Central Valley Region
1685 E Street
Fresno, CA 93706-2020

Kern County
Agriculture Department

Kern County Administrative Officer

Kern County Public Works Department/
Building & Development/Floodplain

Kern County Public Works Department/
Building & Development/Survey

Kern County
Env Health Services Department

Kern County Fire Dept (Put in FIRE BOX)
Regina Arriaga
Roxanne Routh
Jim Killam

Kern County Library/Beale
Local History Room

Carol Lawhon
Association Executive, IOM
Tehachapi Area Assoc of Realtors
803 Tucker Road
Tehachapi, CA 93561

Kern County Library
Delano Branch
925 - 10th Street
Delano, CA 93215

Kern County Parks & Recreation

Kern County Sheriff's Dept
Administration

Kern County Public Works Department/
Building & Development/Development
Review

Kern County Public Works
Department/Operations &
Maintenance/Regulatory Monitoring &
Reporting

Wasco Union High School Dist
P.O. Box 250
Wasco, CA 93280

Wasco Union Elementary School Dist
639 Broadway
Wasco, CA 93280

Lost Hills Union School Dist
P.O. Box 158
Lost Hills, CA 93249

Kern County Superintendent of Schools
Attention School District Facility Services
1300 - 17th Street
Bakersfield, CA 93301

KernCOG
1401 19th Street - Suite 300
Bakersfield, CA 93301

Lost Hills Water Dist
3008 Sillect Avenue, Ste 205
Bakersfield, CA 93308-6340

Rosedale-Rio Bravo Water Dist
P.O. Box 20820
Bakersfield, CA 93390-0820

Kern County Water Agency
3200 Rio Mirada Drive
Bakersfield, CA 93308

San Joaquin Valley
Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

West Side Mosquito
Abatement Dist.
P.O. Box 205
Taft, CA 93268

Adams, Broadwell, Joseph & Cardozo
Attention: Janet M. Laurain
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Kern Audubon Society
Attn: Frank Bedard, Chairman
4124 Chardonnay Drive
Bakersfield, CA 93306

Los Angeles Audubon
926 Citrus Avenue
Los Angeles, CA 90036-4929

Center on Race, Poverty
& the Environment
Attn: Marissa Alexander
1999 Harrison Street – Suite 650
San Francisco, CA 94612

Center on Race, Poverty
& the Environmental/
CA Rural Legal Assistance Foundation
1012 Jefferson Street
Delano, CA 93215

Defenders of Wildlife/
Kim Delfino, California Dir
980 - 9th Street, Suite 1730
Sacramento, CA 95814

Native American Heritage Council
of Kern County
Attn: Gene Albitre
3401 Aslin Street
Bakersfield, CA 93312

Pacific Gas & Electric Co
Land Projects
650 "O" Street, First Floor
Fresno, CA 93760-0001

Sierra Club/Kern Kaweah Chapter
P.O. Box 3357
Bakersfield, CA 93385

Southern California Gas Co
35118 McMurtrey Avenue
Bakersfield, CA 93308-9477

Southern California Gas Co
Transportation Dept
9400 Oakdale Avenue
Chatsworth, CA 91313-6511

Chumash Council of Bakersfield
2421 "O" Street
Bakersfield, CA 93301-2441

David Laughing Horse Robinson
P.O. Box 20849
Bakersfield, CA 93390

Kern Valley Indian Council
Attn: Robert Robinson, Chairperson
P.O. Box 401
Weldon, CA 93283

Kern Valley Indian Council
Historic Preservation Office
P.O. Box 401
Weldon, CA 93283

Santa Rosa Rancheria
Ruben Barrios, Chairperson
P.O. Box 8
Lemoore, CA 93245

Tejon Indian Tribe
Kathy Morgan, Chairperson
1731 Hasti-acres Drive, Suite 108
Bakersfield, CA 93309

Kitanemuk & Yowlumne Tejon Indians
Chairperson
115 Radio Street
Bakersfield, CA 93305

Tubatulabals of Kern County
Attn: Robert Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA 93240

Tule River Indian Tribe
Neal Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

San Fernando Band of Mission Indians
Attn: John Valenzuela, Chairperson
P.O. Box 221838
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Bakersfield, CA 93306-9704

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Fotowatio Renewable Ventures
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53 SW Yamhill Street
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San Francisco, CA 94101-1407

Wind Stream, LLC
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1275 - 4th Street, No. 107
Santa Rosa, CA 95404

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Renewal Dev, T&D Intercon
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Portland, OR 97209

Michael Strickler
Iberdrola Renewables, Sr Proj Mgr
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Portland, OR 97209

Big Pine Paiute Tribe of the Owens
Valley
Attn: James Rambeau, Sr., Chairperson
P.O. Box 700
Big Pine, CA 93513

Big Pine Paiute Tribe of the Owens
Valley
Attn: Sally Manning, Environmental
Director
P.O. Box 700
Big Pine, CA 93513

Big Pine Paiute Tribe of the Owens
Valley
Attn: Danelle Gutierrez, THPO
P.O. Box 700
Big Pine, CA 93513

Chumash Council of Bakersfield
Attn: Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA 93307

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Attn: Brandy Kendricks
30741 Foxridge Court
Tehachapi, CA 93561

Kern Valley Indian Community
Attn: Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella, CA 93240

Kern Valley Indian Community
Attn: Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA 93240

Kitanemuk & Yowlumne Tejon Indians
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115 Radio Street
Bakersfield, CA 93305

San Fernando Band of Mission Indians
Attn: Donna Yocum, Chairman
P.O. Box 221838
Newhall, CA 91322

Tule River Indian Tribe
Attn: Neal Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

Wuksache Indian Tribe/Eshom Valley
Band
Attn: Kenneth Woodrow, Chairperson
1179 Rock Haven Court
Salinas, CA 93906

Coastal Band of Chumash Indians
Attn: Mariza Sullivan, Chairperson
PO Box 4464
Santa Barbara, CA 93140

Fernando Tataviam Band of Mission
Indians
Attn: Jairo Avila
1019 Second Street, Suite I
San Fernando, CA 91340

Fernando Tataviam Band of Mission
Indians
Attn: Rudy Ortega
1019 Second Street, Suite I
San Fernando, CA 91340

Quechan Tribe of the Fort Yuma
Reservation
Attn: Jill McCormick
PO Box 1899
Yuma, AZ 58366

Quechan Tribe of the Fort Yuma
Reservation
Attn: Jordan Joaquin
PO Box 1899
Yuma, AZ 58366

Quechan Tribe of the Fort Yuma
Reservation
Attn: Virgil S. Smith
PO Box 1899
Yuma, AZ 58366

Quechan Tribe of the Fort Yuma
Reservation
Attn: Manfred Scott
PO Box 1899
Yuma, AZ 58366

San Manuel Band of Mission Indians
Attn: Ryan Nordness
26569 Community Center Drive
Highland, CA 92346

San Manuel Band of Mission Indians
Attn: Lynn Valbuena
26569 Community Center Drive
Highland, CA 92346

Salinan Tribe of Monterey, San Luis
Obispo Counties
Attn: Patti Dunton
7070 Morro Road, Suite A
Atascadero, CA 93422

Santa Rosa Indian Community of the
Santa Rosa Rancheria
Attn: Leo Sisco
PO Box 8
Lemoore, CA 93245

Santa Ynez Band of Chumash Indians
Attn: Kenneth Kahn
PO Box 517
Santa Ynez, CA 93460

Tejon Indian Tribe
Attn: Colin Rambo
PO Box 640
Arvin, CA 93203

Tejon Indian Tribe
Attn: Octavio Escobedo
PO Box 640
Arvin, CA 93203

Tubatulabals of Kern Valley
Attn: Robert L. Gomez, Jr.
PO Box 833
Weldon, CA 93283-0833

Xolon-Salinan Tribe
Attn: Karen White
PO Box 7045
Spreckles, CA 93962

Yak tityu tityu yak tilhihi – Northern
Chumash Tribe
Attn: Mona Tucker
660 Camino Del Ray
Arroyo Grande, CA 93420

So. San Joaquin Valley Arch Info Ctr
California State University of Bkfd
9001 Stockdale Highway
Bakersfield, CA 93311

Inyo County Planning Dept
P.O. Drawer "L"
Independence, CA 93526

Kings County Planning Agency
1400 West Lacey Blvd, Bldg 6
Hanford, CA 93230

Los Angeles Co Reg Planning Dept
320 West Temple Street
Los Angeles, CA 90012

San Bernardino Co Planning Dept
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

San Luis Obispo Co Planning Dept
Planning and Building
976 Osos Street
San Luis Obispo, CA 93408

Santa Barbara Co Resource Mgt Dept
123 East Anapamu Street
Santa Barbara, CA 93101

Tulare County Planning & Dev Dept
5961 South Mooney Boulevard
Visalia, CA 93291

Ventura County RMA Planning Div
800 South Victoria Avenue, L1740
Ventura, CA 93009-1740

U.S. Bureau of Land Management
Caliente/Bakersfield
35126 McMurtrey Avenue
Bakersfield, CA 93308

U. S. Fish & Wildlife Service
Division of Ecological Services
2800 Cottage Way #W-2605
Sacramento, CA 95825-1846

North West Kern Resource Cons Dist
5080 California Avenue, Suite 150
Bakersfield, CA 93309

Environmental Protection Agency
Region IX Office
75 Hawthorn Street
San Francisco, CA 94105

U.S. Dept of Agriculture/NRCS
5080 California Avenue, Ste 150
Bakersfield, CA 93309-0711

State Air Resources Board
Stationary Resource Division
P.O. Box 2815
Sacramento, CA 95812

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
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Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: <http://kernplanning.com/>



**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

DATE: November 23, 2022

TO: Surrounding Property Owners within
1,000 Feet of Project Boundary; and,
Interested Parties

FROM: Kern County Planning and Natural
Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301

SUBJECT: Notice of Preparation of an Environmental Impact Report – Pelican’s Jaw Hybrid Solar Project by Pelican’s Jaw, LLC (PP21124)

Dear Sir or Madam:

The Kern County Planning and Natural Resources Department has determined that preparation of an Environmental Impact Report (EIR) is necessary for the proposed project identified below. The purpose of this letter is to notify interested parties and surrounding property owners within 1,000 feet of the project boundaries of this determination. A copy of the Initial Study/Notice of Preparation (IS/NOP) prepared for this proposed project is available for viewing at the following Kern County website:

<https://kernplanning.com/planning/notices-of-preparation/>

The purpose of the IS/NOP is to describe the proposed project, specify the project location, and to identify the potential environmental impacts of the project so that Responsible Agencies and interested persons can provide a meaningful response related to potential environmental concerns that should be analyzed in the Environmental Impact Report.

You are invited to view the NOP and Initial Study and submit written comments regarding the scope and content of the environmental information in connection with the proposed project should you wish to do so. Due to the limits mandated by State law, your response must be received by **December 23 at 5:00 p.m.** Comments can be submitted to the Kern County Planning and Natural Resources Department at the address shown above or to hallmat@kerncounty.com. A Scoping meeting will be held on **Thursday, December 14 at 1:30 p.m.**, at the address listed above.

Please be advised that any comments received after the dates listed above will still be included in the public record for this project and made available to decision makers when this project is scheduled for consideration at a public hearing. Please also be advised that you will receive an additional notice in the mail once a public hearing date is scheduled for this project. You will also be provided additional opportunities to submit comments at that time.

PROJECT TITLE: Pelicans Jaw Hybrid Solar Project by Pelicans Jaw Solar, LLC (PP21124); GPA No. 2, Map No. 5; CUP No. 3, Map No. 5

PROJECT LOCATION: The project site is located northwest of the Twisselman Road and Lost Hills Road intersection and immediately south of the Kern County/Kings County border, approximately 8 miles north of the community of Lost Hills, approximately 2 miles east of Interstate 5. The proposed project is located in the northwestern portion of the Kern County Valley Region.

The project site is located in Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East in the Mount Diablo Base and Meridian (MDB&M).

PROJECT DESCRIPTION: The proposed Pelicans Jaw Hybrid Solar Project is a proposal by Pelicans Jaw Solar, LLC (project proponent) to construct and operate a photovoltaic (PV) solar facility and associated infrastructure to generate up to 500 megawatts (MW) of renewable electrical energy on 3,756.46 acres of privately-owned land. The project will include a Battery Energy Storage System (BESS) capable of storing approximately 2,000 megawatt hours (MWh) of energy within approximately 100 acres of the overall project site.

The project would consist primarily of PV panels, a single-axis tracker system, inverters and transformers, electrical cabling and communication lines, on-site switchgear, a collector substation, a generation interconnection (gen-tie) line, a BESS, access roads, a security fence, an operations and maintenance (O&M) facility, and a supervisory control and data acquisition (SCADA) system. The project would also include a Pacific Gas and Electric (PG&E) switching station that would interconnect with the existing PG&E 230-kilovolt (kV) overhead transmission lines that traverse the project site. The PG&E switching station would be located on-site, within the project boundaries.

Implementation of the project as proposed includes the following requests:

- a) Conditional Use Permit (CUP No. 3, Map No. 5) to allow for the construction and operation of solar facilities with a total generating capacity of approximately 500 MW, and up to 2,000 MWh of energy storage, on 3,756.46 acres, with the energy storage located on an area encompassing no more than 100 acres as an accessory use, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance.
- b) General Plan Amendment to the Circulation Element of the Kern County General Plan (GPA No. 2, Map No. 5) to remove future road reservations on the section and mid-section lines within the project boundaries.

The project has an anticipated construction time of 12 months, and an overall project lifespan of at least 35 years.

Should you have any questions regarding this project, or the Initial Study/Notice of Preparation, please feel free to contact me at (661) 862-8611 or hallmat@kerncounty.com

Sincerely,



Matthew Hall, Supervising Planner
Advanced Planning Division

Attachments: Local Vicinity Map

Azalea Solar Project - EIR
(CUP #10, Map #3;)
WO #PP21401

043 550 12 00 8
WEST VENTURES LLC
2770 MAIN ST STE 270
FRISCO TX 75033

043 210 17 00 4
WILLIAM & DORIS LAND &
ENERGY CO LLC
35244 OIL CITY RD
COALINGA CA 93210-9221

043 210 06 00 2
WILLIAM J MOUREN FARMING INC
35244 OIL CITY RD
COALINGA CA 93210

043 210 21 10 2
TIPTON WILLIAM W JR ET AL
777 SUNSET RIDGE RD
NORTHFIELD IL 60093

043 220 13 00 5
TURNER SARA E & REID J
1960 PARKSIDE DR
WALNUT CREEK CA 94596-3550

043 210 63 00 7
AERA ENERGY LLC
P O BOX 11164
BAKERSFIELD CA 93389-1164

043 250 02 00 2
AMIN ORCHARD CO
195 FAIRFIELD AV STE 1D
WEST CALDWELL NJ 07006

043 220 01 00 0
ANDERSON JAMES S
35244 OIL CITY RD
COALINGA CA 93210

043 210 21 01 4
BACA MARY LOUISE
8550 W CHARLESTON BLV #102 STE
340
LAS VEGAS NV 89117

043 210 08 02 6
BOGESS GENEVIEVE F
43909 SASSARI ST
TEMECULA CA 92592-9386

043 220 14 00 8
CASTRO FAMILY TRUST
3431 DELTA AV
LONG BEACH CA 90810

043 210 04 00 6
CHEVRON USA INC
P O BOX 1392
BAKERSFIELD CA 93302-1392

043 210 08 04 4
CLARK CLIFFORD A
2821 MIRANDA AV
ALAMO CA 94507-1427

043 210 69 00 5
DBF ACQUISITION CO LLC
11444 W OLYMPIC BL FLR 10TH
LOS ANGELES CA 90064

043 220 04 00 9
DUTTON MARGIT H
11617 KLING ST
N HOLLYWOOD CA 91602

043 220 08 02 9
EICHHOLTZ JOHN P & LINDA G LIV
TR
9261 MASSOT AV
SANTEE CA 92071

043 210 08 03 5
FRAME DONALD P
3014 W KEOGH CT
VISALIA CA 93291-4229

043 210 21 04 1
GATES GILBERT HENRY TRUST
145 EL PINAR
LOS GATOS CA 95032

043 210 21 03 2
GREEN LIVING TRUST
4209 SILL PL
BAKERSFIELD CA 93306

043 210 21 05 0
HAMILTON FAMILY TRUST
8550 W CHARLESTON BLV #102
STE 340
LAS VEGAS NV 89117

043 550 05 00 8
HARVEST PETROLEUM INC
2770 N MAIN ST STE 270
FRISCO TX 75033

043 220 08 01 0
HILLEGEIST FAMILY HOLDING
TRUST
PO BOX 1047
SELAH WA 98942-4047

043 220 06 01 4
HITCHCOCK GEORGEANN K ET
AL
4338 FAIR OAKS BL
SACRAMENTO CA 95864

043 210 21 06 9
JOSEPH FAMILY TRUST
8550 W CHARLESTON BLV #102 STE
340
LAS VEGAS NV 89117

043 210 21 02 3
KHRISTY BARBARA TRUST
PO BOX 1784
MEDFORD OR 97501-0140

043 210 42 00 6
LONGBOW LLC
1701 WESTWIND DR # 126
BAKERSFIELD CA 93301-3048

043 210 21 07 8
PIVOVAROFF HARRY A & VERA
8550 W CHARLESTON BLV #102 STE
340
LAS VEGAS NV 89117

043 220 02 00 3
RAIN LLC
35244 OIL CITY RD
COALINGA CA 93210

043 210 48 00 4
ROCK CREEK OIL LLC
10350 SANTA MONICA BL # 160
LOS ANGELES CA 90025-5055

043 220 05 00 2
SINGH LAKHBIR & KAUR
SUKHINDER
6336 LAFAYETTE AV
NEWARK CA 94560-2435

043 210 21 08 7
SPIEGLMAN EVELYN
8550 W CHARLESTON BLV #102 STE
340
LAS VEGAS NV 89117

043 220 03 00 6
TAYLOR DONALDSON &
NORMA J TR
12 DEVONSHIRE DR
NOVATO CA 94947-2032

043 210 21 09 6
TIPTON BENJAMIN PARKER ET AL
1346 JAMES AV
REDWOOD CITY CA 94062-2238

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: _____
 Lead Agency: _____ Contact Person: _____
 Mailing Address: _____ Phone: _____
 City: _____ Zip: _____ County: _____

Project Location: County: _____ City/Nearest Community: _____
 Cross Streets: _____ Zip Code: _____
 Longitude/Latitude (degrees, minutes and seconds): _____° _____' _____" N / _____° _____' _____" W Total Acres: _____
 Assessor's Parcel No.: _____ Section: _____ Twp.: _____ Range: _____ Base: _____
 Within 2 Miles: State Hwy #: _____ Waterways: _____
 Airports: _____ Railways: _____ Schools: _____

Document Type:

CEQA: <input type="checkbox"/> NOP	<input type="checkbox"/> Draft EIR	NEPA: <input type="checkbox"/> NOI	Other: <input type="checkbox"/> Joint Document
<input type="checkbox"/> Early Cons	<input type="checkbox"/> Supplement/Subsequent EIR	<input type="checkbox"/> EA	<input type="checkbox"/> Final Document
<input type="checkbox"/> Neg Dec	(Prior SCH No.) _____	<input type="checkbox"/> Draft EIS	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Mit Neg Dec	Other: _____	<input type="checkbox"/> FONSI	_____

Local Action Type:

<input type="checkbox"/> General Plan Update	<input type="checkbox"/> Specific Plan	<input type="checkbox"/> Rezone	<input type="checkbox"/> Annexation
<input type="checkbox"/> General Plan Amendment	<input type="checkbox"/> Master Plan	<input type="checkbox"/> Prezone	<input type="checkbox"/> Redevelopment
<input type="checkbox"/> General Plan Element	<input type="checkbox"/> Planned Unit Development	<input type="checkbox"/> Use Permit	<input type="checkbox"/> Coastal Permit
<input type="checkbox"/> Community Plan	<input type="checkbox"/> Site Plan	<input type="checkbox"/> Land Division (Subdivision, etc.)	<input type="checkbox"/> Other: _____

Development Type:

<input type="checkbox"/> Residential: Units _____ Acres _____	<input type="checkbox"/> Transportation: Type _____
<input type="checkbox"/> Office: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Mining: Mineral _____
<input type="checkbox"/> Commercial: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Power: Type _____ MW _____
<input type="checkbox"/> Industrial: Sq.ft. _____ Acres _____ Employees _____	<input type="checkbox"/> Waste Treatment: Type _____ MGD _____
<input type="checkbox"/> Educational: _____	<input type="checkbox"/> Hazardous Waste: Type _____
<input type="checkbox"/> Recreational: _____	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Water Facilities: Type _____ MGD _____	

Project Issues Discussed in Document:

<input type="checkbox"/> Aesthetic/Visual	<input type="checkbox"/> Fiscal	<input type="checkbox"/> Recreation/Parks	<input type="checkbox"/> Vegetation
<input type="checkbox"/> Agricultural Land	<input type="checkbox"/> Flood Plain/Flooding	<input type="checkbox"/> Schools/Universities	<input type="checkbox"/> Water Quality
<input type="checkbox"/> Air Quality	<input type="checkbox"/> Forest Land/Fire Hazard	<input type="checkbox"/> Septic Systems	<input type="checkbox"/> Water Supply/Groundwater
<input type="checkbox"/> Archeological/Historical	<input type="checkbox"/> Geologic/Seismic	<input type="checkbox"/> Sewer Capacity	<input type="checkbox"/> Wetland/Riparian
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Minerals	<input type="checkbox"/> Soil Erosion/Compaction/Grading	<input type="checkbox"/> Growth Inducement
<input type="checkbox"/> Coastal Zone	<input type="checkbox"/> Noise	<input type="checkbox"/> Solid Waste	<input type="checkbox"/> Land Use
<input type="checkbox"/> Drainage/Absorption	<input type="checkbox"/> Population/Housing Balance	<input type="checkbox"/> Toxic/Hazardous	<input type="checkbox"/> Cumulative Effects
<input type="checkbox"/> Economic/Jobs	<input type="checkbox"/> Public Services/Facilities	<input type="checkbox"/> Traffic/Circulation	<input type="checkbox"/> Other: _____

Present Land Use/Zoning/General Plan Designation:

Project Description: (please use a separate page if necessary)

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

_____ Air Resources Board	_____ Office of Historic Preservation
_____ Boating & Waterways, Department of	_____ Office of Public School Construction
_____ California Emergency Management Agency	_____ Parks & Recreation, Department of
_____ California Highway Patrol	_____ Pesticide Regulation, Department of
_____ Caltrans District # _____	_____ Public Utilities Commission
_____ Caltrans Division of Aeronautics	_____ Regional WQCB # _____
_____ Caltrans Planning	_____ Resources Agency
_____ Central Valley Flood Protection Board	_____ Resources Recycling and Recovery, Department of
_____ Coachella Valley Mtns. Conservancy	_____ S.F. Bay Conservation & Development Comm.
_____ Coastal Commission	_____ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
_____ Colorado River Board	_____ San Joaquin River Conservancy
_____ Conservation, Department of	_____ Santa Monica Mtns. Conservancy
_____ Corrections, Department of	_____ State Lands Commission
_____ Delta Protection Commission	_____ SWRCB: Clean Water Grants
_____ Education, Department of	_____ SWRCB: Water Quality
_____ Energy Commission	_____ SWRCB: Water Rights
_____ Fish & Game Region # _____	_____ Tahoe Regional Planning Agency
_____ Food & Agriculture, Department of	_____ Toxic Substances Control, Department of
_____ Forestry and Fire Protection, Department of	_____ Water Resources, Department of
_____ General Services, Department of	_____ Other: _____
_____ Health Services, Department of	_____ Other: _____
_____ Housing & Community Development	_____
_____ Native American Heritage Commission	_____

Local Public Review Period (to be filled in by lead agency)

Starting Date _____ Ending Date _____

Lead Agency (Complete if applicable):

Consulting Firm: _____ Applicant: _____
Address: _____ Address: _____
City/State/Zip: _____ City/State/Zip: _____
Contact: _____ Phone: _____
Phone: _____

Signature of Lead Agency Representative: _____ Date: _____

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

NOTICE OF PREPARATION/INITIAL STUDY CHECKLIST

Pelicans Jaw Hybrid Solar Project by Pelicans Jaw Solar, LLC

Conditional Use Permit No. 3, Map No. 5
General Plan Amendment No. 2, Map No. 5

PLN20-01383

(PP21124)

LEAD AGENCY:



Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370

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November 2022

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Introduction

Pursuant to the California Environmental Quality Act (CEQA), the Kern County Planning and Natural Resources Department (County) will initiate the preparation of an Environmental Impact Report (EIR) for the Pelicans Jaw Hybrid Solar Project (project) in the unincorporated area of northwestern Kern County, California. The purpose of this Notice of Preparation and Initial Study is to present the scope of the environmental analysis proposed by the County for the EIR for consideration by project stakeholders, including responsible and trustee agencies and the public, during the scoping period. The analysis provided in this Initial Study relies on information in the Kern County General Plan and other site-specific investigations undertaken by Pelicans Jaw Solar LLC (the Applicant) in support of the project's Conditional Use Permit (CUP) application: 10-Year Farming History Report, Agricultural Conversion Technical Study, Geological Assessment, Phase I Environmental Site Assessment, and Water Supply Assessment.

1. Project Description

1.1. Project Location

The proposed Pelicans Jaw Hybrid Solar Project is a proposal by Pelicans Jaw Solar, LLC (project proponent) to construct and operate a photovoltaic (PV) solar facility and associated infrastructure to generate up to 500 megawatts (MW) of renewable electrical energy and a Battery Energy Storage System (BESS) capable of storing approximately 2,000 megawatt hours (MWh) of energy within approximately 100 acres of the overall 3,943 acres of privately-owned land.

The project site is located on 3,943 acres of private property in unincorporated Kern County, California, adjacent to the southern border of Kings County with direct access from Interstate 5 (I-5) located approximately 2 miles to the west. The project site is situated within portions of Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East, San Bernardino Base and Meridian. The project site is generally bordered by Kern and Kings County line to the north, Lost Hills Road to the east, Twisselman Road to the south, and I-5 to the west. See **Figure 1-1: Regional Vicinity Map**, **Figure 1-2: Local Vicinity Map**, and **Figure 1-3: USGS Topographic Map** which also shows proposed access routes being considered.

The project site is located entirely within Kern County to the west of the Kern River Channel. The topography is characterized by an overall slope to the east/northeast. Elevations range from approximately 212 feet above mean sea level near the northeastern corner of the project site to approximately 223 feet above mean sea level at the central portion of the site. The project site and surrounding properties are currently vacant and have been used for cattle and sheep grazing since 2012. No crop cultivation has occurred on the project site within the last 10 years (between 2012 and 2022).

The project site comprises 26 parcels of land in Kern County, which are listed in **Table 1-1: Project Assessor Parcel Numbers and Corresponding Map Codes, Existing and Proposed Zoning, and Acreage**. **Table 1-1** provides Assessor's Parcel Number (APN), land use designation, existing zoning, and acreage of each parcel. The parcels with APNs are also shown in **Figure 1-4: Existing Parcel Map**.



TABLE 1-1: PROJECT ASSESSOR PARCEL NUMBERS AND CORRESPONDING MAP CODES, EXISTING AND PROPOSED ZONING, AND ACREAGE

APN	General Plan Map Code Designation	Existing Zoning	Acres
CUP Parcels			
044-101-02	8.1/2.5, 8.3, 8.3/2.5	A	87.29
044-101-03	8.1/2.5, 8.3, 8.3/2.5	A	254.69
044-101-05	8.3	A	112
044-101-06	8.3, 8.3/2.5	A	65.73
044-102-01	8.1/2.5	A	320
044-102-03	8.1/2.5	A	160
044-102-05	8.1/2.5	A	91.64
044-102-21	8.1	A	153.9
044-102-22	8.1, 8.3/2.5	A	160
044-103-01 (portion of)	8.1/2.5, 8.3/2.5	A	160
044-103-04 (portion of)	8.1/2.5, 8.3/2.5	A	163.26
044-103-06 (portion of)	8.1/2.5, 8.3/2.5	A	478.65
044-103-08	8.1, 8.1/2.5, 8.3/2.5	A	60
044-103-09 (portion of)	8.1/2.5, 8.3/2.5	A	101.35
044-110-01	8.3	A	10
044-110-03	8.3	A	20
044-110-25	8.3	A	10
044-130-16	8.3, 8.3/2.5	A	158.18
044-130-18	8.3, 8.3/2.5	A	120
044-130-21	8.3, 8.3/2.5	A	200
044-130-39	8.3/2.5	A	230
044-150-05	8.1, 8.1/2.5, 8.3/2.5	A	160
044-150-17	8.1, 8.3/2.5	A	479.77
CUP Parcel Sub-Total			3,756.46
Gen-tie Parcels			
044-102-23 ^{1,3}	8.1	A	6.1
044-101-16 (portion of) ^{1,3}	8.3	A	80
044-101-11 (portion of) ³	8.3, 8.3/2.5	A	100
Gen-tie Parcel Sub-Total			186.1
COMBINED TOTAL			3,942.56^{2,3}
<p>Notes: APN = Assessor’s Parcel Number; 8.1 = Intensive Agriculture; 8.1/2.5 = Intensive Agriculture/Flood Hazard; 8.3 = Extensive Agriculture; 8.3/2.5 = Extensive Agriculture/Flood Hazard; A = Exclusive Agriculture.</p> <p>¹ A 200-foot-wide easement is included within each of these parcels to accommodate interconnection with the existing PG&E 230-kV overhead transmission lines.</p> <p>² Table 1-1 acreage calculations are based on GIS data from Kern County and include the full parcel totals (Kern County 2022a). As noted in the table above development would only take place on portions of the identified parcels. At this time, the entire parcel is considered to be developed to provide a conservative estimate of the project acreage. Therefore, the total area where project construction and development would take place would be less than what is identified in this table. The acreage does not include access roads.</p> <p>³ A 40- to 100-foot wide easement is included within each of these parcels to accommodate a 34.5-kV collection line.</p>			

Each of the project parcels are zoned as “A – Exclusive Agriculture”. The County Zoning Ordinance states “the purpose of the Exclusive Agriculture (A) District is to designate areas suitable for agricultural uses



and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Uses in the A District are limited primarily to agricultural uses and other activities compatible with agricultural uses.” Permitted land uses in this type of district fall into the categories of agricultural uses, residential uses, commercial uses, utility and communications facilities, resource extraction and energy development uses, and other miscellaneous uses. Solar energy electrical generators are considered a compatible use within Exclusive Agriculture zoning with the issuance of a CUP, pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance (Kern County 2021) and the Kern County Agricultural Preserve Standard Uniform Rules.

1.2. Environmental Setting

The project site is designated as Map Code 8.1 (Intensive Agriculture), 8.1/2.5 (Intensive Agriculture/Flood Hazard), 8.3 (Extensive Agriculture), and 8.3/2.5 (Extensive Agriculture/Flood Hazard) in the Kern County General Plan, see **Figure 1-5: Existing General Plan Land Use Designations**. Additionally, the project site is zoned A (Exclusive Agriculture), see **Figure 1-6: Existing Zoning**.

The project site contains a mix of native and non-native vegetative cover including grasses and shrubs. The project site and surrounding properties are currently vacant and have been used for limited cattle and sheep grazing over the past 10 years. No crop cultivation has occurred within the last 10 years on the project site, between the years 2012 and 2022 (Wonderful Orchards 2022). Additionally, there is no existing irrigation system that serves the project site. None of the project parcels are subject to Williamson Act Land Use contracts, as shown in **Figure 1-7: Williamson Act – Active and Nonrenewal**. Project parcels are located within Agricultural Preserve No. 5.

Approximately 54 percent of the project site is located on Grazing Land and 46 percent of the project site is located on Vacant or Disturbed Land as designated under the California Department of Conservation’s (DOC) Farmland Mapping and Monitoring Program. There is no Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, or Unique Farmland on the project site (see **Figure 1-8: Farmland Mapping and Monitoring Program Designations**).

None of the proposed project parcels are located in a Mineral Resource Zone (Conservation Biology Institute 2022) or within a Mineral and Petroleum land use category (see **Figure 1-9: Mineral Resource Zones**). There are no active or existing mines within the project site (USGS 2022). There are several mineral rights holders identified on the project site. The Applicant would coordinate with the mineral rights holders on an agreement including an area for Drilling Island District (DI) zone if requested.

The Federal Emergency Management Agency (FEMA) delineates flood hazard areas on its Flood Insurance Rate Maps. According to the Flood Insurance Rate Maps for the project area, portions of the project site are located in a 100-year flood area (Zones A, 1 percent annual chance of flooding) as shown on **Figure 1-10: FEMA Floodplain Zone Hazards**.

The Kern County Sheriff’s Office (KCSO) would serve the proposed project site for law enforcement and public safety services, as the KCSO serves unincorporated areas of Kern County (KCSO 2017). The KCSO Wasco Substation, located at 748 F Street, Wasco, California 93215, is the closest police station to the project site, located approximately 23 miles southeast of the project site. The Kern County Fire Department (KCFD) provides fire protection and emergency medical services to unincorporated areas of Kern County and thus would provide fire protection services to the proposed project site (KCFD 2022). Kern County



Fire Station 26 is the fire station located closest to the proposed project site, approximately 9 miles south, at 14670 Lost Hills Road, Lost Hills, California, 93249.

The nearest private airport is Wonderful Pistachios & Almonds Airport in Lost Hills, California, which is approximately 11 miles southwest of the project site (Airnav.com 2022a). The nearest public airport is Wasco-Kern County Airport in Wasco, California, which is approximately 23 miles southeast of the project site and serves general aviation primarily for agricultural application aircraft (Airnav.com 2022b). The project site is not located within any safety or noise contour zones for these airports, nor is the proposed project site located within any designated airport land use plan areas.

Surrounding Land Uses

Existing land uses surrounding the project site consist of agricultural parcels with active farming located sparsely in the surrounding area. The primary zoning classification in the 5-mile radius surrounding the project site is A (Exclusive Agriculture). The Kern National Wildlife Refuge, an approximately 11,250-acre protected habitat and species management area, is located approximately 2.5 miles east of the project site (USFWS 2022) and the Tulare Basin Wildlife Management Area is located approximately 3 miles east of the project site. Rural residential buildings are located in the unincorporated community of Lost Hills, approximately 8 miles south of the proposed project site. There are no schools within 5 miles of the proposed project site. The nearest schools are Lost Hills Elementary School, A.M. Thomas Middle School, and Wonderful College Prep Academy, located approximately 8 miles south at 14821 Primary Court, Lost Hills, California 93249, 20979 Lobos Court, Lost Hills, California 93249, and 14848 Lamberson Avenue, Lost Hills, California 93249, respectively. The Kern National Wildlife Refuge, the community of Lost Hills, and the nearest schools are shown in **Table 1-2: Existing Project Sites and Surrounding Properties, Existing Land Use, General Plan Map Code Designations, and Zoning** details the surrounding land uses, including the General Plan designations and existing zoning

TABLE 1-2: EXISTING PROJECT SITES AND SURROUNDING PROPERTIES, EXISTING LAND USE, GENERAL PLAN MAP CODE DESIGNATIONS, AND ZONING

Location	Existing Land Use	Existing General Plan Map Code Designations	Existing Zoning
North ¹	Agricultural, Vacant Land	AG40 (General Agriculture)	AG-40 (General Agriculture Open Space) (minimum site area 40 acres)
East	Agricultural, Vacant Land	8.1/2.5 (Intensive Agriculture/Flood Hazard); 8.3/2.5 (Extensive Agriculture/Flood Hazard), 8.1 (Intensive Agriculture)	A (Exclusive Agriculture)
South	Agricultural, Vacant Land	6.3 (Highway Commercial); 8.1 (Intensive Agriculture); 8.3 (Extensive Agriculture); 8.3/2.5 (Extensive Agriculture/Flood Hazard)	A (Exclusive Agriculture)
West	Agricultural, Vacant Land	1.1 (State or Federal Land); 8.3 (Extensive Agriculture); 8.3/2.5 (Extensive Agriculture/Flood Hazard), 8.1 (Intensive Agriculture)	A (Exclusive Agriculture)

¹ Kings County is located north of the project site (Kings County 2022a; 2022b)



1.3. Project Description

Project Overview

The Pelicans Jaw Hybrid Solar project is a proposed photovoltaic (PV) solar facility with associated infrastructure on approximately 3,943 acres of privately-owned land in northwestern Kern County. As stated above, the proposed project would generate up to 500 MW of renewable electrical energy, as well as 2,000 MWh of energy storage capacity. Construction of the proposed project is anticipated to occur in three phases, with the first phase consisting of the installation of 300 MW of PV solar and the installation of up to 1,000 MWh of battery energy storage beginning in the first quarter 2024 and becoming commercially operational in the fourth quarter of 2024 (up to 12 months). The second and third phases would consist of the installation of 200 MW of photovoltaic solar (phase two) and the installation of up to 1,000 MWh of battery energy storage (phase three), with construction beginning in the first quarter of 2024 and commercial operation anticipated in the fourth quarter of 2024 (up to 12 months). The operational life of the proposed project is anticipated to be 35 years.

The project would consist primarily of PV panels, a single-axis tracker system, inverters and transformers, electrical cabling and communication lines, on-site switchgear, a collector substation, a generation interconnection (gen-tie) line, a BESS, access roads, a security fence, an operations and maintenance (O&M) facility, and a supervisory control and data acquisition (SCADA) system. The project would also include a Pacific Gas and Electric (PG&E) switching station that would interconnect with the existing PG&E 230-kilovolt (kV) overhead transmission lines that traverse the project site. The PG&E switching station would be located on-site, within the project boundaries. The project's BESS, substation, preliminary gen-tie line alignment, and the PG&E switching station are shown in **Figure 1-11: Project Interconnection**.

Implementation of the project as proposed include the following requests:

- a) Conditional Use Permit (CUP No. 3, Map No. 5) to allow for the construction and operation of solar facilities with a total generating capacity of approximately 500 MW, and up to 2,000 MWh of energy storage on approximately 3,763 acres with the energy storage located on an area encompassing no more than 100 acres, within the A (Exclusive Agriculture) Zone District pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance.
- b) General Plan Amendment to the Circulation Element of the Kern County General Plan (GPA No. 2, Map No. 5) to remove future road reservations on the section and mid-section lines within the project boundaries (refer to **Figure 1-12: Proposed Circulation Element Amendments**):

Power generated by the project would assist the state in achieving the Renewables Portfolio Standard (RPS) under Senate Bill (SB) 350, which requires 50 percent of all electricity sold in the state to be generated from renewable energy sources by December 31, 2030. SB 100 was approved in September 2018 and would increase the RPS to a 100-percent goal by 2045. Power generated by the project would be sold to California investor-owned utilities, municipalities, community choice aggregations, or other purchasers in furtherance of the California Renewable Energy Portfolio Standard (California State Senate, 2015).

The Applicant's proposed project construction schedule includes three distinct phases, including:

- **Phase I** – Gen-tie line, telecommunication line, fences, gates, on-site substation, PG&E switching station, and installation and operation of approximately 300 MW of PV solar and a BESS with a capacity up to 1,000 MWh.



- **Phase II** – Installation and operation of approximately 200 MW of PV solar.
- **Phase III** – Installation and operation of a BESS with a capacity up to 1,000 MWh.

The project has an anticipated operational life of up to 35 years. At the end of the project’s operational term, the project proponent would determine whether the project site should be decommissioned and deconstructed or if it would seek an extension of its CUP. If any portion of the project site is decommissioned, it would be converted to other uses in accordance with the applicable land use regulations in effect at that time.

1.4. Project Facilities, Construction, and Operations

Project Facilities

The combined project facilities would include the following components, which are described in greater detail thereafter:

- Solar electricity generating system with a capacity of up to 500 MW, including an underground or above ground (or a combination of both) 34.5-kV collection system.
- One project electrical substation.
- A PG&E switching station constructed (or caused to be constructed) and operated by PG&E on-site to interconnect the project with the existing PG&E overhead transmission lines.
- A gen-tie line extending from the project substation to the proposed PG&E switching station within an approximately 200-foot-wide right-of-way.
- An integrated BESS with a capacity up to 2,000 MWh.
- An on-site operations and maintenance facility, including an integrated SCADA system.
- Staging areas for construction trailers and construction parking.
- A roadway system consisting of internal and perimeter roadways.
- Fiber optic lines to support on-site telecommunication equipment.

Solar System and Collection System

The project would include up to 500 MW of PV solar energy generation. The approximately 3,273-acre development area would house structures associated with solar energy generation and collection, including solar panels, tracking/support structures, and inverters. Solar energy would be captured by an array of PV panels mounted to a single axis tracking system. The proposed project would utilize photovoltaic (PV) panels or modules (including but not limited to concentrated photovoltaic technology (CPV) or bi-facial technology which have similar rectangular shapes, sizes and thickness) on mounting frameworks to convert incoming sunlight to direct current (DC) electrical energy. Pelicans Jaw Solar, LLC may use various PV technologies, including, but not limited to crystalline silicon panels, copper indium gallium selenide panels, or Cadmium Telluride (CdTe) panels, any of which could be bifacial panels. The intent of the PV solar panels is to increase efficiency by absorbing as much light as possible, which will reduce reflection and glare.



The panels would be arranged in series to effectively increase voltage. These chains of panels are called “strings” and provide the basic building block of power conversion in the solar array. The strings are combined in the solar field through an above- or belowground DC collection system. Then, they are collected together at the inverter stations, where the energy is converted to alternating current (AC) and then stepped up to an intermediate voltage, typically 34.5-kV.

Individual panels would be installed on tracker mount systems, using galvanized steel or aluminum. The panels would rotate to follow the sun over the course of the day. The single-axis tracking system would be supported, when practical, by driven piers (piles) directly embedded into the ground and would be parallel to the ground. The foundations for the mounting structures may extend up to 10 feet below ground, depending on the structure, soil conditions, and wind loads, and may be encased in concrete or utilize small concrete footings. The tracking system would rotate slowly throughout the day at a range of +/- 60 degrees facing east to west to stay perpendicular to the incoming solar irradiance so production can be optimized. During midday conditions, when the sun is high in the sky, the rays of the sun are reflected directly upwards. When the sun is low on the horizon (near dawn or dusk), the sun’s angle in the sky is low; however, reflected rays would still be directed away from ground level receptors such as I-5. Due to their limited amount of rotation and their low reflectivity, the PV solar panels are not expected to cause visual impairment for motorists on area roadways including I-5.

Each tracker would hold approximately 60 to 90 panels (depending on final configuration) and, at its highest rotated edge, would have a maximum height of approximately 12 feet above grade, depending on the dimensions of the chosen panel. The minimum clearance from the lower edge of the panel to ground level is approximately 18 to 24 inches, pending final design. Final solar panel layout and spacing would be optimized for project area characteristics and the desired energy production profile.

Collection, Inverter, and Transformer Systems

Photovoltaic energy generated by the panels would be delivered via cable to inverter stations generally located within the solar array field. The inverter stations would be approximately 12 to 16 feet in height and perform the following three critical functions for the solar plant: (1) collect DC power in a central location, (2) convert the DC power into AC power, and (3) convert low-voltage AC power to medium-voltage AC power. The inverter stations are self-contained and designed for environments similar to those found at the project site. The stations consist of DC collection equipment, utility-scale inverters, and a low-to medium-voltage transformer. The output power from the inverter stations is then fed to the AC collection system through an above- or belowground collection system. This AC collection system would deliver the electricity to the on-site project electrical substation, where the voltage would be stepped up to the interconnection voltage.

On-Site Substation

The project substation would be the termination point of the collection system of 34.5-kV AC electricity. The output of the entire solar field would be passed through a final interconnection step-up transformer to convert it to the grid tie voltage at 230 kV. Additionally, the project substation would host the grid interconnection safety equipment and switches required to interconnect to the high-voltage transmission system. The footprint of the on-site substation would be no more than 10 acres in size. The project substation would consist of components up to 55 feet in height, and feeders would be overhead lines or underground line, with the overhead lines constructed with 45-foot- and 60-foot-tall poles for the single and double



circuits, respectively. The substation would be located internal to the project site. The proposed substation could include an emergency generator for use if the regional transmission system fails; this emergency generator would provide emergency power until the regional transmission system restores operations. The substation must have access to communication systems in the area to comply with Federal Energy Regulatory Commission/California Independent System Operator/Utility monitoring and control requirements. Compliance may be accomplished by underground lines, aboveground lines, or wireless communication. The exact location of the substation is not known at this time but is anticipated to be located in one of two locations including the northwest corner of the project site within APNs 044-110-030, 044-110-250, 044-110-010, and/or 044-101-050 or along the west side of the project site within APN 044-102-210. The conceptual locations of the project substation are shown in **Figure 1-11**. The final location of the PG&E switching station is subject to change pending ongoing environmental surveys and consultation with PG&E.

PG&E Switching Station

To deliver electricity from the project to the existing 230-kV overhead transmission lines that traverse the project site, a PG&E switching station with a footprint of up to 15 acres would be constructed within the project boundaries in the northwest corner of the project site. The PG&E switching station is required by the California Independent System Operator (CAISO) to maintain grid stability with interconnection of solar and BESS facilities to the transmission grid. The unmanned, automated, low-profile PG&E switching station would be engineered, constructed (or caused to be constructed), operated and maintained by PG&E. The PG&E switching station would provide a single location for interconnection of the project to existing PG&E facilities. The PG&E switching station would also have expansion bays to allow for future projects to interconnect with the switching station.

The PG&E switching station would be comprised of a graded dirt lot with electrical equipment surrounded by a chain link security fence. More specifically, the PG&E switching station would consist of the following components:

- Circuit breakers and mounting hardware.
- Transformers, capacitors, reactors, disconnect switches, dead end structures, and electrical buses.
- A single-story control house structure.
- Access driveway(s), with each driveway at least 16 feet wide.
 - The internal access road would be all-weather Class II aggregate base.
 - Within the PG&E switching station all access roads would be asphalt.
- An approximately 8-foot-high perimeter chain-link fence topped with approximately 1 foot of barbed wire.
- Security lighting controlled by motion detectors.
- Drive aisles within the PG&E switching station fence line.
- Above and/or below ground distribution line to provide back-up service to the PG&E switching station.
- Distribution line poles would be approximately 40 feet tall and constructed of wood, steel, or concrete.
- Telecommunication facilities that include fiber-optic telecommunication lines and a



telecommunication structure that is approximately 110 feet tall.

- Metering, security, and communication equipment.

The PG&E switching station would generally be located in one of two locations including the northwest corner of the project site within APNs 044-110-030, 044-110-250, 044-110-010, and/or 044-101-050 or along the west side of the project site within APN 044-102-210. The conceptual location of the PG&E switching station is shown in **Figure 1-11**.

Generation Tie Line

The energy generated by the project would be transported from the on-site project collector substation to PG&E's proposed switching station through a gen-tie transmission line. The gen-tie line would extend from the project's on-site substation to PG&E's proposed on-site switching station. The 230-kV gen-tie transmission line would consist of up to 150-foot-tall concrete or steel poles spaced approximately every 500 feet. The number and height of the poles, as well as the type of conductor, would be finalized during detailed design. The preliminary gen-tie alignment would be on-site and is shown in **Figure 1-11**. The gen-tie alignment is subject to change depending on whether the project substation and PG&E switching station are located in the northwest corner of the project site within APNs 044-110-030, 044-110-250, 044-110-010, and/or 044-101-050 or along the west side of the project site within APN 044-102-210. The gen-tie alignment length is estimated to be up to approximately 1,500 feet for both potential locations.

Battery Energy Storage System

A centralized or distributed, integrated BESS would be constructed within the project site to store up to 2,000 MWh of energy produced from the project or other resources during low demand times and release the energy during high demand times. For example, to store solar energy during the daytime and to release it during the evening when the demand for energy goes up but the ability to generate solar energy goes down because the sun has set.

The batteries would be installed in racks that are housed in outdoor BESS enclosures that would be accessed from the outside via cabinet doors for maintenance needs. Because the size of each battery enclosure varies widely by manufacturer, the total number of enclosures to be installed would not be known until a manufacturer has been selected. In all cases, however, the project area containing the battery enclosures would encompass no more than 100 acres. This 100-acre area may be in a single centralized location near the on-site substation or distributed throughout the project site in proximity to project inverters and transformers used to support the photovoltaic solar array. The batteries would be charged directly from the photovoltaic solar energy generated by the project or via the project's interconnection to the proposed PG&E switching station. Energy stored in the BESS would then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local and regional area.

Batteries Housed within BESS Enclosures (Centralized or Distributed Configuration): The BESS, whether installed in a centralized or distributed configuration, would include lithium-ion battery modules or another commercially available battery technology available at the time of construction. Batteries would be housed within outdoor BESS enclosures, which are typically made of metal.

Under normal operations, BESS facilities do not contain, store, or generate hazardous materials in quantities that would represent a risk to off-site receptors. In addition, the project's preventative measures and fire and safety systems, as described below, make an accident condition very rare. Nevertheless, because BESS



facilities do store energy, a battery thermal runaway can occur if a cell, or area within a cell, reaches elevated temperatures due to thermal failure, mechanical failure, or internal/external short circuiting.

All stationary battery storage facilities in California are required to comply with Chapter 12 (Energy Systems) and particularly Section 1206 (Electrical Energy Storage Systems) of the California Fire Code, which has adopted internationally and federally accepted National Fire Protection Association (NFPA) 855 standards for the design, construction, installation, commissioning, operation and maintenance of stationary energy storage systems. In addition to compliance with the 2019 California Fire Code, the project's integrated BESS would also comply with all other local, state, and federal safety standards and regulations, including those of the KCFD.

During operations, the BESS modules would be accessed for maintenance from the outside via cabinet doors. Typical BESS enclosures are approximately 70 feet long by 13 feet wide by 15 feet high; however, these dimensions can vary widely by manufacturer. The size, number, and configuration of each enclosure would vary depending on the battery, enclosure, and BESS system manufacturers selected for the project.

Batteries and Racks (Centralized or Distributed Configuration): The batteries would be housed in racks similar to common computer server racks. The racks are typically made of aluminum, but sometimes may be composed of steel. The battery racks would be designed and installed in accordance with the local seismic design requirements.

BESS Interconnection – Collector Feeder Line(s) (Centralized Configuration): If the BESS is installed in a centralized configuration, collector feeder line(s) will be constructed that would transfer power to and from the on-site substation. The collector feeder line(s) are anticipated to consist of up to 75 feet tall concrete, steel, or wood poles, spaced approximately every 250 feet. The collector feeder line(s) are anticipated to be up to one mile long.

BESS Interconnection (Distributed Configuration): If the BESS is installed in a distributed configuration, each BESS unit would interconnect with the above- or below-ground collection system that is described above under “Solar System and Collection System of this Project Description”.

Outdoor Electrical Equipment (Centralized or Distributed Configuration): Medium voltage transformers and additional electrical equipment would be installed including inverters, which may be installed interior to the BESS enclosures, combined with the medium voltage transformers, or as standalone units, depending on the manufacturer. The medium voltage transformers would be installed whether the BESS is installed in a centralized or distributed configuration. Underground wires and cabling would run from the battery cable collection box (inside the enclosure) to the inverter and transformer. From the medium voltage transformer, cabling would be run to the collector substation. All outside electrical equipment would be housed in the appropriate National Electrical Manufacturers Association rated enclosures and screened from view to the extent possible, on all sides. All outside electrical cabling on the site would be run underground or in ducting.

Operations and Maintenance Building

The project would include the construction of an Operations and Maintenance (O&M) building with associated on-site parking (unpaved) within the project site. The O&M building would be approximately 3,600 square feet and is expected to be collocated with the on-site substation or BESS if a centralized configuration is selected. The O&M facility would be up to 24 feet in height and would include up to two levels. It is anticipated that up to five permanent staff employees would use the O&M building for ongoing



facility monitoring, equipment storage, and repairs. The O&M building is expected to be a prefabricated commercial structure. Permanent restroom facilities with septic tanks and/or portable toilets would be used for sanitary purposes at the O&M building, and a permanent water source in the form of trucked water, well water, or bottled water would be provided for the staff. The proposed building would include the requisite number of parking spaces for staff members' vehicles and O&M equipment.

The project operations would also be monitored remotely through the SCADA system, and periodic inspections and maintenance activities would occur.

Temporary Construction Workspace, Yards, and Staging Areas

Project construction would be supported by up to 30 acres of staging areas, which would be located within the project footprint. The project's primary staging area would include temporary construction trailers for the management of construction, a parking area, and site security facilities. This area would accommodate delivery of materials, vehicles, etc. Material delivery for the solar field would be ongoing, panels and framing structures would be delivered throughout the solar field. Portable restroom facilities would also be located in this area.

Temporary staging areas for material laydown including boxes of solar panels, steel, aluminum framing, conduit for underground electrical, transformers, and other project materials would be located throughout the project area. The laydown and staging areas would be subsumed by the build-out of the panel array with some exceptions. Laydown areas would not be required within the solar field as such. Materials such as boxes of panels, steel and aluminum framing, etc. would be laid out between rows of panels and along the access roads.

Access Roads

Existing roads would be used to the extent possible. The main project access roads would be I-5 and Twisselman Road. Twisselman Road is an existing east/west paved two lane County Road. Two points of access are being proposed from Twisselman Road to provide ingress/egress to the project site:

- An approximately one-mile-long access road extending north from Twisselman Road to the southwest corner of APN 044-150-170.
- An access road extending from the intersection of Twisselman Road and the southeast corner of APN 044-130-160.

Each access road would include a 24-foot-wide unpaved driveway with up to 5-foot shoulders on either side, for a total width of 34-feet (**Figure 1-11**). There is the potential that one or both of the proposed access routes will be developed pending detailed engineering design; therefore, for the purposes of this analysis, both access routes were assumed to be constructed, operated, and maintained.

Internal roads would be constructed to allow fire and maintenance vehicle access. All internal access roads within the project site would be up to 24 feet wide and cleared, graded, and compacted. Up to a 30-foot-wide perimeter road separating the solar arrays from the perimeter fence would be constructed within the entire perimeter of the project. The roads would be constructed to allow fire and maintenance vehicle access.

Preliminary layout and road design would be based on detailed topographic maps and an on-site walk-through by civil engineers.



Fiber Optic Lines

All fiber optic communication lines necessary to support the on-site telecommunication equipment would be located on the same poles used to support the gen-tie line and/or buried in the maintenance road(s). Spur roads, approximately 20 feet wide, would be constructed to provide access to each transmission pole. The spur roads would be unpaved dirt roads. The proposed project would not otherwise generate the demand for or require the relocation or construction of new or expanded off-site telecommunications facilities.

Construction Activities

Construction Phasing

Construction would consist of three primary stages, detailed below. The on-site workforce would consist of laborers, craftsmen, supervisory personnel, supply personnel, and construction management personnel. The on-site workforce is expected to reach its peak of approximately 800 individuals with an average construction-related on-site workforce of 400 individuals during the three stages. Employees would have the option to drive their own automobiles to the project site however, employees would be encouraged to carpool. Employees would park within the project site. The proposed project requires the temporary construction of approximately 30 acres within the project site for all-weather parking spaces, temporary office facilities, and equipment staging area. This area could be expanded to accommodate increased worker needs.

Generally, construction work schedules are expected to be 10 hours per day Monday through Friday, excluding federal holidays. Typically, the workday would consist of one shift beginning as early as 6:00 a.m. and ending as late as 7:00 p.m. The work schedule may be modified throughout the year to account for the changing weather conditions. For instance, during hot weather, it may be necessary to start work earlier to protect the health safety of workers and/or avoid pouring concrete during high ambient temperatures. Additional hours and/or weekend work (Saturdays and Sundays) may be necessary to make up schedule deficiencies, or to complete critical construction activities (e.g., PV block construction, foundation pouring, or working around time-critical shutdowns and constraints). During the startup phase of the project, some activities might be performed over the weekend.

Night work may occur during the installation of solar modules as well as work on inverters, transformers, and the substation, which may be required on a limited basis during the night to support commissioning and operations/maintenance. Solar module installation is a labor-intensive activity that requires a large workforce, working in an open-air environment. Allowing crews to work during the cooler nighttime hours would reduce crew exposure to peak daytime summer temperatures and the associated risk of heat illness. Nighttime work may not be limited to summer months.

Any night work conducted would be limited to solar module installation, wire management, inverter, and BESS commissioning. Solar module installation consists of unpackaging the solar modules from boxes and installing the modules onto the racking system with fasteners. Wire management involves connecting the solar modules of each power block together with wires that extend to each power block's inverter. Night work may occur 5 days per week (Monday through Friday), 10 hours per day from 7:00 P.M. to 5:00 A.M. Each crew would work within a specified lighted work area. These work areas would progress through each power block as work is completed across the project site.



Stage 1: Site Preparation

The first phase of construction would include roadway improvements from the existing paved segment extending northerly from Twissleman Road. A roadway 1 mile in length approximately one-half mile east of Interstate 5 from Twissleman Road to the proposed solar facility would be constructed to enable access. This segment of roadway would be paved.

The majority of the project site is flat and would require minimal to no grading. A low-impact mow and roll technique would be used to remove surface vegetation, while keeping root systems in place. This practice minimizes dust generation and the associated water requirements related to dust suppression. In addition, this practice allows for faster regeneration of vegetation cover than re-seeding alone. In some areas, grubbing and grading would be required to level particularly rough areas of the site and to prepare soils for concrete foundations. Access roads would also be grubbed, graded, and compacted. The fence-line would be shallowly excavated and graded to create a level surface for proper fence installation. Trackers and roads proposed across existing trenches may require engineered fill to match the surrounding existing grade of the project site. The engineered fill would be generated on-site or imported. Soil generated on-site would be excavated and elevations designed to match the existing drainage patterns. The engineered fill would be placed in the trenches and compacted to provide adequate structural support for roads and foundations. If filling the trenches is not deemed necessary due to engineering requirements, the layout would be modified within the existing bounds to avoid the trenches. The site cut and fill would be balanced, and all topsoil would be retained and preserved on-site to the extent feasible. The project would also consist of on-site stormwater retention basins in accordance with County drainage requirements. The existing trenches may be used for storage in addition to newly constructed basins.

A design-level drainage plan would be completed for the project, which would include runoff calculations and design features developed in accordance with Kern County Development Standards, the Kern County Grading Ordinance, the Kern County Floodplain Ordinance, and the Kern County Code of Building Regulations. The drainage plan would ensure appropriate drainage for the project site and that any proposed development within the flood area (Zone A) would be designed to limit obstructions and impacts related to the floodplain. Specifically, the drainage plan would ensure that design of the solar arrays include 1 foot of freeboard clearance above the calculated maximum flood depths for the solar arrays or the finished floor of any permanent structures. Solar panel sites located within a 100-year floodplain would also be graded to direct potential flood waters without increasing water surface elevations more than 1 foot or as required by Kern County's Floodplain Ordinance.

Stage 2: Photovoltaic Panel System Installation

Construction materials and supplies would be delivered to the project site by truck. It is anticipated that all such materials and supplies would be stored in a staging area on-site within the project boundaries for each phase of. When possible, equipment and materials would be stored in proximity to the area where work would be undertaken. Truck deliveries would normally occur during daylight hours. However, there would be offloading and/or transporting to the project site on weekends and during evening hours.

The second phase of construction would include installation of steel piles, a single-axis tracker system, and the PV modules. Steel piles are expected to be driven into the ground using hydraulic techniques and would be approximately four feet above grade. After piles have been driven, tracker drive motors and torque tubes



for the single-axis tracker system would be installed, followed by the PV modules being securely attached to the tracker system. Stage 2 is anticipated to have highest number of employees working at the site.

Stage 3: Inverters, Transformers, Collector Substation, Collector System, Interconnection

Low voltage cables between PV solar arrays and inverters, and medium voltage collector cables would be installed above ground or underground. Underground cables would be installed by using suitable trenching techniques, which typically include a backhoe excavator or trencher. Underground cable installation depths would be in accordance with local, state, and federal requirements.

All electrical inverters and transformers would be placed on concrete foundation structures, steel skids, or driven piles. In lieu of steel skids or pre-cast concrete foundations, driven pile foundations for the transformer and inverter locations would be formed with plywood and reinforced with structural rebar. Commissioning of equipment would include testing, calibration of equipment, and troubleshooting. The collector substation equipment, inverters, collector system, and PV array systems would be tested prior to commencement of commercial operations. Upon completion of successful testing, the equipment would be energized. The collector substation area would be excavated for the transformer equipment. The site area for the collector substation would be graded and compacted to level grade. The foundation for the step-up transformer at the project substation would be formed with plywood and reinforced with structural rebar. Concrete piers would be constructed as a foundation for the project substation above ground electrical equipment, and the remaining area would be graveled. A grounding system would be installed at the collector substation.

PG&E Switching Station – Construction

Construction of the PG&E switching station would be primarily composed of the following activities:

- **Site Preparation:** Rough grading may be performed where required to accommodate the support structures and access roads. Retention basin(s) would be created for hydrologic control. A temporary staging area would be constructed to hold materials and construction equipment internal to the approximately 15-acre PG&E switching station development footprint.
- **Fencing:** An approximately 8-foot-high perimeter security fence topped with approximately 1 foot of barbed wire would be installed.
- **Foundation, Construction and Above-ground Equipment Installation:** Following site preparation, construction of the switching station equipment foundations and the ground grid would commence. Foundation construction would commence with excavation activities that would be accomplished primarily by backhoes and drill rigs. Forms, reinforcing steel, and concrete would then be installed, as appropriate, to build the foundations. Once the foundation work has been finished, placement of major equipment on their respective foundations or structures, inclusive of anchoring in their final position and wiring of the equipment controls and protection devices, would be completed. This work would be accomplished by delivering equipment to the site on flatbed trucks and lifting it into place using cranes.
- **Cleanup:** All areas that are temporarily disturbed by construction activities would be restored to pre-construction conditions, to the extent practical, following the completion of construction.

The PG&E switching station is anticipated to be built over an approximately 12-month period from the onset of site preparation activities through testing and commissioning. It is anticipated that construction



crews would work 8 or 10 hours per day, with work occurring Monday through Friday. Overtime and weekend work would be used only as necessary to meet schedule and adhere to electrical clearance and safety requirements and would comply with applicable California labor laws.

PG&E Switching Station – 230-kV Interconnection Line Work

Construction of new transmission structures to interconnect the PG&E switching station to the existing 230-kV transmission line and to the project collector substation would involve temporary ground disturbance around each new structure location amounting to an area of approximately 8,000 square feet, along with temporary ground disturbance associated with access to each pole location. Installation of the new conductors would require establishing pull and tension sites along the transmission line alignments. Pull and tension sites would typically occupy an approximately 100-foot by 300-foot area situated within the alignment or an extension of the transmission line alignment. Temporary staging and lay down areas may also be needed for the construction of the new transmission lines.

New transmission structures are anticipated to interconnect the PG&E switching station to the existing 230-kV transmission line and to the project collector substation. The number of transmission structures are pending engineering design. The transmission structures are anticipated to be up to 150 feet high and placed within a right-of-way extending a distance of up to approximately 0.25 mile. The location of the new transmission structures to interconnect the PG&E switching station to the existing 230-kV transmission line will be dependent on whether the PG&E switching station is located in the northwest corner of the Project site within APNs 044-110-030, 044-110-250, 044-110-010, and/or 044-101-050 or along the west side of the project site within APN 044-102-210. The final location of the PG&E switching station is subject to change pending ongoing environmental surveys and consultation with PG&E. The gen-tie alignment length is estimated to be up to 0.25-mile for both potential PG&E switching station locations.

The equipment listed above is anticipated to be used to construct the transmission line facilities needed to interconnect the PG&E switching station to the existing 230-kV transmission line and the PG&E switching station to the new project collector substation. Construction is anticipated to occur within the same 12-month period as construction of the PG&E switching station.

Water Use

A project-level Water Supply Assessment (WSA) has been completed to consider potential water sources, locations, and estimated water usage for the duration of construction and operations and maintenance.

Water may be sourced from on-site wells, off-site sources, or a combination of the two in support of construction activities. On-site wells would be placed strategically within the project site to facilitate construction watering and operational water needs. Exact locations of these wells would be determined upon the final engineering of the project and would include the installation of well meters. Temporary storage tanks may be used for water storage throughout the site during construction.

During the approximate 12-month construction period for Phases I, II, and III, water would be needed for such uses as soil compaction, dust control, and sanitary needs for construction workers.

The use of temporary storage tanks has the potential to reduce the amount of vehicle travel around the site by water trucks (and associated exhaust and dust) because water will be readily available in several areas of the site, reduce the rate of groundwater extraction during construction if imported water is used, and also improve capability to respond quickly and effectively to mitigate fugitive dust emissions caused by unexpected high wind events.



Temporary construction wells, if any, would be decommissioned upon the completion of construction unless required for the O&M facility, and capped per applicable regulations.

Bottled water would be provided to the construction workers for consumption. Additionally, on-site restroom facilities for the construction workers would be provided by portable units to be serviced by licensed providers. No connection to a public sewer system is proposed or required for project construction or operation.

Safety and Security

At the onset of construction, site access would be controlled for personnel and vehicles. The project would include a permanent security fence. The security fence would be approximately 8 feet high and have an overall height of no more than approximately 12 feet from the bottom of the fence to the top barbed wire. The fence would have top rail, bottom tension wire, and three strands of barbed wire mounted on 45-degree extension and posts would be set in concrete. The security fence would be installed near the start of construction but may be preceded by mowing and or vegetation clearance as required. All required laydown areas are expected to be contained within the defined project boundaries. Security fencing may be raised approximately 6 inches off the ground surface to allow wildlife to traverse the project site.

During construction, security would be maintained as required by the project contractor or a suitable subcontractor to maintain public safety and the security of the facility. Prior to panel installation, the security fencing would be erected around the entire perimeter of the project site. Access gates would be installed pending site design and fire requirements.

Controlled access gates would be located at the entrances to the facility along Twisselman Road. Site gates would be swing or rolling type access gates. During construction, security personnel would be located on-site during working hours.

Solid and Non-Hazardous Waste and Recycling

Inert solid wastes would be generated during the construction phase of the proposed project. Potential inert solid wastes that would result from the construction activities may include recyclable items such as paper, cardboard, solid concrete and block, metals, wire, glass, types 1–4 plastics, drywall, wood, and lubricating oils. Non-recyclable items include insulation, other plastics, food waste, vinyl flooring and base, carpeting, paint containers, packing materials, and other construction wastes. Recycling and disposal of these inert solid wastes would comply with all local, state, and federal regulations.

The Engineering, Procurement, and Construction (EPC) contractor that would be responsible for construction of the project would carefully disassemble and recycle shipping containers and solar panel packaging to minimize solid waste impacts. The EPC contractor would contract with a waste and recycling service provider to ensure all waste generated from construction of the project is disposed of in accordance with federal and state regulations. The EPC contractor would store, collect, and dispose of solid waste in such a manner as to prevent fire and health hazards, rodent harborage, insect breeding, accidents, and odor. The EPC contractor would ensure that no littering on the project site or neighboring properties would occur during construction.



Hazardous Waste

The project would be designed, constructed, operated and maintained to ensure the safe use and storage of hazardous materials. Storage, handling, and use of all chemicals would be conducted in accordance with applicable laws, ordinances, regulations and standards. Chemicals (if required) would be stored in appropriate chemical storage facilities. Bulk chemicals (if required) would be stored in storage tanks, and other chemicals would be stored in returnable delivery containers. Chemical storage and chemical feed areas would be designed to contain leaks and spills. On-site workers would be trained to handle hazardous wastes generated at the site.

State approved personal protective equipment would be used by site personnel during chemical spill containment and cleanup activities. Personnel would be properly trained in the handling of these chemicals and instructed in the procedures to follow in case of a chemical spill or accidental release. Adequate supplies of absorbent material would be stored on-site for spill cleanup. At this time, the project does not anticipate the need for the use of any hazardous chemicals beyond those found in typical vehicles.

Wastewater and Septic System

A septic tank potentially would be installed near the proposed project site to collect wastewater flows from the O&M building. Disposal of wastewater would meet requirements implemented by Kern County ordinances, regulations, and standards. If an O&M building is not constructed on site, no septic system would be installed.

Operations and Maintenance

Upon commissioning, the project would enter the operational phase. For the duration of the operational phase, the project would be maintained by up to five permanent staff employees and monitored remotely via a SCADA system. On-site maintenance staff would be responsible for security, vegetation management, permit compliance, panel washing, and project repairs. The project includes an O&M facility, please see description above.

Any required planned maintenance would be scheduled to avoid peak load periods, and unplanned maintenance would be typically responded to as needed depending on the event. An inventory of spare components would be readily available either on-site or from a remote warehouse facility.

Project maintenance performed on the site would consist of vegetation management, maintaining compliance with project permits, washing dust from panels, and inspection and replacement of project equipment. Maintenance would occur during daylight hours, when possible. Maintenance program elements include:

- Managing a group of prequalified maintenance and repair firms who can meet the O&M needs of the facility throughout its life;
- Implementing a responsive, optimized cleaning schedule;
- Responding to facility emergencies and failures in a timely manner;
- Maintaining an inventory of spare parts to ensure timely repairs and consistent plant output;
- Maintaining a log to effectively record and track all maintenance problems; and
- Performing maintenance on the project site as required to clear obstructive ground cover.



PG&E Switching Station – Operations and Maintenance

Following completion, testing, and energizing, the PG&E switching station would operate continuously. Routine maintenance would occur as needed in accordance with PG&E standard O&M procedures. PG&E personnel or approved contractors would visit the facilities on a regular basis for inspections and to replace or service equipment. Unauthorized entry would be prevented with the installation of fencing and locked gates. Warning signs would be posted.

Access to the facilities would typically be by crew truck using existing access routes and all-weather access routes anticipated to be constructed as part of the project; a minimal amount of overland travel may be required. Routine operations would require a single pickup truck visiting the PG&E switching station as well as the potential for several larger construction and maintenance trucks visiting the PG&E switching station for equipment maintenance. Maintenance activities would include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventative maintenance.

Safety lighting at the PG&E switching station would be provided inside the switching station fence for the purpose of emergency repair work. Because night activities are anticipated to be limited, the safety lighting inside the PG&E switching station fence would normally be turned off. Lights would be mounted near the entry gate to safely illuminate the switching station entry gate and would be left on during nighttime hours. The light would be directed downward to minimize glare into surrounding properties and habitat.

Routine maintenance of the PG&E transmission lines would continue in accordance with current company requirements. Typically, the lines are inspected once per year, rotating between aerial and ground inspections, with climbing as needed when issues are identified. Vegetation clearing would continue to occur on an as-needed basis for purposes of safety and access. These activities would typically involve the presence of one or two maintenance vehicles and one or more employees to inspect the lines and clear or trim vegetation in order to achieve the minimum necessary working space around switching station and transmission line facilities.

BESS Operations and Maintenance Activities (Centralized or Distributed Configuration)

Typical operations and maintenance activities include, but are not limited to, liaison and remote monitoring administration and reporting; semi-annual and annual services; remote operations of batteries, inverters, substation, and site security and management; and repair and maintenance of the BESS, electrical transmission lines, and other project facilities. The electrical equipment; heating, ventilation, and air conditioning; fire protection systems; and security would be automated and monitored remotely. It is anticipated that between two to four staff members would visit the BESS weekly and as needed for maintenance monitoring. BESS enclosures would be accessed from the outside via cabinet doors for maintenance needs. Periodically, batteries and various components would be replaced or renewed to ensure optimal performance. The project site plan will include provisions for battery enclosures that would not be installed at the time of initial construction, referred to as augmentation equipment. However, the initial design and permitting will account for this equipment that would be installed as part of the ongoing maintenance activity over time as the battery capacity degrades.

Water Use

During operations, water required for annual panel washing may be drawn from the on-site construction wells. Permanent above-ground water storage tanks may be used for O&M tasks and facilities. In



accordance with KCFD Standard No. 503-507, one 10,000-gallon water tank with a 4-inch National Standard Male connection would be provided for fire department use. The location of the water tank would be accessible to emergency vehicles. The capacity and location of the water tank will be approved by the KCFD.

Annual operations of the project would require routine panel washing(s). The frequency of panel washings would be based upon the monitored output of the project, weather events, and the amount of airborne dust particulates in the area over an amount of time. Based on this variability, it is projected that panel washing may occur once annually during operations. Estimated operational water usage for panel washing and general maintenance activities has been addressed in the WSA.

Security and Safety

To ensure the safety of the public and the facility, the project would comply with the North American Electric Reliability Corporation's (NERC) security and safety standards including the installation of security fencing around the project with signs posted. Security measures would be installed as necessary to mitigate and/or deter unauthorized access. Access to the site would be controlled and access gates would be installed at the roads entering the project site from Twisselman Road.

According to the NERC Physical Security Guidelines, electrical generating plants and substations are identified as "critical" facilities. Per the NERC definition, a "critical" facility may be defined as any facility or combination of facilities, that, if severely damaged or destroyed, would have a significant impact on the ability to serve large quantities of customers for an extended period of time, would have a detrimental impact on the reliability or operability of the electric grid, or would cause significant risk to public health and safety. In line with the NERC guidelines, robust perimeter security fencing is the first line of defense necessary to the safety of personnel, the public and maintaining the integrity of the electrical grid. The NERC guidelines generally address security fencing standards and recommendations, with an emphasis that security fencing design be appropriate to the unique location characteristics and level of "critical" importance of the electrical facility. In addition, security may be enhanced with facility lighting and cameras in key locations. Coordination with the California Department of Transportation would be initiated to ensure compliance with exterior lighting regulations of lighting along and adjacent to I-5. Care would be taken to prevent undue light pollution from the nighttime security lighting. Nighttime lighting would be limited to areas required for operation, safety, or security, and would be directed or shielded from major roadways or possible outside observers. Lighting at high illumination areas not required on a continuous basis would be controlled by switches, motion detectors, etc. to light the areas only when required. Exterior lights would be hooded, and lights would be directed on site so that light or glare would be minimized.

To reduce off-site lighting impacts, lighting at the facility would be restricted to areas required for safety, security, and operation such as the on-site substation and O&M facility. The project would use portable lighting for any emergency work that must occur on panels at night. Security lights would use motion sensor technology that would be triggered by movement at a human's height. The level and intensity of lighting during operations would be the minimum needed. Portable lighting may be used occasionally and temporarily for maintenance activities during operations.

Safety precautions and emergency systems would be implemented as part of the proposed project to ensure safe and reliable operation. Administrative controls would include classroom and hands-on training in O&M procedures, general safety items, and a planned maintenance program. These would work with the system design and monitoring features to enhance safety and reliability. The Health and Safety Plan



prepared during the construction phase of the project will be updated annually, as needed during O&M to address changes in health and safety regulations and changes in O&M activities and procedures.

Fire Protection and Control

Fire protection and control would be provided to limit risk of personnel injury, property loss, and possible disruption of the electricity generated by the project. Fire protection and control starts with a lack of flammable materials in the solar field, including vegetation. This is one of the primary reasons that vegetation would be removed from the site where required prior to construction of the solar field. Fire protection also includes appropriate access to all areas of the solar field by fire truck, with turn-around areas. Thus, final plans of the solar facilities would be inspected by the KCFD for sign-off.

The BESS equipment would be enclosed in individual containers installed with fire and safety equipment to segregate and fully mitigate fire and hazardous material risks. The BESS would utilize pre-engineered battery storage systems listed under UL 9540 pursuant to the 2019 California Fire Code, or current fire code at the time of implementation. UL 9540 contains safety standards for the system's construction (e.g., frame and enclosure, including mounting, supporting materials, barriers and more); the insulation, wiring, switches, transformers, spacing and grounding; safety standards for performance of over twenty different elements, such as tests for temperature, volatility, impact, overload of switches, and an impact drop test; and standards for manufacturing, ratings, markings, and instruction manuals. In addition, UL 9540 compliance requires a Failure Mode and Effects Analysis be performed and requires a test to ensure safe compatibility of the system's parts. This includes the UL 1973 standard, in which a battery manufacturer must prove that a failed cell inside would not cause a fire outside the system. The project would meet the UL 9540 and industry standards for adequate separations, cascading protections, and suppression systems to limit failure to a single cell.

The 2019 California Fire Code also requires that all BESS use an Energy Management System for monitoring and balancing cell voltages, currents and temperatures. The system must transmit an alarm signal if potentially hazardous temperatures or other conditions such as short circuits, over voltage or under voltage, are detected. The fire code also requires the use of appropriate fire-extinguishing and smoke detection systems, which would be incorporated into each of the project's BESS enclosures.

Fire extinguishers and other portable fire-fighting equipment would be available on site, as well as additional water for use at the O&M building in accordance with KCFD requirements. These fire extinguishers would be maintained for the full construction duration in accordance with local and federal Occupational Safety and Health Administration requirements.

Locations of portable fire extinguishers would include, but not necessarily be limited to office spaces, hot work area, flammable storage areas, and mobile equipment such as work trucks and other vehicles. Fire-fighting equipment would be marked conspicuously and be accessible at all times. Portable equipment would be routinely inspected, as required by local and federal laws, ordinances, regulations, and standards, and replaced immediately if defective or needing charge.

The Fire Prevention/Safety Plan prepared during the construction phase of the project will be updated annually, as needed during O&M to address changes in fire and safety regulations and changes in O&M activities and procedures.



Solid and Non-Hazardous Waste

The project would produce a small amount of solid waste associated with maintenance activities. PV plant wastes may include broken and rusted metal, defective or malfunctioning modules, electrical hardware, empty containers, and other miscellaneous solid wastes, including the typical refuse generated by workers. These materials would be collected and separated for recycling where available. Any defective or broken solar modules would be returned to the manufacturer for recycling.

Hazardous Waste

Once construction is complete, the project would have minimal hazardous waste at the site. Some hazardous materials may be used for project construction; these could include paints, thinners, solvents, sealants, fuels, oils and lubricants, and drilling mud. The quantities and concentrations of these hazardous substances are not expected to reach regulated levels. Fuel tanks and hazardous materials would be stored at staging areas, and wastes, such as empty hazardous materials containers and used oil, spent solvents, and oily rags, would also be accumulated in appropriate containers prior to disposal. The exact manufacturer of PV solar panels has not been selected at this stage of the project to allow for the procurement of the most efficient technology solution at the time purchase. If a panel is broken for whatever reason, the pieces would be cleaned up completely and properly disposed of.

Under normal operations, BESS facilities do not store or generate hazardous materials in quantities that would represent a risk to off-site receptors. In addition, the BESS facilities' preventative measures and integrated operational management systems, fire, and safety systems, heating, ventilation, and air conditioning systems, ventilation, gas, heat and smoke detection and alarms, and fire suppression systems, reduce the potential for accident conditions.

Project O&M may require the routine transport, use, and disposal of hazardous materials and hazardous wastes such as diesel fuel, hydraulic fluid, water treatment chemicals, oily rags, and spent batteries. Other hazardous chemicals that may be employed on site may include cleaning agents and other such chemicals that would be standard at a commercial site.

State approved personal protective equipment would be used by site personnel during chemical spill containment and cleanup activities. Personnel would be properly trained in the handling of these chemicals and instructed in the procedures to follow in case of a chemical spill or accidental release. Adequate supplies of absorbent material would be stored on-site for spill cleanup. At this time, the project does not anticipate the need for the use of any hazardous chemicals beyond those found in typical vehicles.

Other wastes generated on site would include those typical of a commercial building, such as computer and electronic equipment, paper, food scraps, etc. All wastes would be disposed of according to applicable laws, ordinances, regulations, and standards. In addition, no food wastes would be available for wildlife to scavenge.

All hazardous materials and waste will be managed in accordance with the Hazardous Materials Business Plan, prepared during construction, and updated annually to address changes in regulations or in operations.

Decommissioning

Solar equipment has a typical lifespan of over 30 years. The proposed project expects to sell the renewable energy produced by the project under the terms of a long-term Power Purchase Agreement (PPA) with a utility or other power off taker. Upon completion of the PPA term, the project operator may, at its discretion,



choose to enter into a subsequent PPA or decommission and remove the system and its components. The Applicant would decommission and remove the system and its components at the end of the life of the project. The project site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, state and County regulations. The Applicant would work collaboratively with the County to restore the project to meet the County's next use (i.e., restore the project site to pre-construction conditions). The site would revert to undeveloped land that supports agricultural production and wildlife habitat.

In general, the Solar PV system and BESS would be recycled at the expiration of the project's life. Most parts of the proposed system are recyclable. Solar PV panels typically consist of silicon, glass, and a metal frame and tracking systems (not including the motors and control systems) typically consist of aluminum and steel. The most prevalent commercially available battery technologies include lithium-ion, which degrades but can be recycled or repurposed. Site structures would include steel or wood and concrete, of which all three materials can be recycled. It is anticipated that, during project decommissioning, project structures that would not be needed for subsequent use would be removed from the project site. The decommissioning and restoration process involves removing aboveground and belowground structures, restoring topsoil, revegetation, and seeding. Temporary erosion and sedimentation control BMPs would be used during the decommissioning phase. Equipment would be de-energized prior to removal, salvaged (where possible), and shipped off-site to be recycled or disposed of at an appropriately licensed disposal facility. Once the solar modules are removed, the racks would be disassembled, and the structures supporting the racks would be removed. Site infrastructure would be removed, including fences, and concrete pads that may support the inverters, transformers and related equipment. The demolition debris and removed equipment may be cut or dismantled into pieces that can be safely lifted or carried by standard construction equipment. The fencing and gates would be removed, and all materials would be recycled to the extent practical. Project roads would be restored to their pre-construction condition unless they may be used for subsequent land use. The area would be thoroughly cleaned and all debris removed. Materials would be recycled to the extent feasible, with the remainder disposed of in landfills in compliance with all applicable laws.

1.5. Project Objectives

The project proponent had defined the following objectives for the project:

- Construct, operate, maintain, and eventually decommission, a large-scale solar PV and energy storage facility that maximizes the production and delivery of reliable electricity in an economically feasible, financeable manner.
- Use a project site that is proximate to existing transmission infrastructure to minimize transmission costs and environmental impacts.
- Assist California in meeting the objectives outlined in SB 100 (2018, de León) for eligible renewable energy resources and zero-carbon resources to supply 100 percent of retail sales of electricity to California end-use customers by December 31, 2045.
- Assist California in meeting its greenhouse gas (GHG) emissions reduction goals by 2030 as required by the California Global Warming Solutions Act (AB 32), as amended by SB 32 in 2016.
- Provide long-term property tax revenues that help support public services within Kern County.



- Create “green jobs” within both Kern County and the broader State of California.
- Meet all of the above-listed objectives while designing, constructing, and operating project facilities in an environmentally responsible manner consistent with County, state, and federal requirements.

1.6. Proposed Discretionary Actions/Required Approvals

The Kern County Planning and Natural Resources Department as the Lead Agency (per CEQA Guidelines Section 15052) for the project has discretionary responsibility for the project. To implement this project, the project proponent may need to obtain discretionary and ministerial permits/approvals including, but not limited to, the following:

Federal

- U.S. Fish and Wildlife Service (USFWS) Section 10 Habitat Conservation Plan (if required)
- United States Army Corps of Engineers Section 404 Permit (if required)

State

- California Public Utilities Commission (CPUC)
 - Section 851 Permit
- California Department of Fish and Wildlife (CDFW)
 - Section 1600 et seq. permits (Streambed Alteration Agreements) (if required)
 - Section 2081 Incidental Take Permit (State-listed endangered species) (if required)
- Central Valley Water Quality Control Board (RWQCB)
 - Waste Discharge Requirements
 - Regional Water Quality Certification (401 Permit) (if required)
 - National Pollution Discharge Elimination System (NPDES) Construction General Permit
 - General Construction Stormwater Permit (Preparation of a SWPPP)
- California Department of Transportation (Caltrans)
 - Right-of-Way Encroachment Permit (if required)
 - Permit for Transport of Oversized Loads

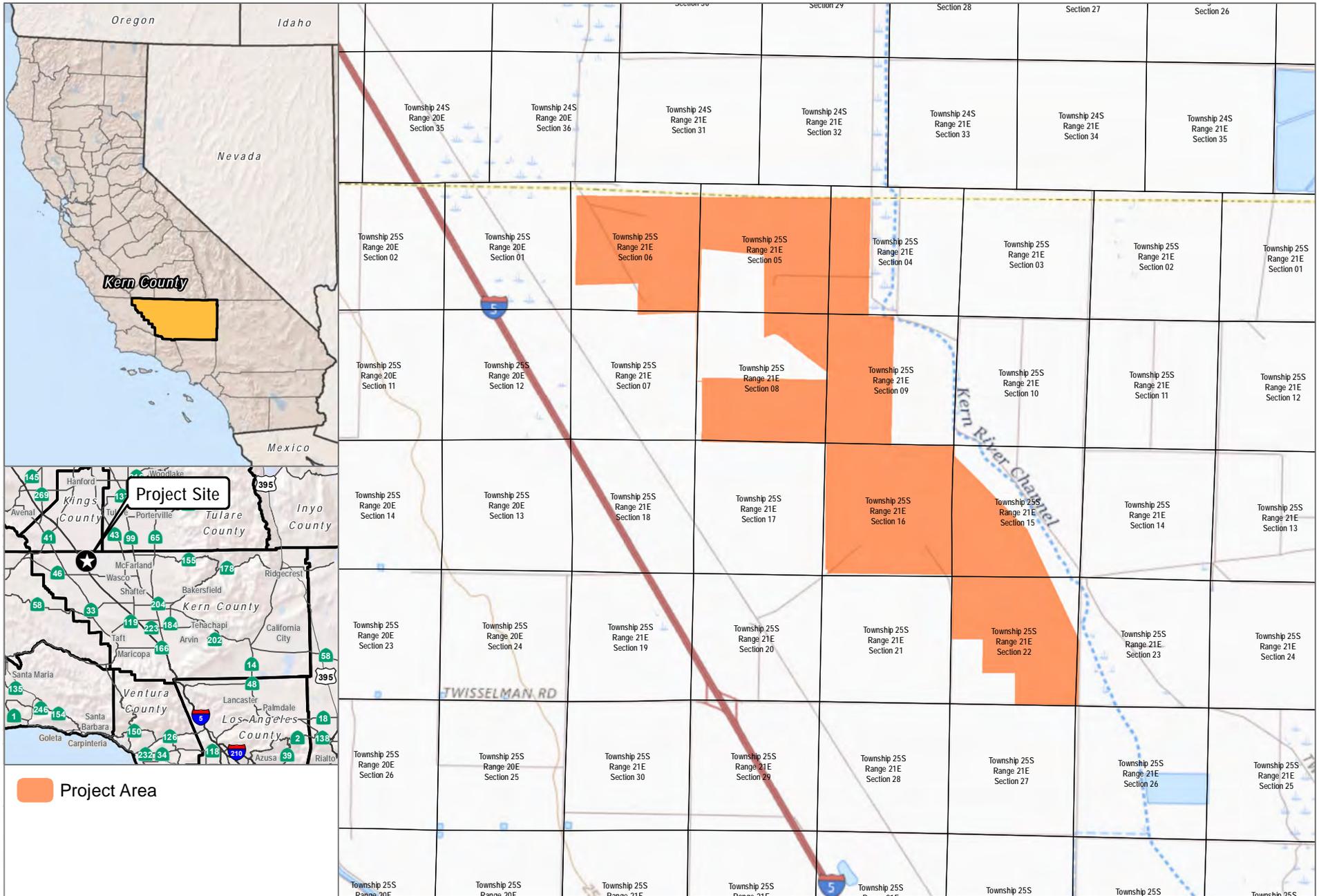
Local

- Kern County
 - Certification of Final Environmental Impact Report
 - Adoption of Mitigation Monitoring and Reporting Program
 - Adoption of 15091 Findings of Fact and 15093 Statement of Overriding Considerations



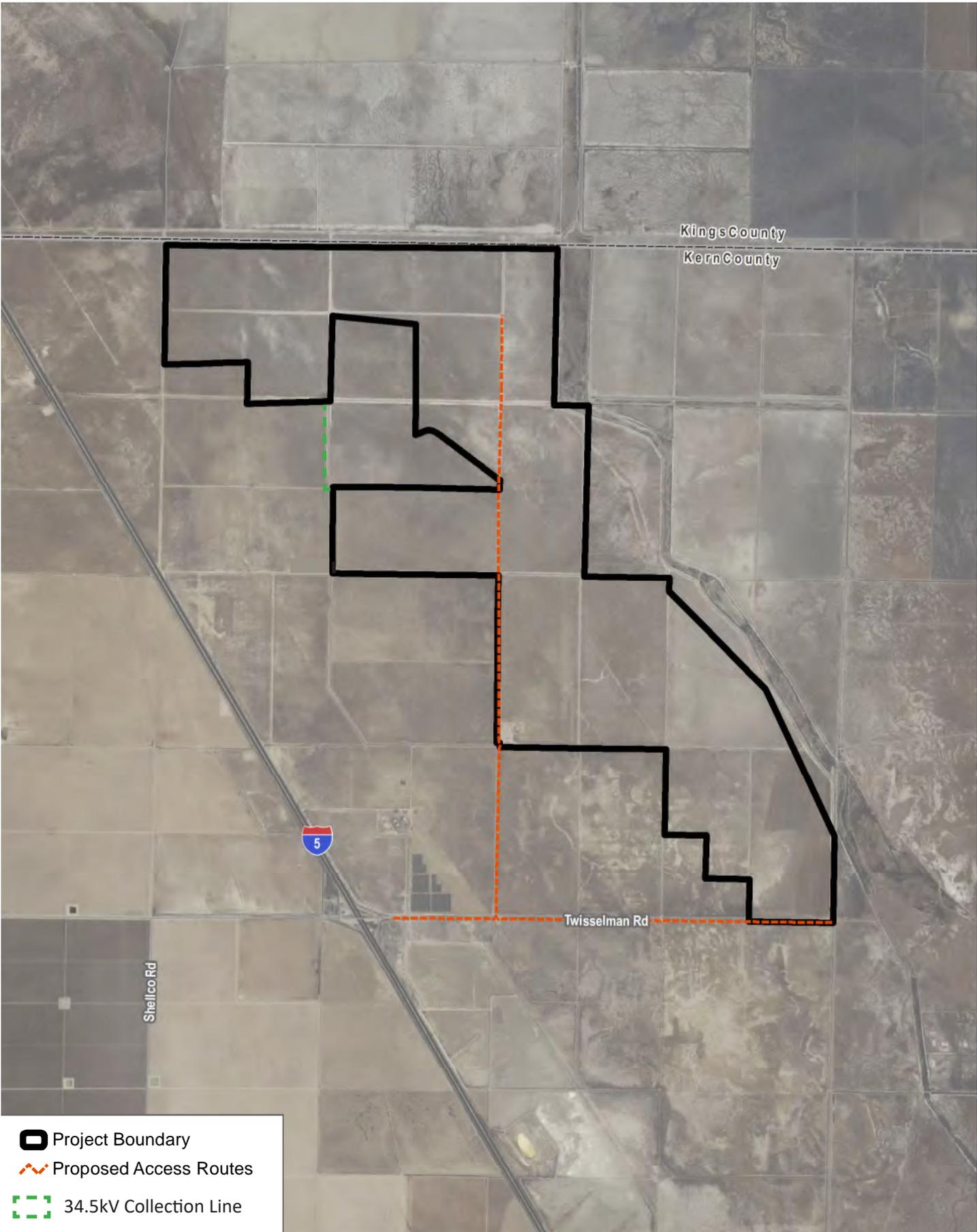
- Approval of Conditional Use Permit
- Approval of Kern County General Plan Circulation Element Amendment
- Approval of Kern County Grading and Building Permits
- Approval of Kern County Access Road Design and Encroachment Permit
- Approval of Fire Safety Plan
- San Joaquin Valley Air Pollution Control District
 - Approval of Fugitive Dust Control Plan
 - Authority to Construct (ATC)
 - Permit to Operate (PTO)

The preceding discretionary actions/approvals are potentially required and do not necessarily represent a comprehensive list of all possible discretionary permits/approvals required. Other additional permits or approvals from responsible agencies may be required for the project.



Source: ESRI, 2022

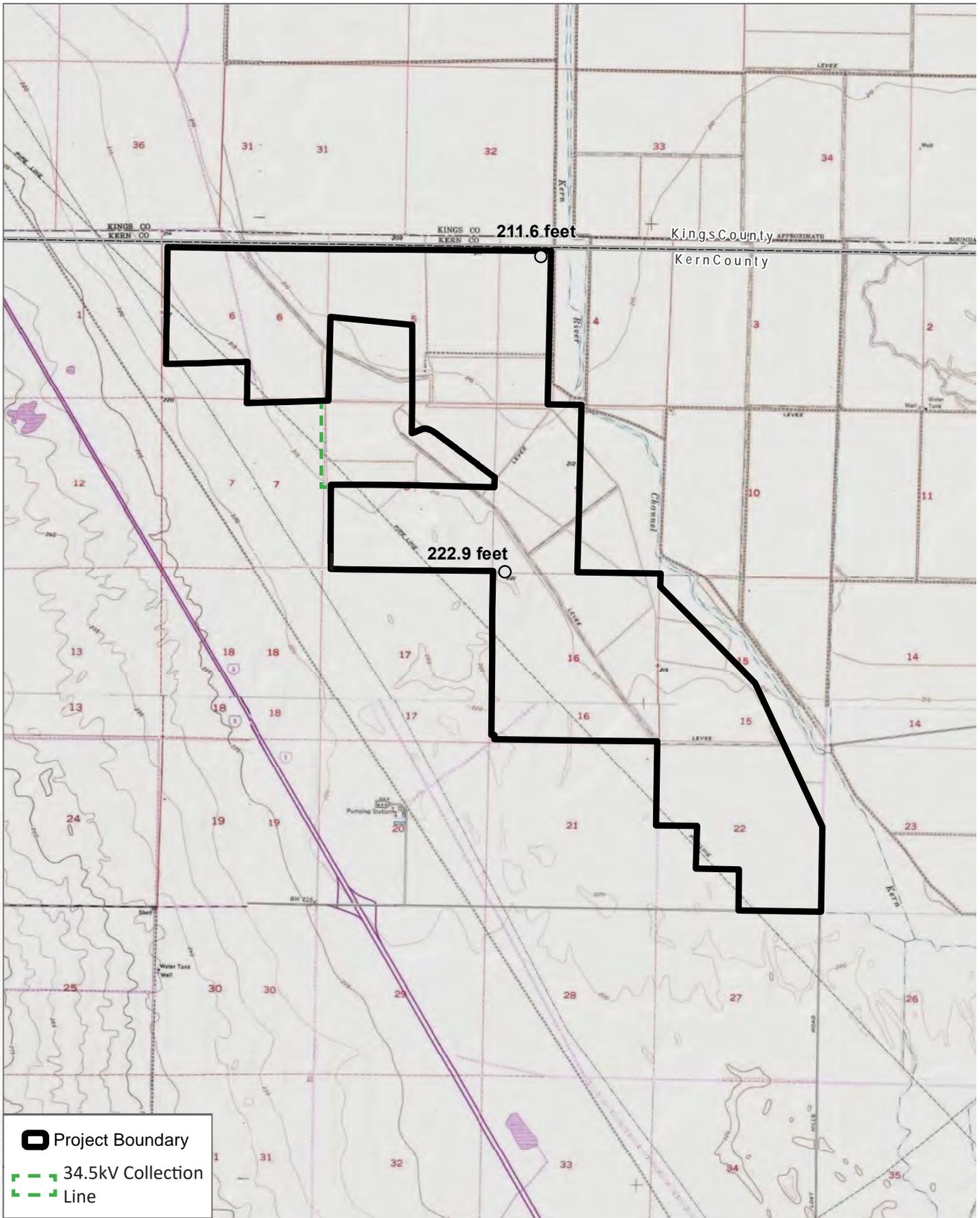
Figure 1-1: Regional Vicinity Map
 Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist



-  Project Boundary
-  Proposed Access Routes
-  34.5kV Collection Line

Source: Kern County, 2020, Open Street Map, 2019, Dudek, 2022

Figure 1-2: Local Vicinity Map
 Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist

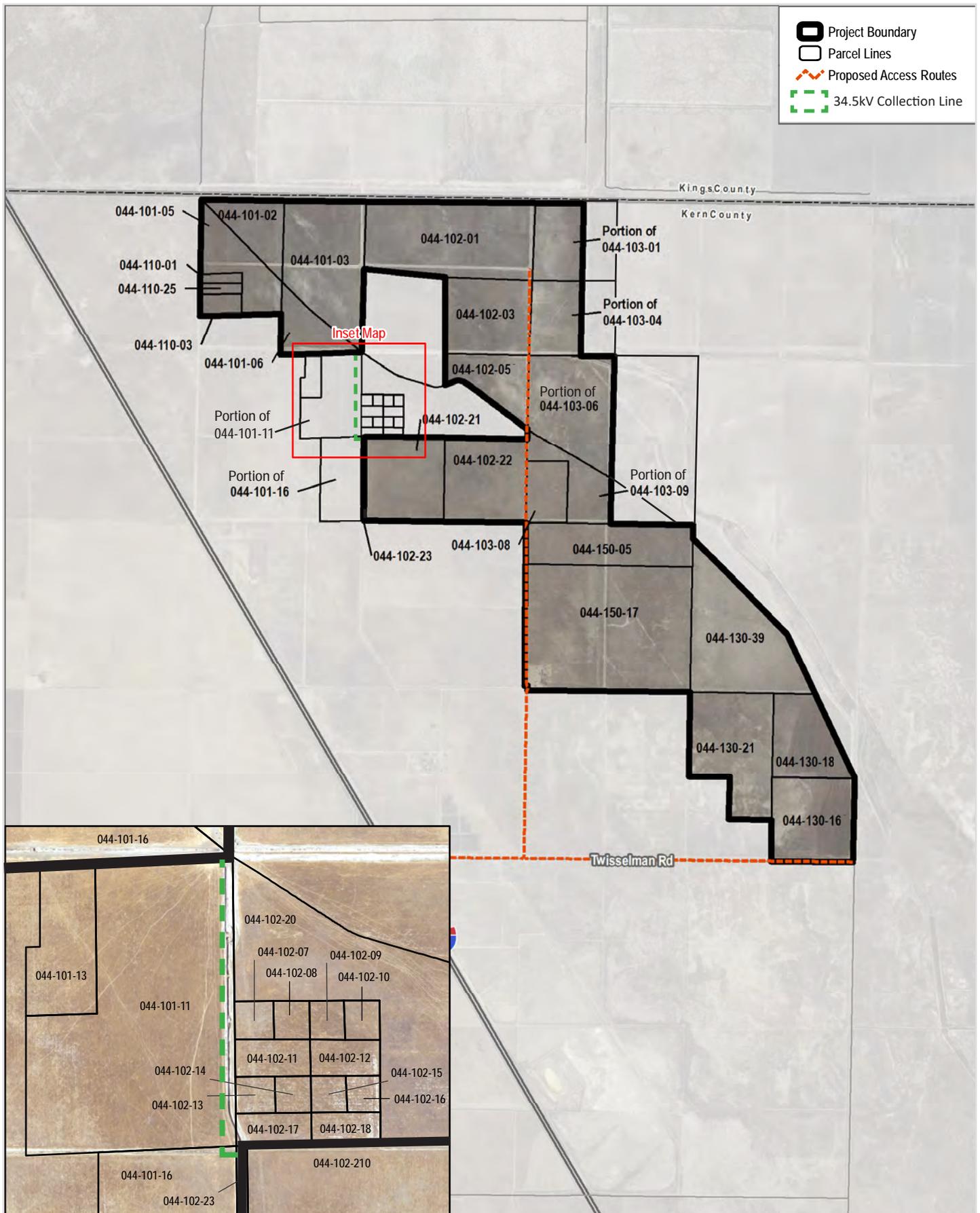


Source: USGS, 2020

Figure 1-3: USGS Topographic Map

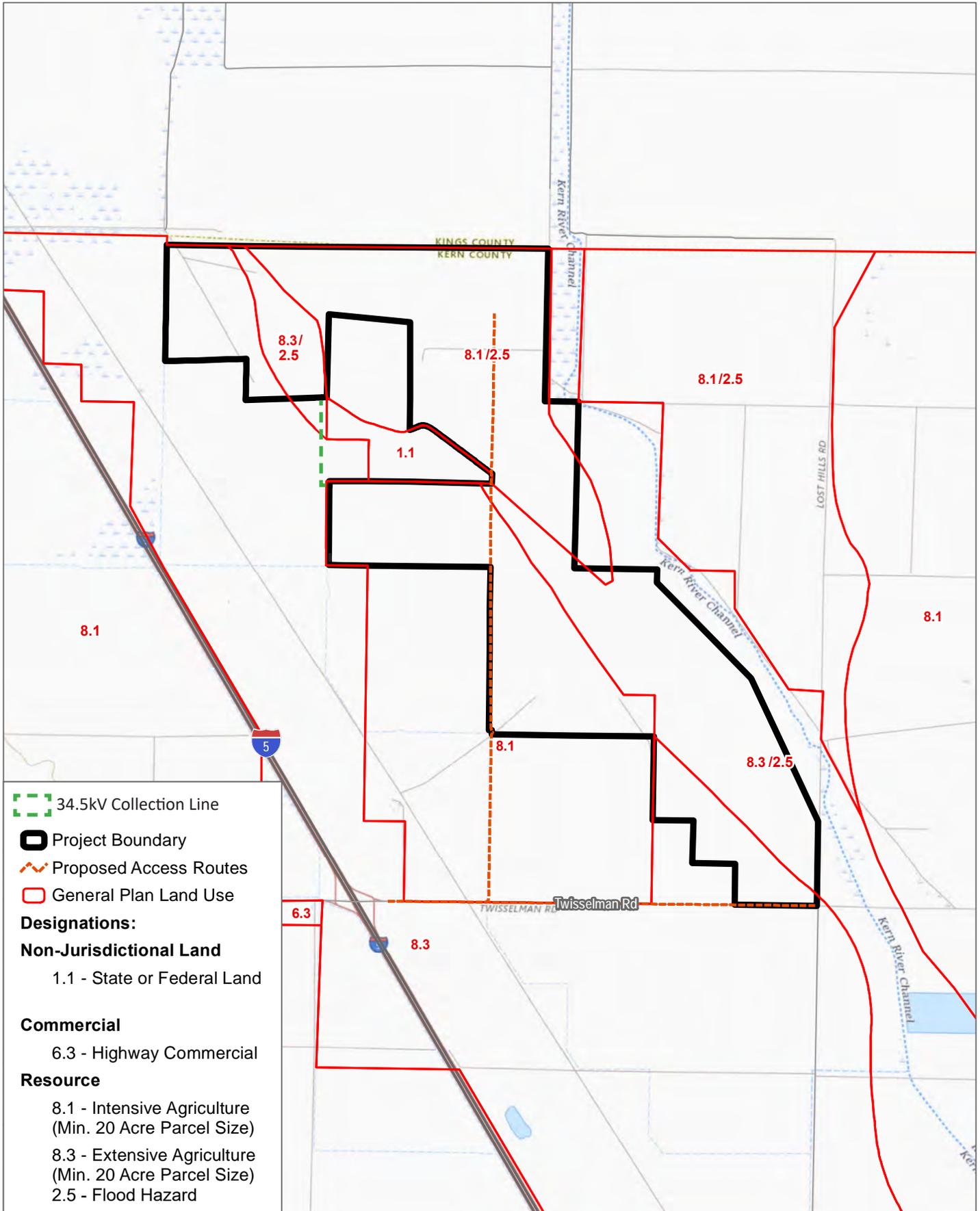
Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist





Source: Kern County, 2020, Open Street Map, 2019, Dudek, 2022

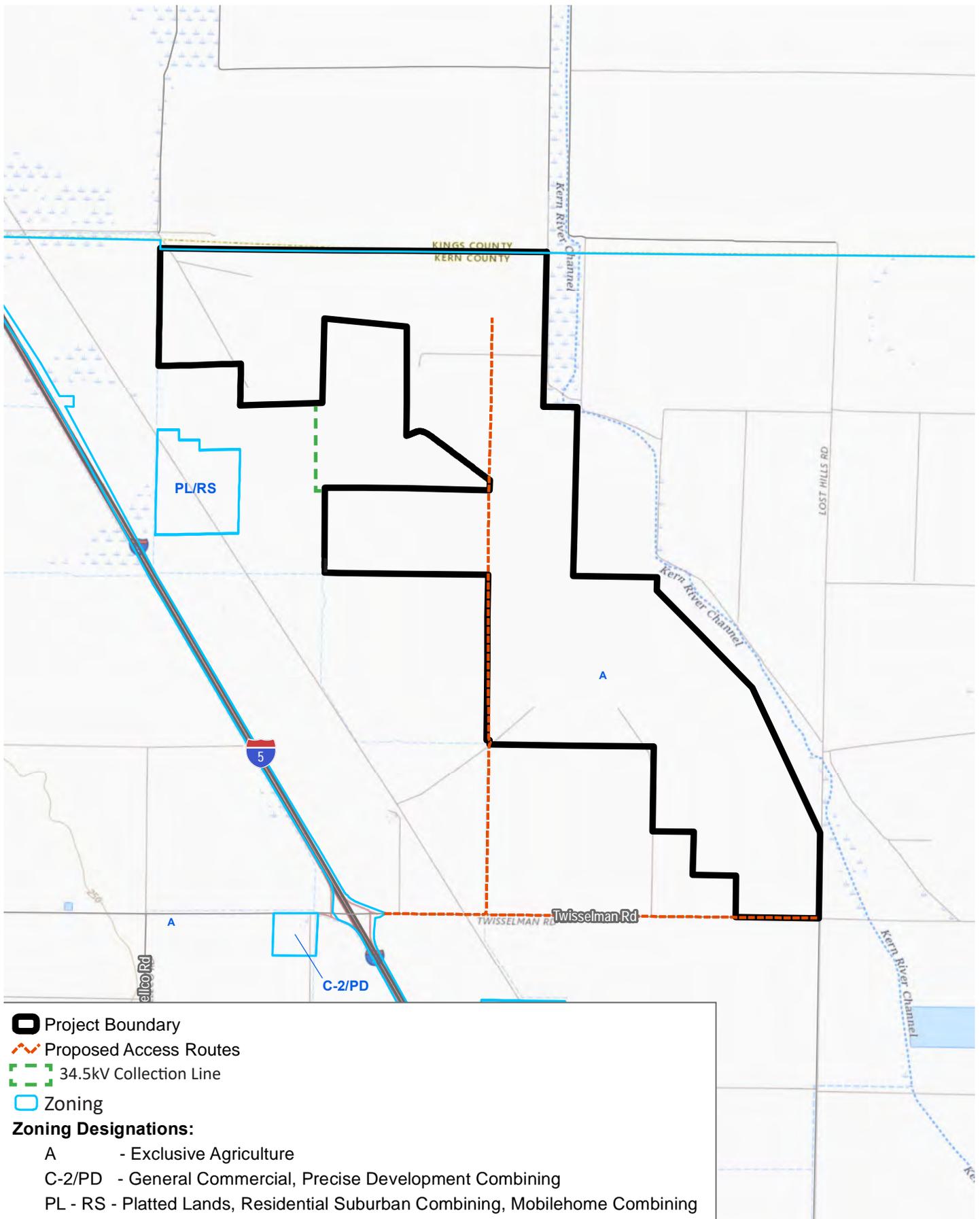
Figure 1-4: Existing Parcel Map
 Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist



Source: Kern County, 2020, Open Street Map, 2019, Dudek, 2022

Figure 1-5: Existing General Plan Land Use Designations



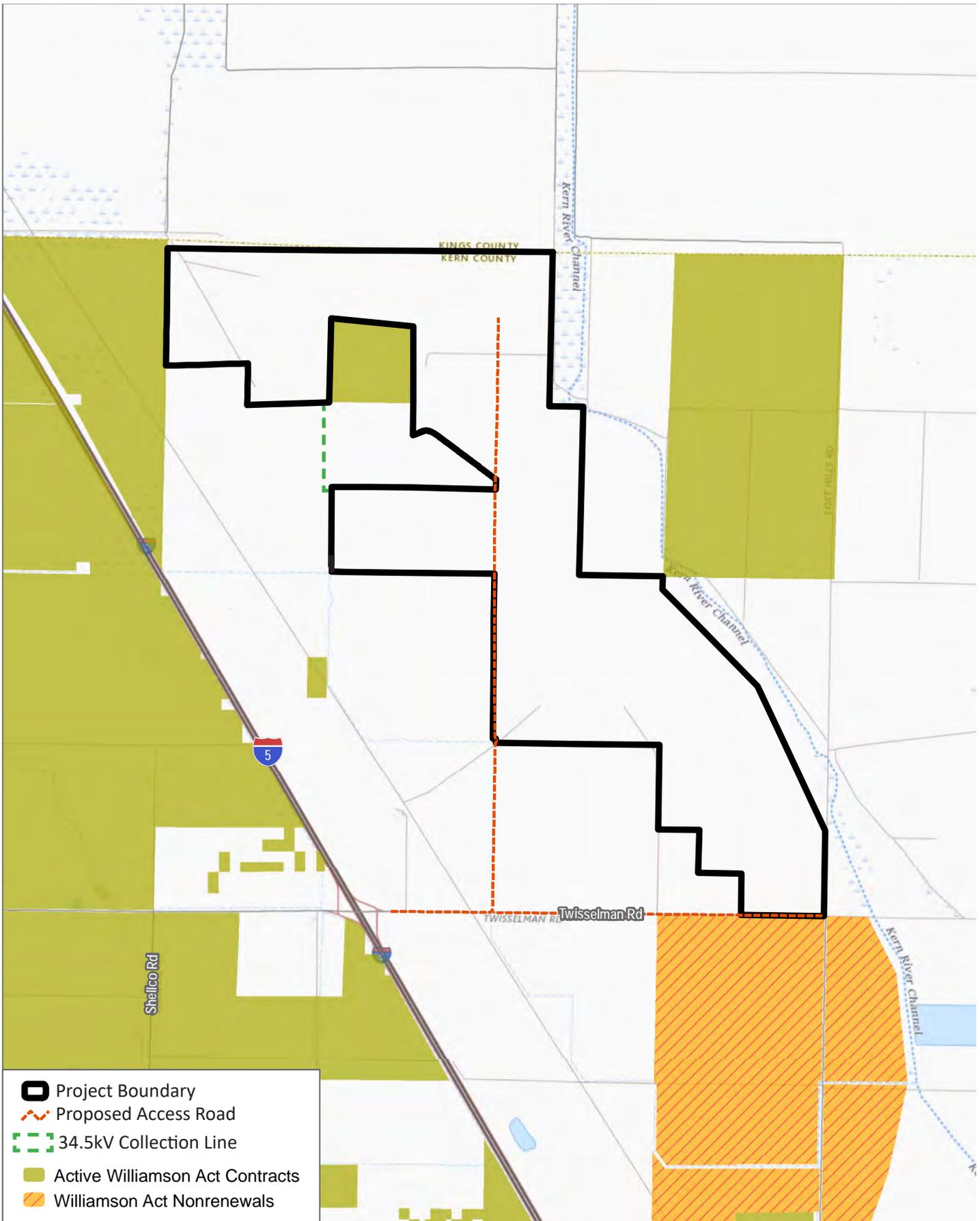


Source: Kern County, 2020, Open Street Map, 2019, Dudek, 2022

Figure 1-6: Existing Zoning

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist

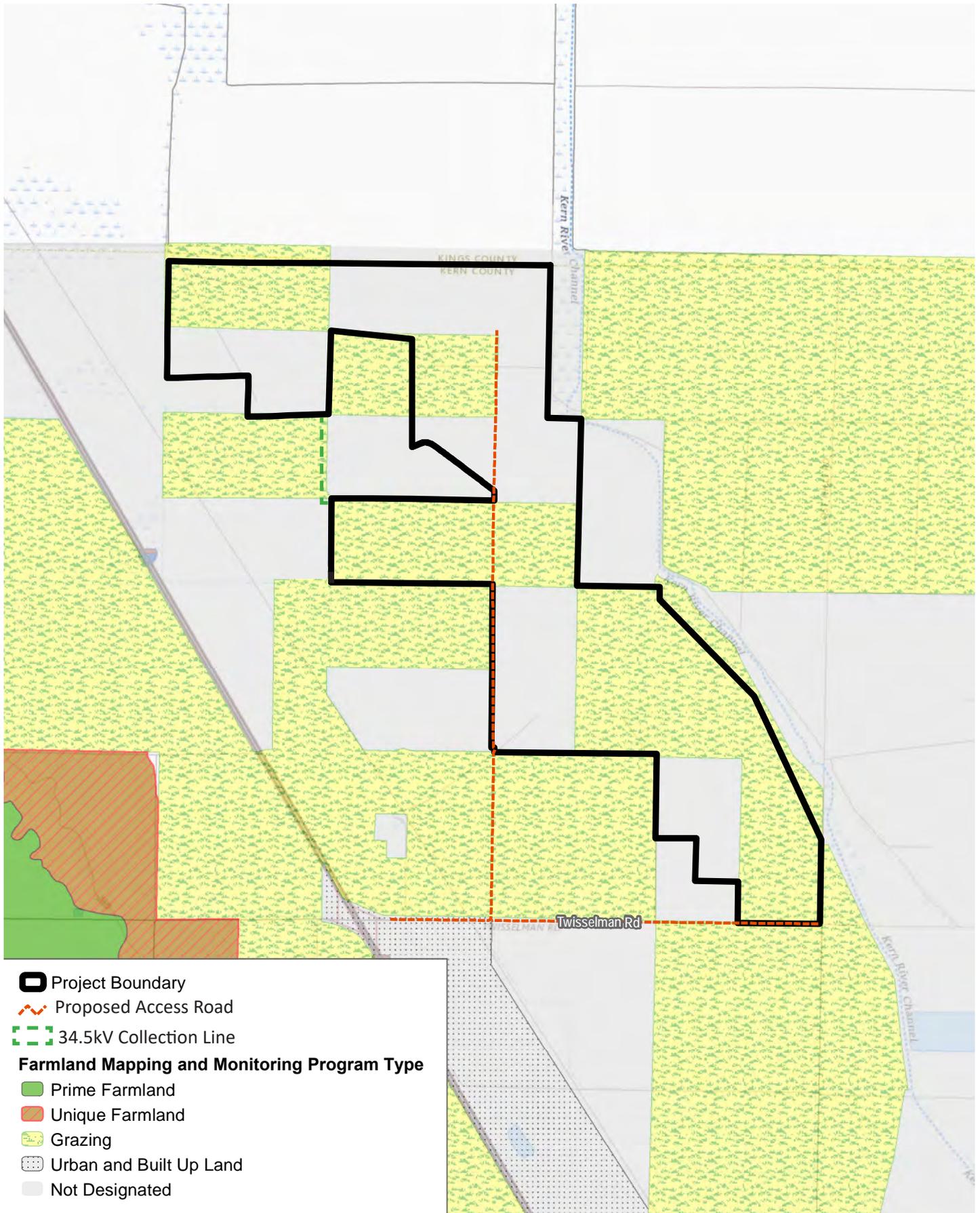




Source: CA Dept. of Conservation 2009, Open Street Map, 2019, Dudek, 2022

Figure 1-7: Williamson Act - Active and Nonrenewal

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist

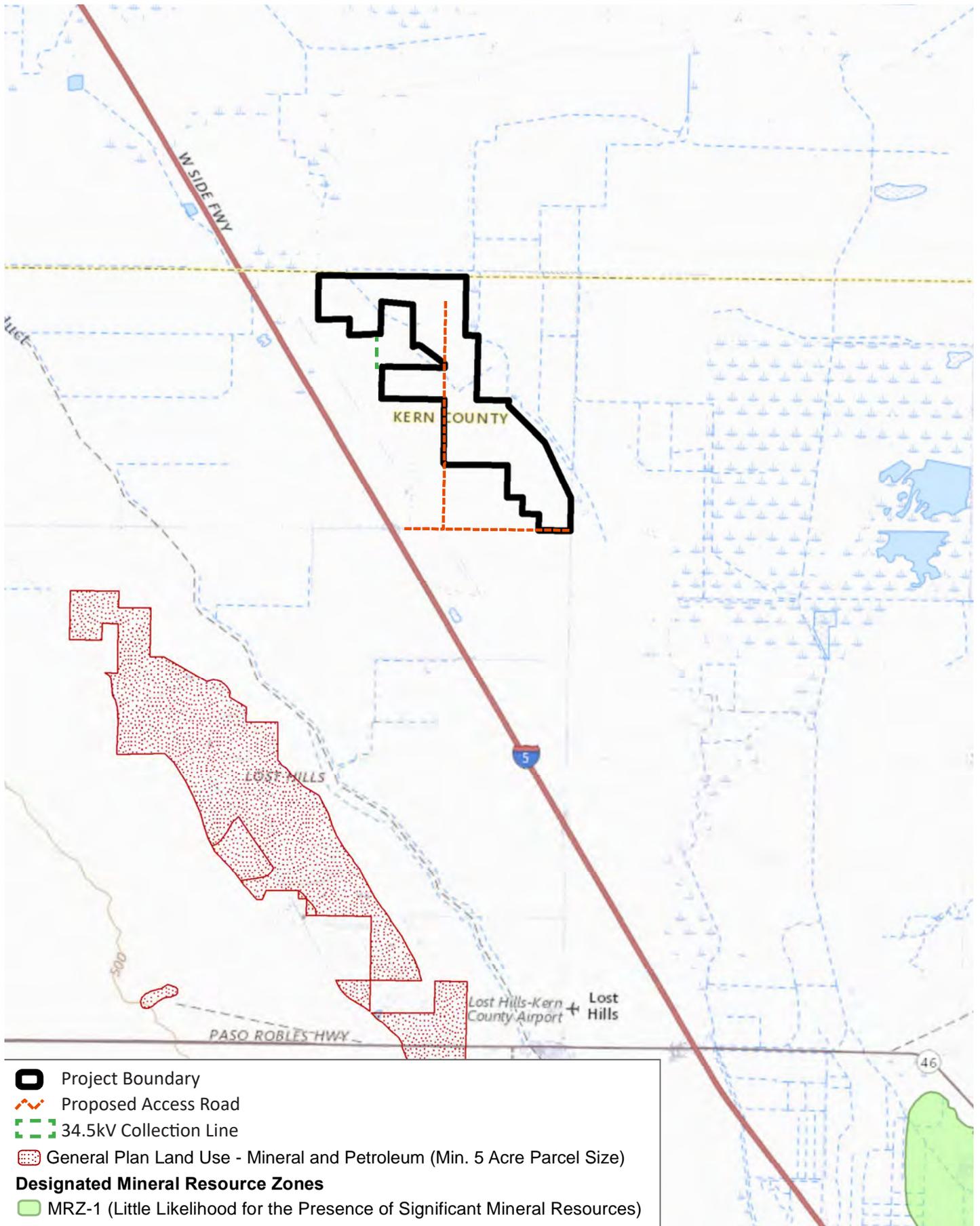


Source: CA Dept of Conservation 2018, Open Street Map, 2019, Dudek, 2022

Figure 1-8: Farmland Mapping and Monitoring Program Designations

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist



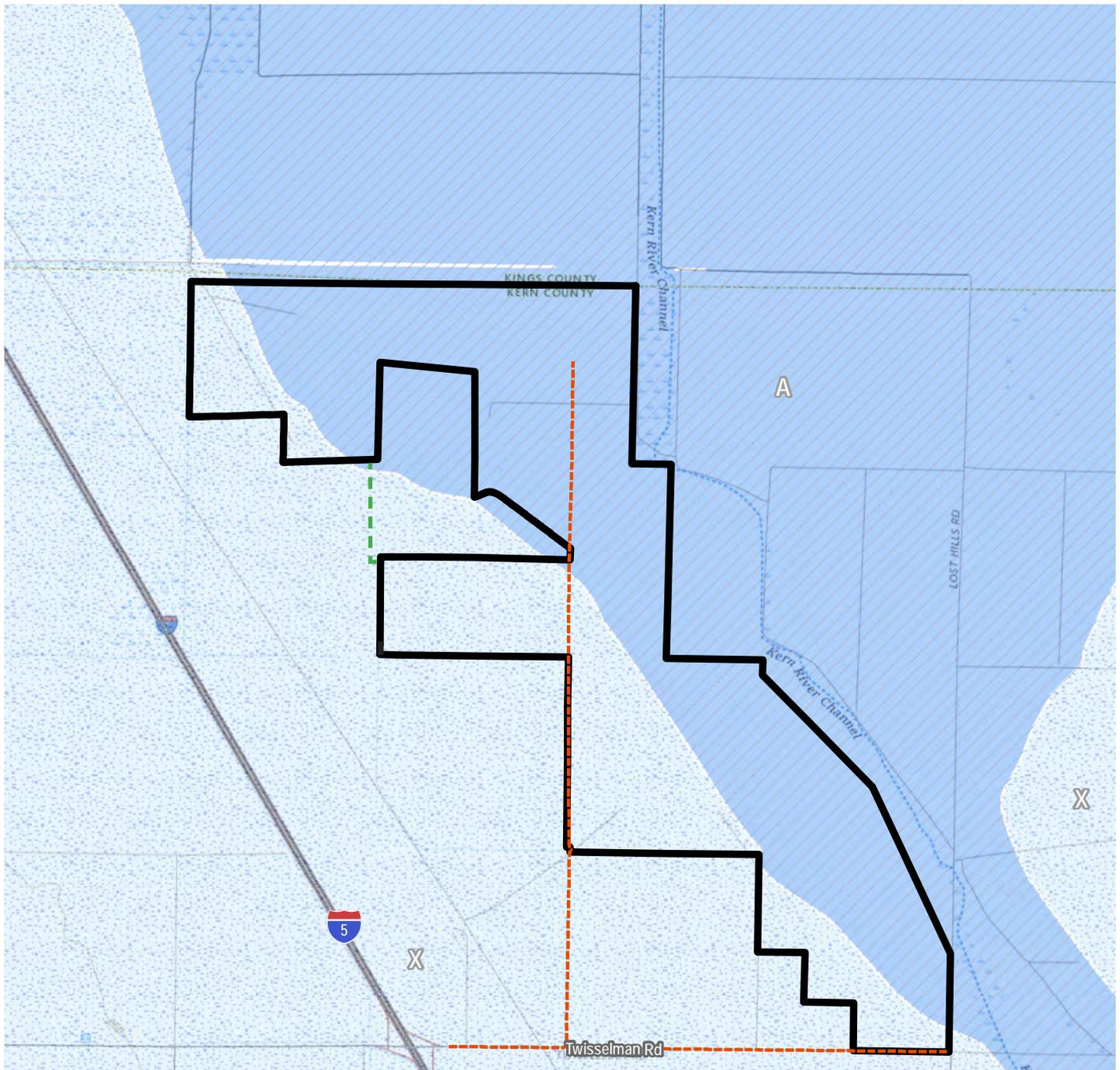


Source: CA Dept. of Conservation 2009, Open Street Map, 2019, Dudek, 2022

Figure 1-9: Mineral Resource Zones

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist





- Project Boundary
- Proposed Access Road
- 34.5kV Collection Line
- ZONE A:** No Base Flood Elevations determined.
- ZONE X:** Areas of Minimal Flood Hazard; Areas determined to be outside the 0.2% floodplan.
- Outside 500 year flood zone (determined to be outside the 1% and 0.2% flood zones) - AREA OF MINIMAL FLOOD HAZARD
- 100 year flood zone

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard Area include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

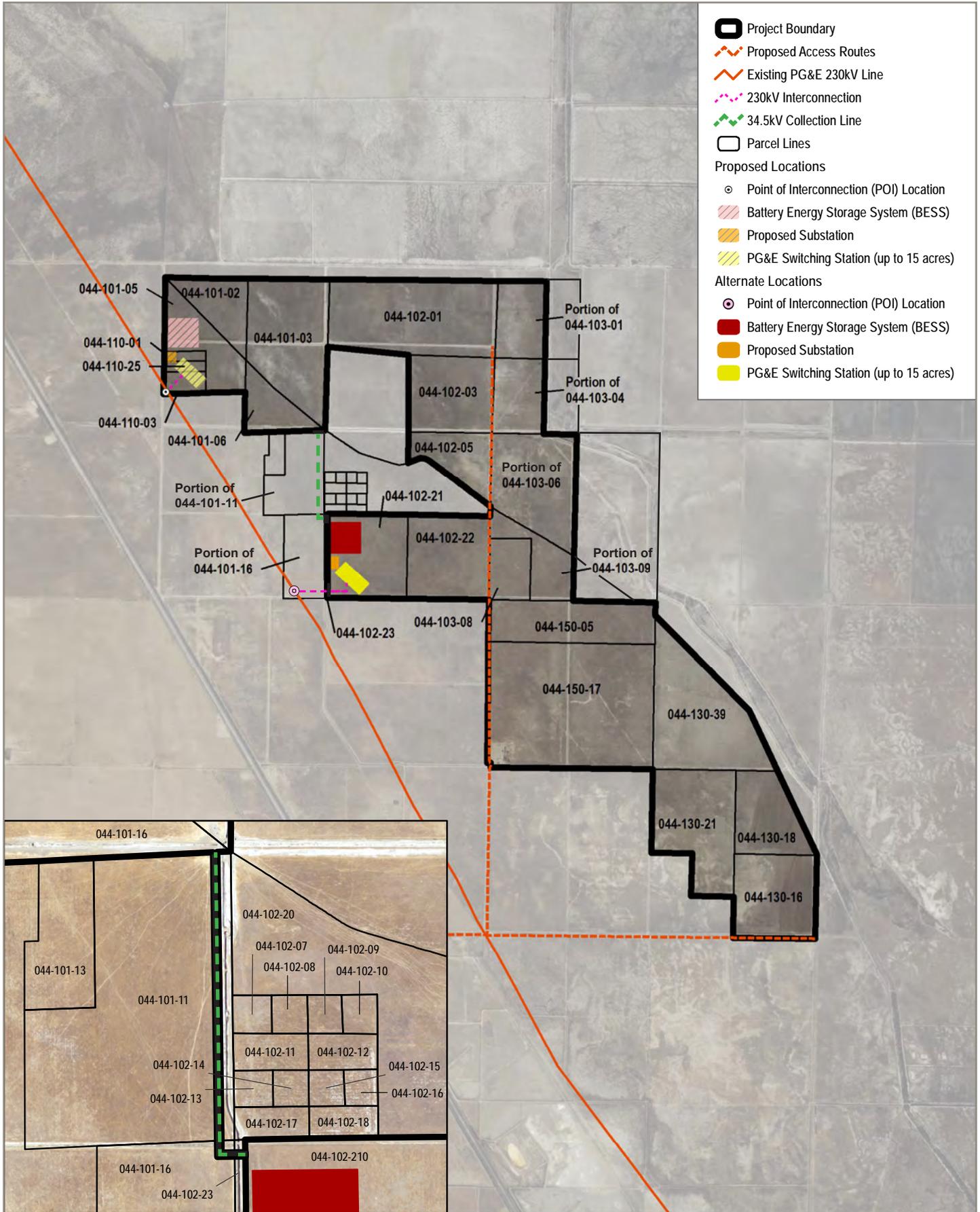
100-Year Flood Hazard Area - Special Flood Hazard Areas Subject to Inundation by the 1% Annual Chance Flood.

Source: FEMA, 2020, Open Street Map, 2019, Dudek, 2022

Figure 1-10: FEMA Floodplain Zone Hazards

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist

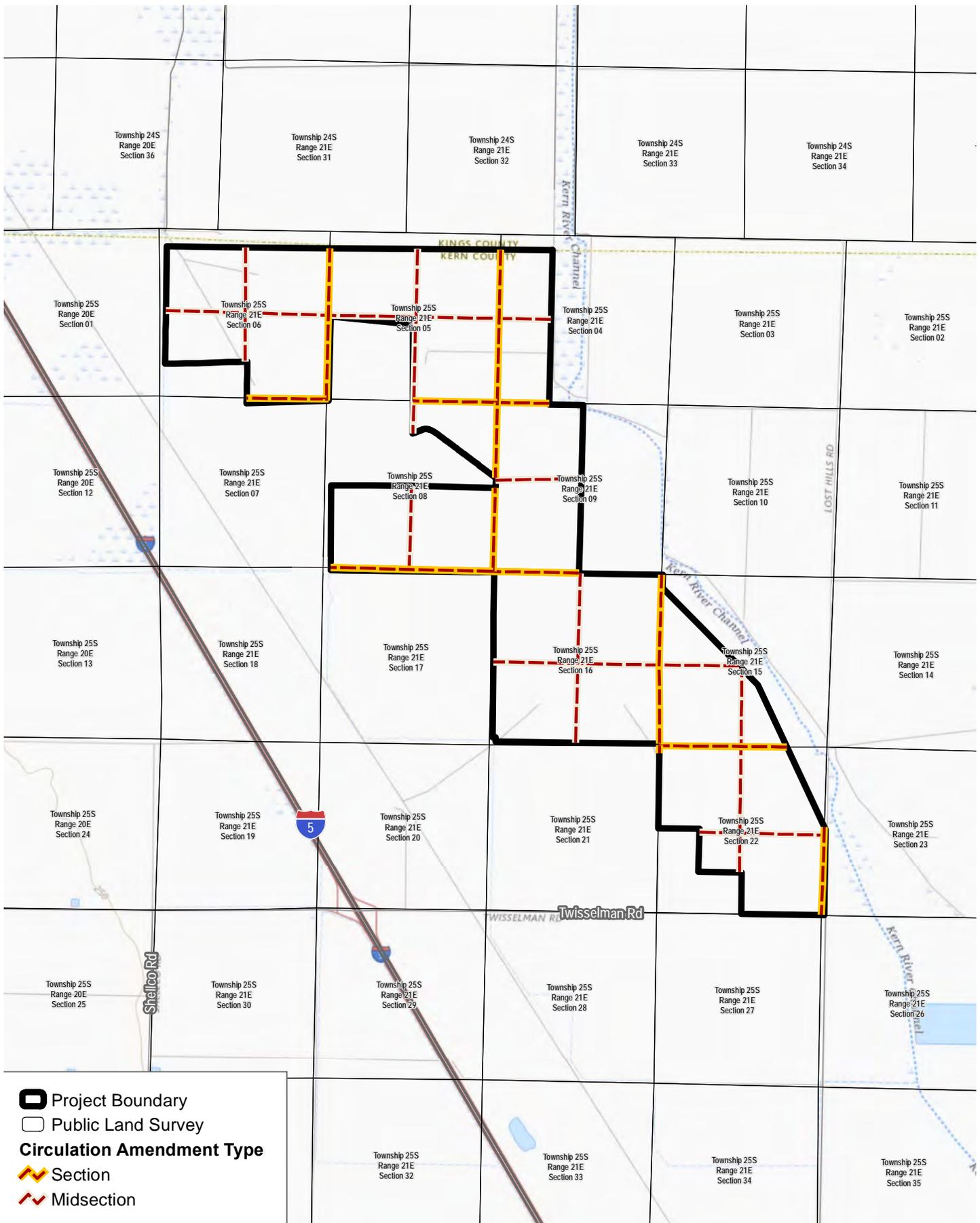




Source: Samaung 2022, County of Kern, 2020, Dudek, 2022

Figure 1-11: Project Interconnection

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist



- Project Boundary
- Public Land Survey
- Circulation Amendment Type**
- Section
- Midsection

Source: Open Street Map, 2019, Dudek, 2022

Figure 1-12: Proposed Circulation Element Amendments

Pelicans Jaw Hybrid Solar Project
 Notice of Preparation/Initial Study Checklist





2. Kern County Environmental Checklist Form

2.1. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “potentially significant impact” as indicated by the Kern County Environmental Checklist on the following pages.

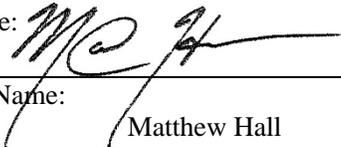
<input checked="" type="checkbox"/>	Aesthetics	<input checked="" type="checkbox"/>	Agricultural and Forestry Resources	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Energy
<input checked="" type="checkbox"/>	Geology and Soils	<input checked="" type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials
<input checked="" type="checkbox"/>	Hydrology and Water Quality	<input checked="" type="checkbox"/>	Land Use and Planning	<input checked="" type="checkbox"/>	Mineral Resources
<input checked="" type="checkbox"/>	Noise	<input type="checkbox"/>	Population and Housing	<input checked="" type="checkbox"/>	Public Services
<input type="checkbox"/>	Recreation	<input checked="" type="checkbox"/>	Transportation and Traffic	<input checked="" type="checkbox"/>	Tribal Cultural Resources
<input checked="" type="checkbox"/>	Utilities/Service Systems	<input checked="" type="checkbox"/>	Wildfire	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

2.2. 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: 
 Printed Name: _____
 Matthew Hall

Date: _____
 November 23, 2022
 Title: _____
 Supervising Planner



3. Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. Negative Declaration: “Less than Significant with Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less-than-Significant Impact.” The lead agency must describe the mitigation measure and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, “Earlier Analyses,” may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration, Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are “Less than Significant with Mitigation Incorporated,” describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.



8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to a less than significant level.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
I. Aesthetics				
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In nonurbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings? (Public views are those that are experienced from public accessible vantage points) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a, c, d) The aesthetic features of the existing visual environment in the project area are relatively uniform, with broad, dry, flat landscapes. The project site is generally surrounded by undeveloped nonurbanized land and agricultural land and facilities. Scenic vistas may be designated by a federal, state, or local agency and may also include an area that is designated, signed, and accessible to the public for the express purposes of viewing and sightseeing. The Kern County General Plan includes the land use designation 8.5 – Resource Management, which includes primarily open space lands containing important resource values, such as wildlife habitat, scenic values, or watershed recharge areas; none of the project parcels nor surrounding parcels are designated 8.5 – Resource Management (Kern County 2009). The Kern National Wildlife Refuge is located approximately two miles to the east, and the rural community of Lost Hills is located approximately 8 miles southwest of the project site and consists predominantly of rural residential uses. The project would alter the landscape on the project site and portions of the project would be visible from public roads such as Twisselman Road which bounds the project on the south would likely be visible from Interstate (I-5) to the west of the project site. The solar arrays are designed to absorb sunlight to maximize electrical output. All lighting at the proposed project site would be designed to meet Kern County Zoning Ordinance Chapter 19.81 - Outdoor Lighting - Dark Skies requirements. Nonetheless, the panels could result in additional reflection from the surfaces resulting in a greater potential for glint/glare during the day. The above project impacts will be further evaluated in the EIR.

(b) According to the California Department of Transportation (Caltrans) California Scenic Highway Mapping System, the closest eligible state scenic highway is State Route (SR) 41 between SR 46 and



SR 33 located approximately 18 miles northwest of the project site. Given the distance from the project site and intervening elevated topographic features including low lying hills, the project would not substantially change existing views from SR 41. There are no officially designated highways in proximity to the project site. There are no known trees, rock outcroppings, or historic buildings designated as scenic resources within or immediately surrounding the project site. Implementation of the proposed project would not erect structures that would substantially damage scenic resources. No impacts would occur and no additional discussion in the EIR will be required.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
II. Agriculture and Forest Resources				
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 nonagricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15205(b)(3) Public Resources Code)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

RESPONSES:

- (a) According to the California Department of Conservation (CCDOC), California Important Farmland Finder Map, there are no agricultural lands designated as Prime Farmland, Unique Farmland, Unique Farmland, or Farmland of Statewide Importance located within the project site, see **Figure 1-8**. All of the site and including the areas that would be developed as part of the project and the generation tie line (“gen-tie”) are classified as Vacant or Disturbed Land, and Grazing Land. Construction and/or operation of the project would not result in the direct conversion of designated Farmland to a nonagricultural use and there would be no impact.



An agricultural conversion technical study has been prepared to analyze potential impacts (Dudek 2022a). As detailed in the agricultural conversion technical study, in accordance with the County's Pathway for Processing: Conversion of Agricultural Land to Solar PV Use (Kern County 2012), the project parcels have not been actively farmed 4 years or fewer out of the last 10 years (in fact, the project site has not been farmed in the last 10 years). Irrigated agricultural production is not feasible on site and there is no existing irrigation system that serves the project site. Lack of irrigation renders these parcels not viable for long-term future use as farmland. Lack of recent agricultural activity on the parcels comprising the project site indicates that the site is not currently productive farmland. Additionally, the proposed project would have a lifespan of 35 years. Should the solar generating operations be removed in the future, the Applicant would decommission and remove the system and its components at the end of the life of the project and work with the County to restore the project site to meet the County's next use (i.e., restore the project site to preconstruction conditions or to a condition that best meets future land use). Therefore, the development of the site for solar generating operations does not preclude future agricultural use at the site. No further analysis in the EIR is required.

- (b) The project site and surrounding area includes land that is currently zoned as A (Exclusive Agriculture), see **Figure 1-6**. According to the Kern County Zoning Ordinance, a commercial solar facility is a compatible use within the A zone district. The construction and operation of a solar energy generating facility on the site would require the approval of a CUP. Solar energy electrical generators are considered a compatible use within Exclusive Agriculture zoning with the issuance of a CUP, pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance and the Kern County Agricultural Preserve Standard Uniform Rules. With approval of a CUP, implementation of the proposed project would not conflict with existing zoning for agricultural use. Although there is land zoned Exclusive Agriculture, according to Kern County GIS, there are no areas in the project site under a Williamson Act Contract. This includes parcels under either an active or non-renewal status, see **Figure 1-7**. As such, there would be no impacts to Williamson Act lands and further discussion in the EIR is not required.
- (c) No lands affected by the project are zoned as forest land or timberland, or for timberland production. Therefore, the project would not conflict with existing zoning for, or cause the rezoning of, forest land, timberland, or timberland zoned for timberland production. Therefore, there would be no impact and further analysis in the EIR is not required.
- (d) The project site is neither situated on forest or timberland nor is located near any such areas that are currently under production. There is no land in the vicinity of the project site that is zoned as forest land, timberland, or lands zoned for timberland production. Therefore, there would be no impact related to the loss of forest land or conversion of forest land to non-forest use. No further analysis is warranted in the EIR.
- (e) As mentioned in responses (c) and (d), the project site is not designated as forest land and forest land or timberlands do not occur in the project vicinity. As mentioned in response (a) above, the project site is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance however, there are active farmlands located adjacent to the project site that are classified as Prime Farmland or Unique Farmland. The project could have indirect impacts on the existing environment that would affect off-site existing agricultural uses. Nearby and adjacent parcels including APN 044-102-02 (160 acres), 044-090-20 (82.05 acres), and 044-090-21 (163.44 acres), are designated as



prime farmland and are under Williamson Act contracts, and therefore, further evaluation will be provided in the EIR.

- (f) The project site is not subject to an open space contract made pursuant to the California Land Conservation Act of 1965 or the Farmland Security Zone Contract. The project would therefore not result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Section 15205(b)(3) Public Resources Code). No impact would occur, and no further evaluation is required in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
III. Air Quality				
Where available, the significance criteria established by the applicable air quality management or air pollution control district shall be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard? Specifically, would implementation of the project exceed any of the following adopted thresholds:				
i. San Joaquin Valley Unified Air Pollution Control District:				
<u>Operational and Area Sources</u>				
Reactive organic gases (ROG): 10 tons per year.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oxides of nitrogen (NO _x): 10 tons per year.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Particulate matter (PM ₁₀): 15 tons per year.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Stationary Sources - as Determined by District Rules</u>				
Severe nonattainment: 25 tons per year.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extreme nonattainment: 10 tons per year.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Eastern Kern Air Pollution Control District.				
<u>Operational and Area Sources</u>				
Reactive organic gases (ROG): 25 tons per year.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oxides of nitrogen (NO _x): 25 tons per year.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Particulate matter (PM ₁₀): 15 tons per year.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Stationary Sources – as Determined by District Rules</u>				
25 tons per year.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



RESPONSES:

- (a-d) The project site is located entirely within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD), in the San Joaquin Valley Air Basin (SJVAB). The SJVAB is designated as a nonattainment area for both the State and federal ozone standards and the State particulate matter (PM_{2.5}) standard. The basin is in nonattainment for the particulate matter (PM₁₀) for state standards but as of September 25, 2008, the Environmental Protection Agency redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan (SJVAPCD, 2012). Project construction would generate emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x), both of which are known as ozone precursors, and PM₁₀ that could result in significant impacts to air quality in the area.

SJVAPCD's most recently adopted air quality management plans are its 2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard (SJVAPCD, 2020) and the 2016 Ozone Plan for 2008 8-Hour Ozone Standard (SJVAPCD, 2016) and its 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards (SJVAPCD, 2018). Further analysis of the project's air quality impacts is warranted to determine whether the project would conflict with or obstruct implementation of SJVAPCD's applicable air quality plan for attainment and, if so, to determine the reasonable and feasible mitigation measures that could be imposed.

The project is not located within the Eastern Kern Air Pollution Control District (EKAPCD) and, therefore, its adopted thresholds do not apply. However, as noted above, the project is located within the SJVAPCD, which is designated as a nonattainment area for the State and federal ozone standards and the State PM_{2.5} standard and the state standard for PM₁₀. As such, the emissions of ozone precursors (ROG and NO_x) and PM_{2.5} during construction and operation of the project could result in a cumulatively considerable net increase of these criteria pollutants in the SJVAPCD. Thus, the project's contribution to cumulative air quality impacts in the SJVAPCD could be potentially significant.

Adjacent and nearby rural residences and communities would be considered sensitive receptors that could be potentially impacted by construction and operation of the proposed project. The nearest sensitive receptors are located approximately 3.8 miles southwest of the project site and consist of four single-family residences on Twisselman Road. Nearby sensitive receptors could be exposed to pollutant emissions during construction of the proposed project. The proposed project's construction-related activities would result in diesel exhaust emissions and dust (also known as PM₁₀) that could adversely affect air quality for the nearest sensitive receptors.

Additionally, exposure to Valley Fever, a disease caused by a fungus that grows in the soil and dirt in some areas of California, could be caused by exposure to fugitive dust generated during construction is a potentially significant impact. There is the potential that (*coccidioidomycosis*) cocci spores could be stirred up during excavation, grading, and earth-moving activities, exposing construction workers and the sensitive receptor to these spores and thereby to the possibility of contracting Valley Fever.

The project would not have any permanent stationary sources or equipment located on-site that would generate objectionable odors. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. These odors would be temporary and would be dispersed rapidly. The project impacts listed above will be further evaluated in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
IV. Biological Resources				
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

RESPONSES:

(a-d) The project site contains undeveloped land that is vacant and has been used for cattle and sheep grazing over the past 10 years. The site has history of agricultural uses, but no crop cultivation has occurred within the last 10 years on project site. The project site is flat and does not contain any significant landform features that create a complex terrain or variable landscape. The project site contains a mix of native and non-native vegetative cover including grasses and shrubs. There is the potential for sensitive habitats to be present and that the project site or immediately surrounding areas may provide habitat for candidate, sensitive, or special-status plants and wildlife. Field surveys for riparian and other sensitive natural communities also will be completed for the project, and the results



will be incorporated into the EIR. The field surveys also will be used to determine the presence of candidate, sensitive, or special-status plant and animal species on-site and in the surrounding area and the findings will be included in the EIR.

In addition to sensitive plant and animal species, Federal or State-protected water-based resources such as streams and washes could be present on the project site and might be impacted by project construction activities. A determination as to whether the project site contains features under federal or State jurisdiction will be conducted as part of the EIR. Impacts to protected wetlands would be considered potentially significant. The project site and surrounding area may be used for migration or dispersal by some wildlife species. Project construction and operation also could also remove foraging habitat and reduce the area usable to wildlife. These project impacts will be further evaluated in the EIR.

In the San Joaquin Valley, a regional wildlife movement corridor is defined as major rivers that provide connection between the mountains and the San Joaquin and Kern Rivers (Tulare Basin Wildlife Partners 2022). The project site is not considered a wildlife movement corridor because it does not contain major rivers that connect the mountains and the San Joaquin and Kern Rivers. Therefore, project impacts are expected to be less than significant; however, this issue will be further evaluated in the EIR.

- (e-f) There are no oak woodlands located within the project site and the project does not conflict with General Provision 1.10.10 of the Kern County General Plan regarding oak tree conservation. As currently designed, the project is considered to be consistent with the Land Use, Open Space, and Conservation Element of the Kern County General Plan. There are no other adopted conservation plans for protection of biological resources governing the project area. No impact would occur as the project would not conflict with the provisions of an adopted habitat conservation plan. No further analysis in the EIR is warranted.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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V. Cultural Resources

Would the project:

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| a. Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Disturb any human remains, including those interred outside of formal cemeteries? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

RESPONSES:

(a-c) The project site consists of disturbed and undeveloped land that has history of agricultural use and that is currently used for grazing. Development of the project would require additional ground disturbance for grading, installation of the solar arrays, gen-tie line, other electrical improvements such as the BESS and placement of underground electrical and communications lines. The project could potentially impact historical or cultural resources, including resources that are undiscovered or that may be buried underground. A cultural resources survey will be conducted for the project as part of the EIR. The cultural resources survey will evaluate the project site and document if there are known resources present as well as the potential for the site to contain archaeological and historical resources. The report will identify potential impacts to historical and/or archaeological cultural resources and will include avoidance or mitigation measures, if applicable.

There is no evidence that the project site is located within an area likely to contain human remains, and discovery of human remains during project earthmoving activities is not anticipated. Although, impacts to human remains are anticipated to be less than significant, inadvertent discovery of such remains is possible and this issue will be further evaluated in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
VI. Energy				
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

- (a) During the construction phase of the proposed project, on-site energy demand and consumption would be related to gasoline and diesel fuel for construction worker vehicle trips and hauling and material delivery trips. Diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electrical grid. Permanent solar and energy-related equipment is constructed off-site to specifications and delivered in sub-assemblies to the project site, where they are assembled into their final configuration with little to no alterations that would result in waste material. However, using energy resources to build a renewable energy project does not constitute wasteful, inefficient, or unnecessary consumption of energy resources, during project construction, or operation. O&M facilities associated with the project would require electricity for interior and exterior building lighting; heating, ventilation, and air conditioning; electronic equipment; machinery; appliances; security systems; and other operations through the life of the project. Maintenance activities during operations, such as landscape maintenance, could involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in minimal transportation energy use associated with limited employee vehicle trips generated by the proposed project. Nevertheless, this issue will be further evaluated in the EIR.
- (b) Following implementation of the proposed project, energy would switch from consumption to production. Operation of the proposed project would lead to an overall increase in the County’s Renewable Portfolio and would align with the General Plan Energy Element’s goals and policies to encourage the development of renewable energy within Kern County. The project would also assist California in meeting the objectives outlined in SB 100 for eligible renewable energy resources and zero-carbon resources to supply 100 percent of retail sales of electricity to California end-use customers by December 31, 2045. The project would generate rather than consume electricity and therefore would not conflict with state or local energy efficiency plans. Because there would be no conflict with state or local plans for renewable energy or energy efficiency, further analysis in the EIR is not required.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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VII. Geology and Soils

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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

- (a-i) The project site is located in a seismically active region of California; however, it is not located in proximity to a State of California Alquist-Priolo Earthquake Fault Zone and there are no known faults



within the project site. According to the California Department of Conservation (CDOC) Fault Activity Map of California, the nearest fault to the project site is the Pond-Poso Creek Fault, a quaternary fault (one that has moved in the last 1.6 million years), is located approximately 14 miles east of the project site. The nearest major active fault is the Great Valley 14 Fault, located approximately 20 miles east of the proposed project site (Ninyo & Moore 2022). Also, according to the CDOC Earthquake Zones of Required Investigation, the nearest Alquist Priolo Fault Zone is a portion of the San Andreas fault location approximately 30 miles to the southwest of the project site (CDOC, 2022). Due to the distance from the nearest active fault to the project sites, the potential for surface fault rupture at the project sites is considered negligible.

In addition, construction of the project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Kern County has adopted the CBC 2016 Edition (CCR Title 24), which incorporates substantially the same requirements as the International Building Code (2018 Edition), with some modification and amendments. Adherence to all applicable regulations would mitigate any potential fault rupture-related impacts associated with the project. Based on the absence of any known active faults that cross or come anywhere near the project site, and the project compliance with applicable ordinances of the Kern County Building Code, impacts related to fault rupture would be less than significant and further discussion in the EIR is not warranted.

- (a-ii-iii) Due to the location of active faults in the general region, strong seismic ground shaking could occur at the project site, resulting in damage to above and below ground structures and other site improvements if not properly designed to withstand strong ground shaking. Construction of the project would be subject to all applicable ordinances of the Kern County Building Code (Chapter 17.08). Kern County has adopted the CBC which imposes substantially similar requirements for design to resist strong ground motions as the IBC. Adherence to applicable regulations are anticipated to minimize the potential impacts associated with the project, but these issues will be further evaluated in the EIR.
- (a-iv) Zones of Required Investigation referred to as "Seismic Hazard Zones" in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where Site investigations are required to determine the need for mitigation of potential earthquake-induced landslide ground displacements. The project is located in a gently sloping area and does not contain any steep slopes and is not adjacent to an area with steep slopes that could affect the project site. The project would not include any habitable structures with the exception of the O&M building and BESS, and the potential hazard due to landslides from adjacent properties to affect the project site is considered remote as there are no steep slopes on adjoining properties. Further, there are no mapped areas that have Seismic Hazard Zones in the project area and the potential for the project to be affected by landslides or exacerbate the potential for landslides is low. No impacts from landslides are anticipated and further discussion in the EIR is not required.
- (b-d) Regarding the projects potential to secondary seismic effects as a result of ground shaking or the potential for the project to be located on an expansive soil(s), a geotechnical investigation of the project site will be conducted to determine the physical characteristics of the underlying soils and geologic formations and to identify if any of these unstable conditions exist that could be exacerbated by proposed construction activities. The results of these investigations and need for mitigation would be analyzed in the EIR.
- (e) The project O&M building would be a prefabricated commercial structure. Permanent restroom facilities with septic tanks and/or portable toilets would be used for sanitary purposes at the O&M



building. Proper siting and design of the leach field would minimize the potential for a health or environmental impact from flooding and will be discussed further in the EIR.

- (f) There are no known subsurface historical resources within the project site but there is the potential for unknown subsurface paleontological resources to exist within the project site. The potential for the project to impact will be further evaluated in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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VIII. Greenhouse Gas Emissions

Would the project:

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|--|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

RESPONSES:

(a-b) Greenhouse gas (GHG) emissions emitted by human activity are implicated in global climate change or global warming. The principal GHGs are CO₂, methane (CH₄), NO_x, ozone, water vapor, and fluorinated gases. The temporary construction activities associated with the project, which would involve operation of heavy off-road equipment, on-road trucks (for deliveries and hauling), and construction worker commute trips, would generate GHGs through exhaust emissions. However, as a solar facility, the project is anticipated to displace traditional sources of electricity production that involve combustion energy sources (e.g., burning coal, fuel oil, or natural gas). As such, the provision of solar energy by the project would produce GHG-free electricity that is anticipated to offset GHGs that would otherwise be generated by traditional fuel combustion sources of electricity. The project's GHG emissions generated during construction of the project and the potential GHG offsets resulting from operation of the project, as well as any potential conflicts with any applicable plan, policy or regulation will be identified and quantified in the EIR. Additionally, the project's potential GHG impacts and the potential GHG offsets resulting from operation of the project will be examined in the EIR, with respect to the objectives of statewide programs to reduce GHGs associated with energy generation.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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IX. Hazards and Hazardous Materials

Would the project:

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|---|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. For a project located within the adopted Kern County Airport Land Use Compatibility Plan, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g. Expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| h. Would implementation of the project generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste? | | | | |

Specifically, would the project exceed the following qualitative threshold:

The presence of domestic flies, mosquitoes, cockroaches, rodents, and/or any other vectors associated with the project is significant when the applicable enforcement agency determines that any of the vectors:



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
i. Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Are associated with design, layout, and management of project operations; and	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Disseminate widely from the property; and	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Cause detrimental effects on the public health or well-being of the majority of the surrounding population.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a-b) Wastes that would be generated during construction of the project would be non-hazardous, and would consist of materials such as cardboard, wood pallets, copper wire, scrap steel, common trash, and wood wire spools. Although field equipment used during construction activities could contain various hazardous materials (i.e., hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, etc.), these materials are not considered to be acutely hazardous, would be used in accordance with the manufacturer’s specifications, and all applicable regulations. In addition, hazardous fuels and lubricants used on field equipment would be subject to a Construction Waste Management Plan and, if required, a Spill Prevention, Containment and Countermeasure Plan.

The operation of the project would not involve the routine transport, use, or disposal of any hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. During construction, the project would include the transport of general construction materials (i.e., concrete, wood, metal, fuel, etc.) as well as materials necessary to construct the proposed PV arrays.

The proposed project would be subject to all applicable local, state, and federal plans related to hazardous material use on the project site. Additionally, hazardous material use would be reviewed by the Kern County Environmental Health Services Division. In accordance with the review process as set by the Kern County Environmental Health Services Division, the proposed project would be required to submit and complete a list of all materials used on site, describe how the materials would be transported and stored, and identify in what form they would be used to maintain safety and prevent possible environmental contamination or worker exposure. A Safety Data Sheet would be made readily available to on-site personnel for all applicable materials present on site during construction. Nonhazardous construction debris would be generated and disposed of in approved facilities. During construction of the facility, human waste would be managed using portable toilets located at reasonably accessible on-site locations.

The solar PV panels may include materials that considered to be hazardous (i.e., cadmium, telluride, etc.). The proposed project would follow the manufacturer’s collection and recycling program to ensure the proper collection and recycling of PV panels. Broken PV panels would be replaced to avoid a potential source of pollution to stormwater.



Construction and operation of the project may include the accidental release of storage materials, such as cleaning fluids and petroleum products including lubricants, fuels, and solvents. Potential hazards associated with BESS include increased potential for electrical shock and chemical release associated with the batteries used. Impacts resulting from the transport, use, or disposal of hazardous materials during construction and operation of the project will be evaluated further in the EIR.

- (c) There are no schools within 5 miles of the proposed project site. The closest schools to the project site is the Lost Hills Elementary School, A.M. Thomas Middle School, and Wonderful College Prep Academy, each located approximately 8 miles south at 14821 Primary Court, Lost Hills, California 93249, 20979 Lobos Court, Lost Hills, California 93249, and 14848 Lamberson Avenue, Lost Hills, California 93249, respectively. Therefore, the proposed project would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school. There would be no impact, and no further analysis is required in the EIR.
- (d) Based on a review of the Department of Toxic Substances Control (DTSC) Cortese List Data Resources, there are no hazardous materials sites located on the project site. The nearest hazardous materials sites listed on the State Water Resources Control Board's GeoTracker database and DTSC Envirostor is an open-inactive case (04/28/2016) related to a Shell pipeline and contaminated soil from crude oil (DTSC, 2022) located approximately 0.5 miles west of the project site. It does not appear that this or any other hazardous materials conditions would affect the project site, however, additional detail will be provided in the EIR.
- (e) The nearest public airport to the project site is the Wasco-Kern County Airport located approximately 20 miles southeast of the project site. The project site is not located within any safety or noise zones for the Wasco-Kern County Airport. Due to the nature of the proposed land use, impacts from air traffic hazards or excessive aircraft noise are not anticipated to occur for people residing or working in the project area with respect to the project's proximity to an airport. Therefore, there would be no impact and no further analysis is warranted in the EIR.
- (f) As required by routine and standard construction specifications administered by Kern County, road access would be maintained throughout construction, and appropriate detours would be provided in the event of potential road closures. Therefore, no impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would occur during construction.

The five full-time operational work force would not generate significant traffic volumes during an emergency evacuation scenario that could complicate area-wide emergency evacuation efforts. The access road that would be constructed as part of the proposed project would not affect designated emergency evacuation routes as Twisselman Road is not designated evacuation routes in the Kern County Emergency Operations Plan (EOP) (EOP, 2022). No impacts are anticipated, further analysis of this issue in the EIR is not warranted.

- (g) According to the California Department of Forestry and Fire Protection (CalFire), Kern County Fire Hazards Severity Zone Maps, the project site is located within a Local Responsibility Area and is not defined by Calfire as having a specific fire hazard designation (Calfire, 2007a). According to the Calfire Local Responsibility Area (LRA) the project site is within an area that is unzoned in regard to wildfire hazard.(CalFire, 2007b). The proposed project would comply with all applicable wildland fire management plans and policies established by CalFire and the Kern County Fire Department.



Accordingly, the proposed project is not anticipated to expose people or structures to a significant risk of loss, injury, or death involving wildland fires, but this will be further discussed in the EIR.

- (h) Project-related facilities would not result in features or conditions that could potentially provide habitat for vectors such as mosquitoes, flies, cockroaches, or rodents. During construction and operation, workers would generate small quantities of solid waste (i.e., trash, food containers, etc.) that would be stored in enclosed containers, then transported to and disposed of at approved disposal facilities. Construction and operation of the proposed solar arrays and associated facilities would not produce uncontrolled wastes that could support vectors and would not generate any standing water or other features that would attract nuisance pests or vectors. Although impacts are anticipated to be less than significant, further analysis of this issue will be discussed in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
X. Hydrology and Water Quality				
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in substantial erosion or siltation on- or off-site;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a-b) Construction of the project would be subject to County, State, and federal water quality regulations. The project site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). Construction associated with the proposed project would comply with all local, state, and federal water quality regulations. Project construction activities have the potential to result in erosion, sedimentation, and discharge of construction debris, and could result in the



discharge of wastewater and runoff at the project site. During construction, potable water would be brought to the site for drinking and domestic needs. Non-potable water would be used during construction for soil compaction and dust-suppression purposes. Water may be sourced from on-site wells, off-site sources, or a combination of the two in support of construction activities. On-site wells would be placed strategically within the project site to facilitate construction watering and operational water needs. Exact locations of these wells would be determined upon the final engineering of the project and would include the installation of well meters. Temporary storage tanks may be used for water storage throughout the site during construction. Off-site water would be sourced via truck or pipeline. A comprehensive hydrology and water quality impact analysis as well as a water supply assessment will be prepared, and the findings will be further analyzed in the EIR.

- (c) Construction and operational activities associated with the project would alter existing drainage conditions and create impervious surfaces that would have the potential to result in an increase in the rate or amount of surface runoff during storm events. A hydrologic study will be prepared for the project in accordance with Kern County requirements. Potentially significant impacts will be analyzed in the EIR.

During construction and following installation of the solar arrays, the majority of the project site would remain as a pervious surface. Although the solar arrays are impervious, most rainfall would runoff the panels and fall to the ground surface such that storm water infiltration would be similar post construction compared to the existing conditions. No discharges to or alterations of any municipal stormwater drainage systems are proposed. Similarly, no component of the project would generate a substantial source of polluted runoff. The construction period SWPPP and the operational period Water Quality Management Plan (WQMP) would ensure the proper control and treatment, if necessary, of any storm water prior to discharge. While impacts are anticipated to be less than significant, this impact will be further discussed in the EIR.

FEMA delineates flood hazard areas on FIRMs. Portions of the project site are located in a 100 year flood area (Zones A, 1 percent annual chance of flooding) as shown on Figure 7, FEMA Floodplain Zone Hazards. A hydrology flood report/hydrology technical study will be prepared for the proposed project, and further analysis of the project site to view location of floodplains as delineated by FEMA will be provided. A design-level drainage plan would be completed for the project, which would include runoff calculations and design features developed in accordance with Kern County Development Standards, the Kern County Grading Ordinance, the Kern County Floodplain Ordinance, and the Kern County Code of Building Regulations. The drainage plan would ensure appropriate drainage for the project site and that any proposed development within the flood area (Zone A) would be designed to limit obstructions and impacts related to the floodplain. Specifically, the drainage plan would ensure that design of the solar arrays include 1 foot of freeboard clearance above the calculated maximum flood depths for the solar arrays or the finished floor of any permanent structures. Solar panel sites located within a 100-year floodplain would also be graded to direct potential flood waters without increasing water surface elevations more than 1 foot or as required by Kern County's Floodplain Ordinance. Compliance with the Kern County Development Standards, the Kern County Grading Ordinance, the Kern County Floodplain Ordinance, and the Kern County Code of Building Regulations would reduce impacts however, further assessment will be provided in the EIR.

- (d) The project is not located near an ocean or enclosed body of water, and therefore would not be subject to inundation by seiche or tsunami. Mudflows are a type of mass wasting or landslide, where earth



and surface materials are rapidly transported downhill under the force of gravity and are often triggered by heavy rainfall and soil that is not able to sufficiently drain or absorb water and the super-saturation results in soil and rock materials to become unstable and slide away. Due to the relatively flat topography of the project site and surrounding area, the potential to be inundated by mudflow is considered remote.

Portions of the project site are within a Zone A, which is an area as mapped by the Federal Emergency Management Agency (FEMA) its Flood Insurance Rate Maps (FIRMs). According to the FIRMs (06029CC0650E – eff. 09/26/2008) and (06029C0125E eff 09/26/2008), some of the project site to the west of the drainage that bounds much of the eastern project boundary is designated as a Special Flood Hazard Area (Zone A, without base flood elevations determined). The balance of the project site is not within a flood area (Zone X, areas determined to be outside the 0.2% annual chance floodplain). It is unknown if or how many acres of solar panels or other project elements would be located in these areas. The project would be reviewed by the Kern County Public Works Department for adherence to all applicable floodplain management standards. Because of the potential for flood hazards to occur, and related risk of release of pollutants due to project inundation, further analysis will be provided in the EIR.

- (e) The project site is located within the San Joaquin Valley Groundwater Basin (SJVGB) within the Kern Groundwater Authority (KGA) boundaries. The SJVGB is designated in accordance with the Sustainable Groundwater Management Act (SGMA) as a high priority basin and has developed a groundwater sustainability plans (GSP) to become sustainable (KGA, 2022). The GSP was prepared with five other groundwater sustainability agencies (GSA's) including the City of McFarland (GA), Cawelo Water District GSA, Semitropic Water Storage District, Pioneer GSA, and West Kern Water District GSA. The GSP was reviewed by the California Department of Water Resources but was found to be deficient. The deficiencies were to be addressed by July 27, 2022 (CDWR, 2022). In regard to water quality, the project would conform to all of the applicable plans including preparation of a stormwater pollution prevention plan (SWPPP) and best management practices (BMPs) to help ensure water quality is not substantially affected. A water supply assessment will be completed for the project to analyze potential impacts to groundwater resources, including any potential conflicts with the finalized GSP. The potential for the project to result in conflicts with applicable water quality plans will be further analyzed in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XI. Land Use and Planning

Would the project:

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|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a. Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

RESPONSES:

- (a) The project site is located on undeveloped land. The rural community of Lost Hills is located approximately 7 miles south of the project site and consists predominantly of rural residential uses. Rural residential uses in Kettleman City and Alpaugh in Kings County, that are located approximately 20 miles to the north and 14 miles to the northeast of the project site, respectively. The project would neither physically encroach into nor divide or restrict access to either of these or other cities or town within the region. In addition, no new roadways or other linear elements that would have the potential to restrict existing access or movement within the local community are proposed. Because the project is not located between any established communities or residential areas, the project would not physically divide an established community and there would be no impact. Therefore, no further analysis in the EIR is warranted.
- (b) The project site is located within the Kern County General Plan area but is located on the southern border of Kings County. The project site consists of 26 parcels designated by the Kern County General Plan as map codes include the following or mix of the following: 8.1 Intensive Agriculture; 8.3 Extensive Agriculture; 8.1/2.5 (Intensive Agriculture/Flood Hazard); and 8.3/2.5 Extensive Agriculture/Flood Hazard. See **Figure 1-5**. No change to the existing land use designations is required or proposed with project implementation. However, a General Plan Amendment to the Circulation Element of the Kern County General Plan to remove future road reservations on the section and mid-section lines within the project boundaries is proposed.

As shown on **Figure 1-6**, the project site has a zone classification of A (Exclusive Agriculture) within Zone Map 5. No changes in zone classification are proposed. According to Kern County Zoning Ordinance Chapters 19.12.030G, solar energy electrical facilities are permitted within the A Zone District with the approval of a CUP. The project proponent is requesting a CUP to allow for the construction and operation of a solar facility and battery energy storage system. With approval of the CUP, the proposed solar project would be an allowable use within the A Zone District.

The project proponent is requesting a CUP to allow for the construction and operation of a solar facility and BESS. Use of the A zone district for a solar project is listed as an allowable use. At the end of the project's operational term, the project proponent would determine whether the project site should be decommissioned and deconstructed or if it would seek an extension of its CUP.



With approval of the requested CUP the proposed project is not anticipated to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. However, further assessment will be provided in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XII. Mineral Resources

Would the project:

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|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

RESPONSES:

- (a) The project site is neither designated as a mineral recovery area nor within a designated mineral and petroleum resource site by the Kern County General Plan. Additionally, the site is not identified as a mineral resource zone by the California Department of Conservation - CGS Information Warehouse: Mineral Land Classification Map, see **Figure 1-9**. However, research has found that there are mineral rights holders within the project area. While it is not anticipated that construction and operation of the proposed project would interfere with mineral extraction and processing, research is ongoing to determine the depth of the mineral rights and therefore impacts are unknown at this time. If determined to be of no impact to mineral rights holders through continued research, the topic may be scoped out from further analysis in the EIR.
- (b) As mentioned previously, the project site is not located within a designated mineral and petroleum resource site within the Kern County General Plan. The project site is not located within the County's NR (Natural Resources) or PE (Petroleum Extraction) zoned districts. Therefore, the installation of the solar facilities would not preclude future mineral resource development nor would it result in the loss of a locally important mineral resource recover site. There would be no impact and no further analysis is warranted in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
XIII. Noise				
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 a local general plan or noise ordinance or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. For a project located within the vicinity of a private airstrip or Kern County Airport Land Use Compatibility Plan, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

RESPONSES:

(a-b) Land uses determined to be “sensitive” to noise as defined by the Kern County General Plan include residential areas, schools, convalescent and acute care hospitals, parks, and recreational areas, and churches. The Kern County General Plan Noise Element sets a 65 A-weighted decibels day–night noise level limit on exterior noise levels for stationary sources (i.e., non-transportation) at sensitive receptors. The nearest sensitive receptors, which include four single-family residences on Twisselman Road, are approximately 3.8 miles southwest of the project site.

Noise generated by the proposed project would occur primarily during the construction phase whereas as the long-term operation of the solar facility would generate minimal noise. Groundborne vibration and groundborne noise could originate from the operation of heavy off-road equipment and heavy-duty trucks delivering materials and machinery during the construction phase of the project. Operation of the proposed project would not generate a substantial amount of noise because no substantial noise-generating equipment would be located at the project site during operations, and there would be minor traffic generating by on-site employees, who would work mainly indoors, within the potential O&M building(s). The proposed project would adhere to local noise ordinances set forth in the Kern County Ordinance Code Section 8.36.020 with respect to permitted days and hours of construction. Operation of the proposed project would emit a minimal amount of groundborne noise and vibrations. Thus, noise impacts during project construction will be further analyzed in the EIR.



- (c) Maintenance and operational activities including intermittent deliveries, worker vehicle trips, routing site maintenance, and the associated noise would be minimal. Operation of the proposed project is anticipated to require limited staffing resulting in low levels of vehicular traffic on the project access road, primarily consisting of personal vehicles, which is consistent with existing uses in the vicinity of the project site. However, the analysis of potential impacts in relation to generation of substantial permanent increase in ambient noise as a result of the proposed project will be further evaluated in the EIR to determine if the proposed project elements are consistent with applicable regulations in the Kern County General Plan Noise Element and Kern County Zoning Ordinance. Impacts would be less than significant. In addition, the project site is not located near any sensitive receptors such as residences, schools, medical facilities, etc. that would be affected by operational noise sources. Thus, noise impacts during project operations will be less than significant and additional discussion in the EIR is not required.

- (d) The nearest private airport is Wonderful Pistachios & Almonds Airport in Lost Hills, California, which is approximately 11 miles southwest of the project site. The nearest public airport is Wasco Kern County Airport in Wasco, California, which is approximately 23 miles southeast of the project site. The project site is not located within any safety or noise zones for these airports; nor is the proposed project site located within any airport land use plan areas. Therefore, there would be no impacts, and no further analysis of this issue is warranted in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XIV. Population and Housing

Would the project:

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|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

RESPONSES:

- (a) Although the proposed project would provide new employment consistent with the adopted Kern County General Plan goals, plans, and policies, long-term employment opportunities would be minimal. The proposed project would require an operational staff of up to five full-time employees.

It is estimated that the on-site workforce at its peak would be approximately 800 individuals with an average construction-related on-site workforce of 400 individuals. The entire construction process is anticipated to take 12 month Therefore, the majority of project-generated jobs would be from the local and regional area and would occur on a temporary and short-term basis. Construction workers are expected to travel to the site from various local communities and locations throughout Southern California. Few, if any workers are expected to relocate to the surrounding area because of these temporary jobs and there would not be a substantial increase in the local population. If temporary housing should be necessary, it is expected that accommodations (i.e., extended stay hotels, apartments, RV parks, homes for rent or sale) would be available in the nearby communities of Lost Hills, Kettleman City, and Alpaugh. Therefore, the project is not anticipated to directly or indirectly induce the development of any new housing or businesses within the local communities.

During the operational phase, the project would require up to five full-time equivalent (FTE) personnel (or personnel hours totaling 5 FTE positions), who would commute to the site. Due to the small number of full-time employees, it is anticipated that the local housing stock would be adequate to accommodate operations personnel should they relocate to the area, without requiring the need for the construction of new housing. The project would not directly or indirectly induce substantial unplanned population growth and further analysis in the EIR is not warranted.

- (b) The project site is currently undeveloped and does not contain any existing housing units. The proposed project would therefore not displace any existing people or housing, necessitating the construction of replacement housing elsewhere. No further evaluation of this issue is required in the EIR.



Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XV. Public Services

Would the project:

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:

i. Fire protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Police protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a)(i) **Fire Protection.** The Kern County Fire Department provides fire suppression and emergency medical services to the project area. The project site would be served by Fire Station #26, located at 14670 Lost Hills Rd, in the community of Lost Hills, approximately 9 miles south of the project site. Adherence to all applicable regulations would reduce wildfire ignitions and prevent the spread of wildfires. However, construction and operation activities may result in increased demand for firefighting services in the area. Therefore, the potential impact on fire services from construction and operation of the project is considered potentially significant and will be further evaluated in the EIR.

(a)(ii) **Police Protection.** KCSO would serve the proposed project site for law enforcement and public safety services, as KCSO serves unincorporated areas of Kern County (KCSO 2017). The KCSO Wasco Substation, located at 748 F Street, Wasco, California 93215, is the closest police station to the project site, located approximately 23 miles southeast of the project site. Although the potential is low, the proposed project may attract vandals or thieves that would require response from the Sheriff's Department. On-site security measures (i.e., on-site monitoring equipment, gated access) would be provided and access to the project site during construction and operation would be restricted, thereby minimizing the need for local Sheriff surveillance. Nonetheless, project impacts on local sheriff services could potentially result in an increased demand for law enforcement services, or require the construction of new facilities that could result in an environmental impact. This issue will be evaluated in the EIR.



- (a)(iii) **Schools.** There are no schools within five (5) miles of the proposed project site. The nearest schools are Lost Hills Elementary School, A.M. Thomas Middle School, and Wonderful College Prep Academy, located approximately 8 miles south at 14821 Primary Court, Lost Hills, California 93249, 20979 Lobos Court, Lost Hills, California 93249, and 14848 Lamberson Avenue, Lost Hills, California 93249. During project construction, a relatively large number, a maximum of approximately 500 temporary construction workers would be required. It is expected that most of these workers would live in the local area as well as broader regional area and commute to the project site from the surrounding communities where their children would already be enrolled in school. In addition, employee such as these would already be making contribution through local taxes that would be used to fund schools. The proposed project would not require employees or their children to relocate to the project area. Therefore, substantial temporary increases in population that would adversely affect local school populations are not anticipated. Likewise, the operational workforce would be small (approximately 5 full-time positions). Thus, these jobs would not generate a substantial permanent increase in population that would impact school populations or require construction of new school facilities. Therefore, no significant impacts to schools are anticipated to occur and further analysis is not warranted in the EIR.
- (a)(iv) **Parks.** The population increase that would be experienced during the construction phase of the proposed project would be temporary and limited to a maximum of approximately 800 construction workers at the project site. Such conditions would not result in a substantial new demand for parks or recreational facilities. The number of employees required for project operations would be minimal, up to 5 full-time, and they would not likely frequent any public parks during, before, or after their work shifts. The up to 5 full-time equivalent employees would not require construction of a substantial number of new housing units that would significantly increase the local population and result in the demand for public parkland or construction of new park facilities to provide services to new residences. Therefore, no significant impacts to parks are anticipated to occur, and further analysis of this issue is not warranted in the EIR.
- (a)(v) **Other Public Facilities.** Implementation of the project may have impacts on the ability of the county to provide adequate county-wide comprehensive public facility services. Public policies in the Kern County General Plan require development to address economic deficiencies in public services and facilities costs. Therefore, the proposed project's impacts on public facilities are potentially significant and will be evaluated in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XVI. Recreation

Would the project:

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

RESPONSES:

- (a) The on-site workforce at its peak is estimated to be approximately 800 individuals with an average construction-related on-site workforce of 400 individuals. These workers would not have time to visit any local parks or recreation facilities during the workday. Further, few workers are expected to relocate to this area temporarily while the construction is underway, and there would be little or no impact on local recreational resources after work hours. Operation of the project would require approximately five employees for maintenance and monitoring activities, but they would likely be drawn from the local labor force and would commute from their existing permanent residences to the project site during those times. However, even if the maintenance/monitoring employees were hired from out of the area and relocated to northwestern Kern County, the addition of any such families to the project area would not result in a substantial increase in the number of users at local parks or recreational facilities. As a result, there would not be a detectable increase in the use of existing neighborhood or regional parks or other recreational facilities. Therefore, no deterioration of any such facilities would occur with project implementation. No impact would occur, and no further analysis in the EIR is warranted.
- (b) As discussed in impacts to Population and Housing, the proposed project would not result in a substantial increase in population and thus would not require the construction or expansion of recreational facilities. The proposed project does not include or require the construction of new or expansion of existing recreational facilities, and there are no recreational facilities on the project site that would be affected. No impact would result, and no further analysis in the EIR is warranted.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XVII. Transportation and Traffic

Would the project:

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|--|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

RESPONSES:

- (a) The project would require an amendment to the Kern County General Plan Circulation Element to remove road reservations including sections and mid-section lines in and around the project site (see **Figure 1-12**). This amendment to the General Plan Circulation Element will be evaluated in detail in the EIR.

Regarding construction traffic, an undetermined volume of large truck trips would be generated, with numbers varying depending on the phase of construction. Further analysis in the EIR is required to determine whether construction traffic could disrupt normal traffic flows or otherwise conflict with the County’s roadway performance policies and programs. During operation of the project, the project would only have five full-time employees, who would access the site with personal vehicles using local roadways and state highways that can readily accommodate such minor volumes of vehicle traffic. Ongoing maintenance and periodic repair are also anticipated to produce negligible traffic impacts and would not conflict with any County plans or programs pertaining to roadway performance. These potential impacts on the local roadway system from construction-related vehicle trips and the project’s operational traffic on the area roadway system will be further evaluated in the EIR. Impacts would be potentially significant. Additionally, temporary access roads may be constructed during the construction phase of the project but would not impact the performance of the existing roadway network.

There are no dedicated pedestrian or bicycle facilities in the immediate vicinity of the project site or along the surrounding roadways. Due to the rural nature of the project area, pedestrian and bicycle traffic is extremely limited. The project site is not located along an existing bus route, and no bus stops exist on the roadways likely to be used during construction and operation. The project would not house residents or employees, and therefore, would not have characteristics that would influence alternative means of transportation.



- (b) CEQA Guidelines Section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas and shifts the focus from driver delay to reduction of vehicular GHG emissions through creation of multimodal networks, and creation of a mix of land uses that can facilitate fewer and shorter vehicle trips. Vehicle miles traveled (VMT) is a measure of the total number of miles driven for various purposes and is sometimes expressed as an average per trip or per person. Construction traffic would be temporary and would not permanently affect VMT characteristics in this part of Kern County or elsewhere. Long-term, operational traffic would be limited, with a small work force of approximately five full-time equivalent employees. It is not known where the employees would live or how long their commuting trips would be. According to technical guidance issued by the Office of Planning and Research, projects generating 110 or fewer daily vehicle trips may be presumed to have a less-than-significant impact involving VMT. Since the project is expected to require five full time employees during project operations, the project would result in a less than significant impact involving VMT. Regardless, a traffic generation assessment would be completed to further analyze the operational VMT characteristics of the project is required to determine whether the project is considered a “low VMT” project due to small daily traffic volumes alone, or whether more extensive analysis is warranted. Impacts are expected to be less than significant, however an assessment of the project’s VMT characteristics will be provided in the EIR to ensure consistency with state and local guidance.
- (c) The proposed project site and surrounding areas would be accessible through highways such as I 5 and local roads such as Twisselman Road and Lost Hills Road. There is the potential for construction traffic to occur on these access roads, and further analysis would be required in the EIR and in a traffic generation assessment.

No new roadway design or features (i.e., sharp curves, dangerous intersections, or other hazardous features) would be required that could result in transportation-related hazards or safety concerns. The new access road and internal site access roads must be designed in accordance with the County’s street standards that assure safe ingress/egress. The project buildings and other structures would be set back from roadways as required by the Kern County Zoning Ordinance. Given these considerations, significant impacts related to increased hazards are not anticipated to occur; however, additional analysis will be included in the EIR.

- (d) The project site and surrounding areas would be accessible through highways such as I-5 and local roads such as Twisselman Road and Lost Hills Road. Emergency vehicle access would be maintained at all times during construction activities, and appropriate detours would be provided should there be partial road closures. Operation of the proposed project would not adversely impact emergency access routes. There would be a total of five full-time employees working at the project site during operation activities. The number of daily trips from the five full-time employees would have a minimal effect on traffic volumes at the project site and surrounding areas. However, a traffic generation assessment will be conducted as part of the proposed project. Although impacts would likely be less than significant, this issue will be further evaluated in the EIR.



Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
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XVIII. Tribal Cultural Resources

Would the project:

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 or historical resources as defined in Public Resources Code section 5020.1(k), or | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

RESPONSES:

(ai-ii) Since the project site is undeveloped, there is a potential for tribal cultural resources to exist either on-site or on surrounding lands. Therefore, the proposed project has the potential to impact tribal cultural resources during site clearance and earthmoving activities. All tribes with possible cultural affiliation and interest within the project area have been notified pursuant to the requirements of Assembly Bill 52 and Senate Bill 18, and consultation with the potentially affected tribes will occur, as appropriate, between the County and the tribes. Further evaluation in the EIR is warranted to identify potential impacts to tribal cultural resources and to formulate avoidance or mitigation measures, if applicable.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
XIX. Utilities and Service Systems				
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a) **Wastewater Facilities.** The proposed project would generate a minimal amount of water during construction and operation activities. Workers on site during construction activities would have access to a portable toilet facility and wastewater would be disposed of at an off-site approved facility. During operation, wastewater generated would potentially be disposed of to an on-site septic tank. Soils on site are suitable for septic tanks (Ninyo & Moore 2022). The proposed project operations would have five full-time employees; thus, the proposed project operation would not generate a substantial amount of wastewater that would require or result in the relocation or construction of new or expanded municipal wastewater facilities. Therefore, impacts would be less than significant. However, this issue will be further evaluated in the EIR.

Stormwater Facilities. The proposed project would not expand or require new storm drainage facilities. The proposed project is unlikely to generate a significant increase in storm runoff because implementation of the proposed project would not introduce a substantial amount of impervious surfaces. A SWPPP would be prepared as part of the proposed project. Any storm drainage/detention



facilities that may be required would be minor in scale and located within the project site. Potential impacts from such facilities will be addressed in the response to the topic of Hydrology and Water Quality, Threshold (c). Impacts would be considered less than significant; however, this issue will be further evaluated in the EIR.

Water Facilities. During construction, a minimal amount of water would be used for drinking and cleaning for on-site construction workers. During project operation, water would be used to wash solar panels and dust suppression activities. Water would be obtained from on-site wells or delivered to the site. Potential impacts to groundwater resources resulting from on-site well production will be addressed in the response to the topic of Hydrology and Water Quality, Threshold (b). Additionally, a WSA will be prepared to determine if the proposed project would substantially decrease groundwater supplies or interfere with groundwater recharge. Impacts would be further evaluated in the EIR.

Power, Natural Gas, and Telecommunication Facilities. The proposed project would install a PV solar facility that would generate electrical energy to be transmitted, either via overhead or underground transmission lines, to a regional electrical facility. On-site telecommunication facilities may be installed to facilitate collection and transmission of meteorological data and data regarding solar arrays. Potential impacts of the installation of these telecommunication facilities is not anticipated to result in a significant impact. There would be no use of natural gas on site. Therefore, the proposed project would not otherwise generate the demand for or require or result in the relocation or construction of new or expanded off-site electric power, natural gas, or telecommunications facilities that would, in turn, result in a significant impact to the environment. Impacts would be less than significant; however, this issue will be further evaluated in the EIR.

- (b) The proposed project would require PV solar panel washing during operation. Water use for PV solar panel washing is not anticipated to exceed 20 acre-feet per year, and water usage during soil compaction and dust suppression activities is not anticipated to exceed 500 acre-feet per year during construction (2024). Water is anticipated to be obtained from on-site wells or delivered via truck from an off-site source(s). A water supply assessment will be completed for the project to analyze potential water sources and potential impacts to water supplies. This potentially significant impact will be addressed further in the EIR.
- (c) As stated above, portable toilets would provide for wastewater disposal during project construction, and no connection to a public system for wastewater treatment would be required. The proposed project's operations would only have five full-time employees, which would not generate a substantial amount of wastewater. Wastewater disposal would be done through septic tanks and/or portable toilets. The proposed project would not adversely impact existing wastewater treatment facilities, and impacts would be less than significant; however, this issue will be further evaluated in the EIR.
- (d) The proposed project would not generate a significant amount of solid waste from construction or operation activities. Nonhazardous construction refuse and solid waste would be either collected and recycled per the construction waste management plan or disposed of at a local Class III landfill, while any hazardous waste generated during construction would be disposed of at an approved off-site location. The closest Class III municipal landfill is the Shafter-Wasco Recycling & Sanitary Landfill, which is located 22 miles southeast of the project site. The Shafter-Wasco Recycling & Sanitary Landfill has a remaining capacity of 7,901,339 cubic yards, with an anticipated closure date of December 31, 2053 (CalRecycle 2022). Therefore, solid waste from the site would be transported to



this landfill for disposal. It is not anticipated that the amount of solid waste generated by the proposed project would exceed the capacity of local landfills needed to accommodate the waste. Therefore, impacts would be less than significant; however, this issue will be further evaluated in the EIR.

- (e) The proposed project's construction, operation, and decommissioning phases would generate solid waste. The 1989 California Integrated Waste Management Act (AB 939) requires Kern County to attain specific waste diversion goals. In addition, the California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires expanded or new development projects to incorporate storage areas for recycling bins into the proposed project design. The proposed project would comply with the aforementioned regulations to reduce solid waste. Impacts are anticipated to be less than significant, but further analysis of how the proposed project would reduce solid waste would be discussed in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
XX. Wildfire				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

(a-d) The project site is not located within a state responsibility area (CAL FIRE 2007). According to CAL FIRE GIS data, the proposed project site is also not located within a Very High Fire Hazard Severity Zone (CAL FIRE 2007). The nearest state responsibility area Very High Fire Hazard Severity Zone is located approximately 21 miles southwest of the project site. In addition, the proposed project would not impair emergency response or evacuation plans (see Hazards and Hazardous Materials section (f) and (g)), exacerbate wildfire risk and expose occupants to pollutants, require installation or maintenance of infrastructure that may exacerbate fire risk, or expose people or structures to slope instability or drainage changes as a result of the proposed project (see Geology and Soils and Hydrology and Water Quality section). In compliance with applicable fire code and building code requirements, construction and maintenance/operations managers and personnel would be trained in fire prevention and emergency response. Fire suppression equipment specific to construction would be maintained on the project site. Project construction and maintenance/operations would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Further, a Fire Prevention/Safety Plan would be prepared prior to construction and implemented during construction and operation to safeguard human life, prevent personnel injury, preserve property, and minimize downtime due to fire or explosion. Fire protection measures would include fire prevention methods to prevent the inception of fires. The Fire Prevention/Safety Plan would also contain



notification procedures and emergency fire precautions consistent with the 2019 California Fire Code and Kern County Fire Code. Nonetheless, the proposed project involves the development of a solar energy generation and storage facility. The proposed project would include the construction of power transmission lines, inverters, roads, and an energy storage facility. Further analysis of how the proposed project would pose a risk for wildfires will be discussed in the EIR.



	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than Significant Impact	No Impact
XXI. Mandatory Findings of Significance				
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESPONSES:

- (a) The EIR’s biological, cultural, and tribal cultural resources sections will discuss specific project impacts on plants and wildlife including avian species and impacts to cultural and tribal cultural resources. The document will also evaluate the project’s contribution to cumulative biological, cultural and tribal cultural resources impacts and propose mitigation that will reduce the impacts to less than significant levels, where feasible. Impacts would be potentially significant.
- (b) The project has the potential to contribute to cumulatively significant aesthetics, air quality, biological resources, cultural resources, tribal cultural resources, greenhouse gas emissions, traffic, and wildfire impacts. Such impacts could occur during the construction phases and/or as a result of the fully built and operational project. The EIR will evaluate the project’s contribution to cumulative impacts in these and other areas. Impacts would be potentially significant.
- (c) The proposed project would not result in the long-term air pollutant emissions or noise sources that would adversely affect nearby sensitive receptors. The solar farm would not include any kinds of industrial processes or equipment that would generate hazardous substances or wastes that would threaten the well-being of people on- or off-site. However, short-term construction activities could result in temporary increases in pollutant concentrations and potentially significant off-site noise impacts. Pollutants of primary concern commonly associated with construction-related activities



include toxic air contaminants gaseous emissions of criteria pollutants, and fugitive dust. Within the project area, the potential for increased occurrences of Valley Fever is also of concern. Human health impacts from the short-term cumulative contribution to air quality impacts from project construction will be further evaluated in the EIR. Impacts would be potentially significant.



References

- Airnav.com. 2022a. “Wonderful Pistachios & Almonds Airport.” FAA Information Effective 19 May 2022. Accessed June 9, 2022. <http://www.airnav.com/airport/2CN4>
- Airnav.com. 2022b. “Wasco-Kern County Airport.” FAA Information Effective 19 May 2022. Accessed June 9, 2022. <https://www.airnav.com/airport/L19>
- CAL FIRE (California Department of Forestry and Fire Protection). 2007. Draft Fire Hazard Severity Zones in LRA. CAL FIRE Fire and Resource Assessment Program. Accessed June 9, 2022. https://osfm.fire.ca.gov/media/6686/fhszl06_1_map15.pdf.
- CAL FIRE. 2022. State Responsibility Area (SRA) Viewer. Accessed June 22, 2022. <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1>
- California Department of Water Resources, 2022. Available: <https://sgma.water.ca.gov/portal/gsp/assessments/36> Accessed: July 11, 2022.
- CalRecycle (California’s Department of Resources Recycling and Recovery). 2022. “SWIS Facility/Site Activity Details, Shafter-Wasco Recycling & Sanitary Landfill (15-AA-0057).” Accessed June 9, 2022. <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3891?siteID=705>.
- Caltrans (California Department of Transportation). 2022. California State Scenic Highway System Map. Accessed June 9, 2022. <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>.
- Centers for Disease Control (CDC), 2022. Valley Fever (Coccidioidomycosis). Available: <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html> Accessed: July 11, 2022.
- California Department of Conservation, 2015 – Fault Activity Map of California, Available: <https://maps.conservation.ca.gov/cgs/fam/> Accessed: July 11, 2022.
- California Department of Conservation (DOC). 2022. “Important Farmland Mapping Categories and Soil Taxonomy Terms.” Accessed June 9, 2022. https://www.conservation.ca.gov/dlrp/fmmp/Documents/soil_criteria.pdf.
- California Department of Conservation, 2022 – Zones of Required Investigation. Available: <https://maps.conservation.ca.gov/cgs/EQZApp/app/> Accessed: July 11, 2022
- CGS (California Geological Survey). 2022a. Earthquake Zones of Required Investigation [interactive GIS map viewer]. Accessed June 10, 2022. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.
- CGS. 2022b. Fault Activity Map of California [interactive GIS map viewer]. Accessed June 10, 2022. <https://maps.conservation.ca.gov/cgs/fam/>.
- Cohen, K.M., S.C. Finney, P.L. Gibbard, and J.X. Fan. 2021. The ICS International Chronostratigraphic Chart. Episodes 36: 199–204. 2013; updated. Available at: <https://stratigraphy.org/ICSchart/ChronostratChart2021-05.jpg>.
- Conservation Biology Institute. 2022. “Mineral Resource Zones for Kern County.” Data Basin [interactive GIS map viewer]. Accessed June 9, 2022. <https://databasin.org/maps/new#datasets=26c92d3ecbe541ec81451f9de4e1e0e4>.
- California State Senate. October 2015. Clean Energy and Pollution Reduction Act. Bill No. 350.



- Available: https://leginfo.legislature.ca.gov/faces/billNavlient.xhtml?bill_id=201520160SB350.
- California Department of Toxic Substances Control (DTSC), 2022. DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List). Available: <https://dtsc.ca.gov/dtscs-cortese-list/> Accessed: July 11, 2022.
- Data Basin, 2022 – Mineral Resource Zones. Available: <https://databasin.org/maps/new/#datasets=26c92d3ecbe541ec81451f9de4e1e0e4> Accessed: July 11, 2022.
- DTSC (California Department of Toxic Substances Control). 2022. EnviroStor [interactive GIS map viewer]. Accessed June 10, 2022. <https://www.envirostor.dtsc.ca.gov/public/>.
- Dudek. 2022a. Agricultural Conversion Technical Study. Prepared for Pelicans Jaw Solar LLC. June 2022.
- Dudek. 2022b. Water Supply Assessment. Prepared for Pelicans Jaw Solar LLC. July 2022.
- Kern County. 2009. *Kern County General Plan – Chapter 1: Land Use, Open Space, and Conservation Element*. Approved 2009. Accessed June 9, 2022. <https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGPChp1LandUse.pdf>.
- Kern County. 2021. Zoning Ordinance. April 2021 Revision. Accessed June 9, 2022. <https://psbweb.co.kern.ca.us/planning/pdfs/KCZOApr2021.pdf>
- Kern County, 2022 Emergency Operation Plan. Available: <https://www.kerncounty.com/home/showpublisheddocument/8407/637859766134270000> Accessed: July 11, 2022.
- Kern County. 2022a. County of Kern GIS: Open Data, Assessor Parcels Lands 2022, last updated May 13, 2022. Accessed June 14, 2022. <https://geodat-kernco.opendata.arcgis.com/search?q=parcel>.
- Kern County. 2022b. Kern County GIS [interactive GIS map viewer]. Accessed June 8, 2022. <https://maps.kerncounty.com/H5/index.html?viewer=KCPublic>.
- Kern County School District, District Map Overview 2022 - https://kern.org/wp-content/blogs.dir/4/files/sites/4/2018/09/KernDistricts_Place_10.pdf Accessed: July 11, 2022.
- Kern County School District – Lost hills Union Elementary School District 2014-2015. Available: https://kern.org/wp-content/blogs.dir/4/files/sites/4/2018/09/LostHills_1415_MARY.pdf Accessed: July 11, 2022.
- Kern Groundwater Authority, 2022. Welcome to the Kern Groundwater Authority. Available: <http://www.kerngwa.com/> Accessed: July 11, 2022.
- KCFD (Kern County Fire Department). 2022. “Department Profile.” Accessed June 8, 2022. <https://kerncountyfire.org/about-kcfd/>.
- KCSO (Kern County Sheriff's Office). 2017. “Kern County Sheriff's Office – Policies and Procedures.” Updated August 2017. Accessed June 9, 2022. https://www.kernsheriff.org/Policies_Document/Department/DepartmentPolicies_SectionA.pdf.
- Kings County. 2022a. 2035 Kings County General Plan. Adopted January 26, 2010. Accessed June 10, 2022. <https://www.countyofkings.com/departments/community-development-agency/information/2035-general-plan>.
- Kings County. 2022b. County of Kings Parcel & Services Map Viewer [interactive GIS map viewer].



- Accessed June 10, 2022. <https://kingscomdev.maps.arcgis.com/apps/webappviewer/index.html?id=35c6e6dac50446b9945154c9fc7f46c8>.
- Ninyo & Moore. 2022. Geological Desktop Assessment Pelicans Jaw Hybrid Solar Project. Prepared for Pelicans Jaw Solar LLC and Kern County. July 2022.
- Practical Environmental Solutions. 2021. Phase I Environmental Site Assessment for the Pelicans Jaw Hybrid Solar Project, Twisselman Road, Lost Hills CA 93249. Prepared for Pelicans Jaw Solar LLC. December 30.
- San Joaquin Valley Air Pollution Control District (SJVAPCD, 2012) Ambient Air Quality Standards & Valley Attainment Status). Available: <https://www.valleyair.org/aqinfo/attainment.htm> Accessed: July 11, 2022.
- SJVAPCD (San Joaquin Valley Air Pollution Control District). 2015. *Guidance for Assessing and Mitigating Air Quality Impacts*. February 2015. Accessed June 9, 2022. <https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF>.
- San Joaquin Valley Air Pollution Control District (SJVAPCD, 2016). 2016 Ozone Plan for 2008 8-Hour Ozone Standard. Available: http://valleyair.org/Air_Quality_Plans/Ozone-Plan-2016/Adopted-Plan.pdf Accessed: July 11, 2022.
- San Joaquin Valley Air Pollution Control District (SJVAPCD, 2020). 2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard. Available: http://valleyair.org/Air_Quality_Plans/docs/2020-RACT-Demonstration.pdf. Accessed: July 11, 2022.
- SJVAPCD. 2022. “About the District.” Accessed June 8, 2022. https://www.valleyair.org/General_info/aboutdist.htm.
- SWRCB (State Water Resources Control Board). 2022. GeoTracker database [interactive GIS map viewer]. Accessed June 10, 2022. <https://geotracker.waterboards.ca.gov/>
- SVP (Society of Vertebrate Paleontology). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. 11 p. http://vertpaleo.org/Membership/MemberEthics/SVP_Impact_Mitigation_Guidelines.aspx.
- Tulare Basin Wildlife Partners. 2022. Tulare Basin Riparian and Wildlife Corridors. Accessed July 12, 2022. https://www.tularebasinwatershedpartnership.org/uploads/2/1/4/7/21473344/conservation_report_summary_riparian-wildlife-corridors.pdf
- USFWS (U.S. Fish and Wildlife Service. 2022. “About Us.” Kern National Wildlife Refuge. Accessed June 9, 2022. <https://www.fws.gov/refuge/kern/about-us>
- USGS (U.S. Geological Survey). 2022. “Active Mines and Minerals Plants” [Interactive GIS Map]. Accessed June 8, 2022. <https://mrddata.usgs.gov/mineplant/map-us.html#homev>.
- U.S. Census Bureau. 2020. “All Sectors: County Business Patterns”. Accessed June 24, 2022. <https://data.census.gov/cedsci/table?q=construction&g=310XX00US12540&tid=CBP2020.CB2000CBP>
- Wonderful Orchards. 2022. Samsung Solar Facility Previous 10 Year Farming History. Letter from Mike Widhalm, Director of Property Risk and Management.



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12/10/2022

Matthew Hall
2700 M Street, Suite 100, Bakersfield, CA 93301, USA
hallmat@kerncounty.com

Construction Site Well Review (CSWR) ID: 1012665

Assessor Parcel Number(s): 04410102, 04410103, 04410105, 04410106, 04410201, 04410203, 04410205, 04410221, 04410222, 04410301, 04410304, 04410306, 04410308, 04410309, 04411001, 04411003, 04411025, 04413016, 04413018, 04413021, 04413039, 04415005, 04415017, 04410223, 04410116, 04410111

Property Owner(s): Pelican's Jaw Solar LLC

Project Location Address: Twisselman Road and Lost Hills Road, Lost Hills, California 93249

Project Title: Pelicans Jaw Hybrid Solar Project

Public Resources Code (PRC) § 3208.1 establishes well reabandonment responsibility when a previously plugged and abandoned well will be impacted by planned property development or construction activities. Local permitting agencies, property owners, and/or developers should be aware of, and fully understand, that significant and potentially dangerous issues may be associated with development near oil, gas, and geothermal wells.

The California Geologic Energy Management Division (CalGEM) has received and reviewed the above referenced project dated 12/5/2022. To assist local permitting agencies, property owners, and developers in making wise land use decisions regarding potential development near oil, gas, or geothermal wells, the Division provides the following well evaluation.

The project is located in Kern County, within the boundaries of the following fields:

Any Field

In addition to the plugged & abandoned wells, there might be pipelines associated to oil and gas production.

Our records indicate there are 4 known oil or gas wells located within the project boundary as identified in the application.

- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 2
- Number of wells Not Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 1
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Projected to Be Built Over or Have Future Access Impeded by this project: 1
- Number of wells Abandoned to Current Division Requirements as Prescribed by Law and Not Projected to Be Built Over or Have Future Access Impeded by this project: 0

The Division categorically advises against building over, or in any way impeding access to, oil, gas, or geothermal wells. Impeding access to a well could result in the need to remove any structure or obstacle that prevents or impedes access including, but not limited to, buildings, housing, fencing, landscaping, trees, pools, patios, sidewalks, roadways, and decking. Maintaining sufficient access is considered the ability for a well servicing unit and associated necessary equipment to reach a well from a public street or access way, solely over the parcel on which the well is located. A well servicing unit, and any necessary equipment, should be able to pass unimpeded along and over the route, and should be able to access the well without disturbing the integrity of surrounding infrastructure.

There are no guarantees a well abandoned in compliance with current Division requirements as prescribed by law will not start leaking in the future. It always remains a possibility that any well may start to leak oil, gas, and/or water after abandonment, no matter how thoroughly the well was plugged and abandoned. The Division acknowledges wells plugged and abandoned to the most current Division requirements as prescribed by law have a lower probability of leaking in the future, however there is no guarantees that such abandonments will not leak.

The Division advises that all wells identified on the development parcel prior to, or during, development activities be tested for liquid and gas leakage. Surveyed locations should be provided to the Division in Latitude and Longitude, NAD 83 decimal format. The Division expects any wells found leaking to be reported to it immediately.

Failure to plug and reabandon the well may result in enforcement action, including an order to perform

reabandonment well work, pursuant to PRC § 3208.1, and 3224.

PRC § 3208.1 give the Division the authority to order or permit the re-abandonment of any well where it has reason to question the integrity of the previous abandonment, or if the well is not accessible or visible. Responsibility for re-abandonment costs may be affected by the choices made by the local permitting agency, property owner, and/or developer in considering the general advice set forth in this letter. The PRC continues to define the person or entity responsible for reabandonment as:

1. The property owner - If the well was plugged and abandoned in conformance with Division requirements at the time of abandonment, and in its current condition does not pose an immediate danger to life, health, and property, but requires additional work solely because the owner of the property on which the well is located proposes construction on the property that would prevent or impede access to the well for purposes of remedying a currently perceived future problem, then the owner of the property on which the well is located shall obtain all rights necessary to reabandon the well and be responsible for the reabandonment.
2. The person or entity causing construction over or near the well - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and the property owner, developer, or local agency permitting the construction failed either to obtain an opinion from the supervisor or district deputy as to whether the previously abandoned well is required to be reabandoned, or to follow the advice of the supervisor or district deputy not to undertake the construction, then the person or entity causing the construction over or near the well shall obtain all rights necessary to reabandon the well and be responsible for the reabandonment.
3. The party or parties responsible for disturbing the integrity of the abandonment - If the well was plugged and abandoned in conformance with Division requirements at the time of plugging and abandonment, and after that time someone other than the operator or an affiliate of the operator disturbed the integrity of the abandonment in the course of developing the property, then the party or parties responsible for disturbing the integrity of the abandonment shall be responsible for the reabandonment.

No well work may be performed on any oil, gas, or geothermal well without written approval from the Division. Well work requiring approval includes, but is not limited to, mitigating leaking gas or other fluids from abandoned wells, modifications to well casings, and/or any other re-abandonment work. The Division also regulates the top of a plugged and abandoned well's minimum and maximum depth below final grade. CCR §1723.5 states well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this regulation, a permit from the Division is required before work can start.

The Division makes the following additional recommendations to the local permitting agency, property owner, and developer:

1. To ensure that present and future property owners are aware of (a) the existence of all wells located on the property, and (b) potentially significant issues associated with any improvements near oil or gas wells, the Division recommends that information regarding the above identified well(s), and any other pertinent information obtained after the issuance of this letter, be communicated to the appropriate county recorder for inclusion in the title information of the subject real property.
2. The Division recommends that any soil containing hydrocarbons be disposed of in accordance with local, state, and federal laws. Please notify the appropriate authorities if soil containing significant amounts of hydrocarbons is discovered during development.

As indicated in PRC § 3106, the Division has statutory authority over the drilling, operation, maintenance, and abandonment of oil, gas, and geothermal wells, and attendant facilities, to prevent, as far as possible, damage to life, health, property, and natural resources; damage to underground oil, gas, and geothermal deposits; and damage to underground and surface waters suitable for irrigation or domestic purposes. In addition to the Division's authority to order work on wells pursuant to PRC §§ 3208.1 and 3224, it has authority to issue civil and criminal penalties under PRC §§ 3236, 3236.5, and 3359 for violations within the Division's jurisdictional authority. The Division does not regulate grading, excavations, or other land use issues.

If during development activities, any wells are encountered that were not part of this review, the property owner is expected to immediately notify the Division's construction site well review engineer in the Inland district office, and file for Division review an amended site plan with well casing diagrams. The District office will send a follow-up well evaluation letter to the property owner and local permitting agency.

Should you have any questions, please contact me at (661) 201-8607 or via email at Victor.Medrano@conservation.ca.gov.

Sincerely, *Olu Oladimeji*

Chris Jones
Acting District Deputy

cc: Matthew Hall - Submitter

Wells Not Abandoned to Current Division Requirements as Prescribed by Law & Projected to be Built Over or Have Future Access Impeded

The wells listed below are not abandoned to current Division requirements as prescribed by law, and based upon information provided, are projected to be built over or have future access impeded. **The Division expects these wells to be reabandoned in compliance with current California law, prior to development activities.**

API	Well Designation	Operator	Well Evaluations
0402936410	De Flon 1	Gilles De Flon	<p>According to our records, The well is not plugged and abandoned consistent with current PRC and CCR. Surface plug is not adequate (CCR § 1723.5) [Surface Plug @ 10' - SFC]</p> <p>NOTE: No well leak test reported.</p>
0402936409	De Flon 4	Gilles De Flon	<p>According to our records, The well is not plugged and abandoned consistent with current PRC and CCR. Surface plug is not adequate (CCR § 1723.5) [Surface Plug @ 10' - SFC]. Base of freshwater (BFW) isolation plug is not present (CCR §1723.2) [BFW reported @ 810'].</p> <p>NOTE: No well leak test reported.</p>

Wells Not Abandoned to Current Division Requirements as Prescribed by Law & Not Projected to be Built Over or Have Future Access Impeded

The wells listed below are not abandoned to current Division requirements as prescribed by law, and based upon information provided, are not projected to be built over or have future access impeded.

API	Well Designation	Operator	Well Evaluations
0403047440	Mel 1	Aera Energy LLC	Canceled Well

**Wells Abandoned to Current Division Requirements as Prescribed by Law & Projected to be
Built Over or Have Future Access Impeded**

The wells listed below are abandoned to current Division requirements as prescribed by law, and based upon information provided, are projected to be built over or have future access impeded.

API	Well Designation	Operator	Well Evaluations
0403012267	Westfarmers 1	V. F. Neuhaus Properties, Inc.	According to our records, The well is plugged and abandoned consistent with current PRC and CCR. NOTE: No well leak test reported.



NATIVE AMERICAN HERITAGE COMMISSION

November 30, 2022

Matthew Hall
Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Re: 2022110558, Pelican's Jaw Hybrid Solar Project by Pelican's Jaw Solar LLC, Kern County

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NAHC HEADQUARTERS
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West Sacramento,
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nahc@nahc.ca.gov
NAHC.ca.gov

Dear Mr. Hall:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b))). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1))). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

[AB 52](#)

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

 - a. A brief description of the project.
 - b. The lead agency contact information.
 - c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).

 - a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

 - a. Alternatives to the project.
 - b. Recommended mitigation measures.
 - c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

 - a. Type of environmental review necessary.
 - b. Significance of the tribal cultural resources.
 - c. Significance of the project's impacts on tribal cultural resources.
 - d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

 - a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, if Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
 - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i.** Protecting the cultural character and integrity of the resource.
 - ii.** Protecting the traditional use of the resource.
 - iii.** Protecting the confidentiality of the resource.
 - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
 - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
 - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subs. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:
Cameron.Vela@nahc.ca.gov.

Sincerely,

Cameron Vela

Cameron Vela
Cultural Resources Analyst

cc: State Clearinghouse

December 23, 2022

Matthew Hall
Kern County
Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301

Project: Pelican's Jaw Hybrid Solar Project

District CEQA Reference No: 20221606

Dear Mr. Hall:

The San Joaquin Valley Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) and Initial Study Checklist (IS) prepared by Kern County (County) for the Pelican's Jaw Hybrid Solar Project. Per the NOP, the project consists of a photovoltaic (PV) solar facility and associated infrastructure to generate up to 500 megawatts (MW) of renewable electrical energy on 3,756.46 acres of privately-owned land (Project). The Project is located at Twisselman and Lost Hills Roads in Kern County, CA.

The District offers the following comments regarding the Project:

1) Project Related Emissions

The District's initial review of the Project concludes that emissions resulting from construction and operation of the Project may exceed any of the following significance thresholds as identified in the District's Guidance for Assessing and Mitigating Air Quality Impacts: <https://www.valleyair.org/transportation/GAMAQI.pdf>. The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions.

1a) Construction Emissions

The District recommends, to reduce impacts from construction-related diesel exhaust emissions, the Project should utilize the cleanest available off-road construction equipment, including the latest tier equipment.

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-8000 FAX: (559) 230-8081

Southern Region
34948 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 FAX: (661) 392-5585

1b) Operational Emissions

Operational (ongoing) air emissions from mobile sources and stationary sources should be analyzed separately. For reference, the District's significance thresholds are identified in the District's Guidance for Assessing and Mitigating Air Quality Impacts:

<https://www.valleyair.org/transportation/GAMAQI.pdf>.

Recommended Mitigation Measure: At a minimum, project related impacts on air quality should be reduced to levels of significance through incorporation of design elements such as the use of cleaner Heavy Heavy-Duty (HHD) trucks and vehicles, measures that reduce Vehicle Miles Traveled (VMTs), and measures that increase energy efficiency. More information on transportation mitigation measures can be found at:

<http://www.valleyair.org/transportation/Mitigation-Measures.pdf>.

1c) Recommended Model for Quantifying Air Emissions

Project-related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using the California Emission Estimator Model (CalEEMod), which uses the most recent CARB-approved version of relevant emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

2) Health Risk Screening/Assessment

The County should evaluate the risk associated with the Project for sensitive receptors (residences, businesses, hospitals, day-care facilities, health care facilities, etc.) in the area and mitigate any potentially significant risk to help limit exposure of sensitive receptors to emissions.

To determine potential health impacts on surrounding receptors (residences, businesses, hospitals, day-care facilities, health care facilities, etc.) a Prioritization and/or a Health Risk Assessment (HRA) should be performed for the Project. These health risk determinations should quantify and characterize potential Toxic Air Contaminants (TACs) identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health.

Health risk analyses should include all potential air emissions from the project, which include emissions from construction of the project, including multi-year construction, as well as ongoing operational activities of the project.

Note, two common sources of TACs can be attributed to diesel exhaust emitted from heavy-duty off-road earth moving equipment during construction, and from ongoing operation of heavy-duty on-road trucks.

Prioritization (Screening Health Risk Assessment):

A "Prioritization" is the recommended method for a conservative screening-level health risk assessment. The Prioritization should be performed using the California Air Pollution Control Officers Association's (CAPCOA) methodology.

The District recommends that a more refined analysis, in the form of an HRA, be performed for any project resulting in a Prioritization score of 10 or greater. This is because the prioritization results are a conservative health risk representation, while the detailed HRA provides a more accurate health risk evaluation.

To assist land use agencies and project proponents with Prioritization analyses, the District has created a prioritization calculator based on the aforementioned CAPCOA guidelines, which can be found here:

http://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION-CALCULATOR.xls

Health Risk Assessment:

Prior to performing an HRA, it is strongly recommended that land use agencies/ project proponents develop and submit for District review a health risk modeling protocol that outlines the sources and methodologies that will be used to perform the HRA. This step will ensure all components are addressed when performing the HRA.

A development project would be considered to have a potentially significant health risk if the HRA demonstrates that the project-related health impacts would exceed the District's significance threshold of 20 in a million for carcinogenic risk, or 1.0 for either the Acute or Chronic Hazard Indices.

A project with a significant health risk would trigger all feasible mitigation measures. The District strongly recommends that development projects that result in a significant health risk not be approved by the land use agency.

The District is available to review HRA protocols and analyses. For HRA submittals please provide the following information electronically to the District for review:

- HRA (AERMOD) modeling files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodologies.

For assistance, please contact the District's Technical Services Department by:

- E-Mailing inquiries to: hramodeler@valleyair.org
- Calling (559) 230-5900

Recommended Measure: Development projects resulting in TAC emissions should be located an adequate distance from residential areas and other sensitive receptors in accordance to CARB's Air Quality and Land Use Handbook: A Community Health Perspective located at <https://ww3.arb.ca.gov/ch/handbook.pdf>.

3) Ambient Air Quality Analysis

An Ambient Air Quality Analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of State or National Ambient Air Quality Standards. The District recommends an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant

An acceptable analysis would include emissions from both project-specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance, is available online at the District's website: www.valleyair.org/ceqa.

4) Voluntary Emission Reduction Agreement

Criteria pollutant emissions may result in emissions exceeding the District's significance thresholds, potentially resulting in a significant impact on air quality. When a project is expected to have a significant impact, the District recommends the NOP also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-related impacts on air quality can be mitigated. Types of emission reduction projects that have been funded in the past include

electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-related emissions have been mitigated. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the environmental document includes an assessment of the feasibility of implementing a VERA.

5) District Rules and Regulations

The District issues permits for many types of air pollution sources, and regulates some activities that do not require permits. A project subject to District rules and regulations would reduce its impacts on air quality through compliance with the District's regulatory framework. In general, a regulation is a collection of individual rules, each of which deals with a specific topic. As an example, Regulation II (Permits) includes District Rule 2010 (Permits Required), Rule 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits), and several other rules pertaining to District permitting requirements and processes.

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to future projects, or to obtain information about District permit requirements, the project proponents are strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (559) 230-5888 or (661) 392-5665.

5a) District Rules 2010 and 2201 - Air Quality Permitting for Stationary Sources

Stationary Source emissions include any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission. District Rule 2010 (Permits Required) requires operators of emission sources to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the District. District Rule 2201 (New and Modified Stationary Source Review) requires that new and modified stationary sources of emissions mitigate their emissions using Best Available Control Technology (BACT).

This Project may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and may require District permits. Prior to construction, the Project proponent should submit to the District an application for an ATC. For further information or assistance, the project proponent may contact the District's SBA Office at (559) 230-5888 or (661) 392-5665.

5b) District Rule 9510 - Indirect Source Review (ISR)

The Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 9,000 square feet of space.

The purpose of District Rule 9510 is to reduce the growth in both NO_x and PM emissions associated with development and transportation projects from mobile and area sources; specifically, the emissions associated with the construction and subsequent operation of development projects. The ISR Rule requires developers to mitigate their NO_x and PM emissions by incorporating clean air design elements into their projects. Should the proposed development project clean air design elements be insufficient to meet the required emission reductions, developers must pay a fee that ultimately funds incentive projects to achieve off-site emissions reductions.

Per Section 5.0 of the ISR Rule, an Air Impact Assessment (AIA) application is required to be submitted no later than applying for project-level approval from a public agency. As of the date of this letter, the District has not received an AIA application for this Project. Please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510. One AIA application should be submitted for the entire Project. It is preferable for the applicant to submit an AIA application as early as possible in the County's approval process so that proper mitigation and clean air design under ISR can be incorporated into the County's analysis.

Information about how to comply with District Rule 9510 can be found online at: <http://www.valleyair.org/ISR/ISRHome.htm>.

The AIA application form can be found online at: <http://www.valleyair.org/ISR/ISRFormsAndApplications.htm>.

5c) District Rule 4601 (Architectural Coatings)

The Project will be subject to District Rule 4601 since it is expected to utilize architectural coatings. Architectural coatings are paints, varnishes, sealers, or stains that are applied to structures, portable buildings, pavements or curbs. The purpose of this rule is to limit VOC emissions from architectural coatings. In addition, this rule specifies architectural coatings storage, cleanup and labeling requirements. Additional information on how to comply with District Rule 4601 requirements can be found online at:
<http://www.valleyair.org/rules/currnrules/r4601.pdf>

5d) District Regulation VIII (Fugitive PM10 Prohibitions)

The project proponent may be required to submit a Construction Notification Form or submit and receive approval of a Dust Control Plan prior to commencing any earthmoving activities as described in Regulation VIII, specifically Rule 8021 – *Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities*.

Should the project result in at least 1-acre in size, the project proponent shall provide written notification to the District at least 48 hours prior to the project proponents intent to commence any earthmoving activities pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). Also, should the project result in the disturbance of 5-acres or more, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of bulk materials, the project proponent shall submit to the District a Dust Control Plan pursuant to District Rule 8021 (Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities). For additional information regarding the written notification or Dust Control Plan requirements, please contact District Compliance staff at (559) 230-5950.

The application for both the Construction Notification and Dust Control Plan can be found online at:

<https://www.valleyair.org/busind/comply/PM10/forms/DCP-Form.docx>

Information about District Regulation VIII can be found online at:

http://www.valleyair.org/busind/comply/pm10/compliance_pm10.htm

5e) Other District Rules and Regulations

The Project may also be subject to the following District rules: Rule 4102 (Nuisance) and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

6) District Comment Letter

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

If you have any questions or require further information, please contact Jacob Torrez by e-mail at Jacob.Torrez@valleyair.org or by phone at (559) 230-6558.

Sincerely,

Brian Clements
Director of Permit Services



For: Mark Montelongo
Program Manager



Santa Ynez Band of Chumash Indians
Tribal Elders' Council

P.O. Box 517 ♦ Santa Ynez ♦ CA ♦ 93460

Phone: (805)688-7997 ♦ Fax: (805)688-9578 ♦

December 5, 2022

Kern County Planning and Natural Resources Department
2700 M Street , Suite 100
Bakersfield, CA 93301-2370

Att.: Mathew Hall, Planner

Re: Pelican's Jaw Hybrid Solar Project by Pelican's Jaw Solar, LLC (PP21124)

Dear Mr. Hall:

Thank you for contacting the Tribal Elders' Council for the Santa Ynez Band of Chumash Indians.

At this time, the Elders' Council requests no further consultation on this project; however, we understand that as part of NHPA Section 106, we must be notified of the project.

Thank you for remembering that at one time our ancestors walked this sacred land.

Sincerely Yours,

Crystal Mendoza

Crystal Mendoza
Administrative Assistant | Cultural Resources
Santa Ynez Band of Chumash Indians | Tribal Hall
(805) 325-5537
cmendoza@chumash.gov

Office of the Fire Marshal
Kern County Fire Department
Fire Prevention Unit



2820 M St. • Bakersfield, CA 93301 • www.kerncountyfire.org
Telephone 661-391-3310 • FAX 661-636-0466/67 • TTY Relay 800-735-2929

November 30, 2022

Kern County Planning and Natural Resources Department
2800 M St., Bakersfield, CA 93301
Attn: **Matt Hall**

Re: Kern County Fire Department Comments Regarding Planning Department Project

To Whom It May Concern:

The Kern County Fire Department (KCFD), as the local fire authority, has received a request for comments regarding **GPA No. 2, Map No. 5; CUP No. 3, Map No. 5 (Pelican's Jaw Hybrid Solar Project)**. Upon initial review, it has been determined that all new construction will require fire water flowing a minimum 1,500 GPM for 2 hours with 20 PSI residual. All fire access roads to each parcel must meet specifications set forth in Section 503.2 of the California Fire Code and the applicable Appendix and Ordinance sections.

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

Please feel free to call our Fire Prevention Office at (661) 391-3310 with any questions.

Respectfully,
Regina Arriaga/Jim Killam
Fire Plans Examiner
Kern County Fire Department

Office Memorandum

KERN COUNTY

To: Planning and Natural Resources
Department
Matthew Hall

Date: December 2, 2022

From: Public Works Department
Floodplain Management Section
Kevin Hamilton, by Brian Blase

Phone: (661) 862-5098
Email: BlaseB@kerncounty.com

**Subject: Preparation of Draft Environmental Impact Report
Pelican's Jaw Hybrid Solar Project**

Our section has reviewed the attached subject documents and has the following comments:

The runoff of storm water from the site will be increased due to the increase in impervious surface generated by the proposed development.

The subject property is subject to flooding.

Therefore, this section recommends the following be included as Conditions of Approval for this project:

The applicant shall provide a plan for the disposal of drainage waters originating on site and from adjacent road right-of-ways (if required), subject to approval of the Public Works Department, per the Kern County Development Standards.

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

CRAIG M. POPE, P.E., DIRECTOR
ADMINISTRATION & HUMAN RESOURCES
FINANCE & ENGINEERING
BUILDING & CODE
OPERATIONS



2700 "M" STREET, Suite 400
BAKERSFIELD, CA 93301-2370
Phone: (661) 862-5000
FAX: (661) 862-8851
Toll Free: (800) 552-5376 Option 5
TTY Relay: (800) 735-2929

December 21, 2022

To: Lorelei Oviatt, Director
Planning and Natural Resources Department

Matthew Hall, Supervising Planner

From: Brian Blacklock, County Surveyor
By: Andres Arias, Engineering Support Supervisor

Phone: 28959

Subject: Notice of Preparation of Draft Environmental Impact Report for Pelican's Jaw Hybrid Solar Project by Pelican's Jaw Solar, LLC (PP21124)

I have reviewed the above noted project Notice of Preparation of DEIR and recommend the following conditions be placed on the Conditional Use Permits:

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

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

RECEIVED

DEC 09 2022

Kern County Planning & Natural Resources Dept. *Office of Mary C. Barlow ...advocates for children*

December 2, 2022

Kern County Planning Department
Attn: Matthew Hall
2700 M Street, Suite 100
Bakersfield, CA 93301

Our File No.: CO22-0170

RE: DEVELOPER FEES FOR: Notice of Preparation – Draft EIR Pelicans Jaw Hybrid Solar Project; Map No. 5-4, 5, 6, 8, 9, 15, 16 & 22
(Northwest of Twisselman Rd and Lost Hills Rd intersection and south of the Kern County/Kings County border)

Dear Mr. Hall,

This office represents the Lost Hills Union Elementary and Wasco Union High School Districts with regard to the imposition of school facility fees, and appreciates the opportunity to respond on behalf of the districts regarding the proposed project. This letter is limited to addressing the possible effects which the project might have on school facilities created by students attributable to the project. It is not intended to address other possible environmental concerns which might be identified by the district(s) after reviewing it.

It is our determination that the above-mentioned project proposing the Pelicans Jaw Hybrid Solar Project to include (a) a Conditional Use Permit to allow the construction and operation of solar facilities with the energy storage located on no more than 100 acres as an assessor use within the A (Exclusive Agriculture) District and (b) a General Plan Amendment to the Circulation Element of the Kern County General Plan to remove future road reservations on the section and mid-section lines within the project boundaries will have no significant effects on the districts facilities as long as statutory school fees, if any, are collected as required by law and that no further mitigation measures regarding school facilities are necessary.

Thank you for the opportunity to comment on the project. Should you have any questions, or if we can be of any further assistance in this matter, please contact me at 636-4599, or through e-mail at anwatson@kern.org.

Sincerely,

Mary C. Barlow
Kern County Superintendent of Schools

Andrea Watson, Specialist
School District Facility Services

ALW
Cc: Districts



Transmission Technical
Services Department

9400 Oakdale Ave
Chatsworth, CA 91311
SC9314

December 21, 2022

Matthew Hall
Kern County
hallmat@kerncounty.com

Subject: Pelican's Jaw Hybrid Project

DCF: 2402-22NC

The Transmission Department of SoCalGas does not operate any facilities within your proposed improvement. However, the Distribution Department of SoCalGas may maintain and operate facilities within your project scope.

To assure no conflict with the Distribution's pipeline system, please e-mail them at:

NorthwestDistributionUtilityRequest@semprautilities.com

Best Regards,
Nerses Papazyan
SoCalGas Transmission Technical Services
SoCalGasTransmissionUtilityRequest@semprautilities.com



Kern Audubon Society
Attn: Franklin Bedard
P.O. Box 3581
Bakersfield, CA 93385
mbedard@bak.rr.com

December 22, 2022

submitted electronically

Matthew Hall, Supervising Planner
Kern County Planning and Natural Resources Department
2700 "M" Street, Suite 100
Bakersfield, CA 93301
hallmat@kerncounty.com

**Subject: Notice of Preparation of a Draft Environmental Impact Report
The Pelican's Jaw Hybrid Solar Project (Project), by Pelican's Jaw Solar, LLC**

Dear Mr. Hall:

The Kern Audubon Society (KAS), an interested party, received a notice of availability concerning a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the Kern County Planning and Natural Resources Department (County) for the above referenced Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

KAS was founded in Bakersfield, CA in 1973 and incorporated in 1979. KAS is a thriving environmental organization in Kern County, and the chapter continually plans educational projects for the community. KAS conducts regular program meetings and field trips to both common and unique habitats in California. KAS would like to thank you for the opportunity to provide comments concerning the scope and content of the environmental analysis of the Project that may affect the diverse California wildlife within the Project's footprint and its cumulative impacts in the region.

The DEIR for the proposed 3,756.46 acre project located in the Central Valley Region of unincorporated Kern County northwest of the Twisselman Road and Lost Hills Road intersection, approximately 8 miles north of the community of Lost Hills should identify and evaluate potential adverse impacts to protected species that may utilize the disturbed and undeveloped scrub areas proposed for the Project activities.

These undeveloped areas have potential to support San Joaquin kit fox, Blunt-nosed leopard lizard, American badger, San Joaquin antelope squirrel, Tipton kangaroo rat, Giant kangaroo rat, Western burrowing owl, Swainson's hawk, and loggerhead shrike.

The biological site evaluation should be performed by qualified biological consultants using the appropriate survey protocols as established by both state and federal wildlife agencies. It is imperative that all biological surveys be performed during the appropriate time of year to discern species presence for this eco-region. Species presence or absence can be influenced by seasonal drought conditions so it is imperative that surveys be performed during years exhibiting average winter precipitation.

KAS appreciates the opportunity to comment on the NOP for the Pelican's Jaw Hybrid Solar Project DEIR and to assist the County in identifying Project impacts on sensitive biological resources endemic to this region of Kern County.

Sincerely,
Franklin Bedard
Conservation Chair
Kern Audubon Society



December 21, 2022

Matthew Hall, Supervising Planner
Kern County Planning and Natural Resources Department
2700 M Street, Suite 100
Bakersfield, CA 93301
Delivered via email to: hallmat@co.kern.ca.us

RE: Scoping Comments for Pelican's Jaw Hybrid Solar Project (SCH 2022110558)

Dear Mr. Hall,

Thank you for the opportunity to provide scoping comments in response to the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Pelican's Jaw Hybrid Solar Project (Project). These scoping comments are submitted on behalf of California Native Plant Society (CNPS) and Defenders of Wildlife (Defenders).

We strongly support the development of renewable energy production. A low-carbon energy future is critical for California – for our economy, our communities, and the environment. Achieving this future—and *how* we achieve it—is critical for protecting California's internationally treasured wildlife, landscapes, productive farmlands, and diverse habitats.

CNPS is a non-profit environmental organization with more than 12,000 members in 36 Chapters across California and Baja California, Mexico. CNPS's mission is to protect California's native plant heritage and to preserve it for future generations through the application of science, research, education, and conservation. We work closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices. CNPS supports science-based, rational policies and actions, on the local, state, national, and international levels, that lead to the continued study and enjoyment of the state's botanical resources.

Defenders has nearly 2.2 million members and supporters in the United States, 323,000 of which reside in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction. Defenders strongly supports energy development that will help meet California's emissions reduction goals and avoids destruction of important wildlife habitat and loss of at-risk species.

Comments

As we transition toward a clean energy future, it is imperative for our future and the future of our wild places and wildlife that while addressing the long-term impacts of climate change, we also consider the near-term impact of solar development on our biological diversity, fish and wildlife habitat, and natural landscapes. We need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and lands with known high-resource values. We believe energy projects must be sited to avoid or minimize impacts to wildlife and habitat, and where necessary, unavoidable impacts should be offset through compensatory or off-site mitigation. Some projects, however, are so poorly sited that significant impacts to imperiled species and their habitat can neither be avoided nor minimized. These projects face lengthy, expensive permitting processes with uncertain outcomes.¹ Unfortunately, this Project is one of those and should be re-located onto other more suitable lands that are considered to have low conservation value.

Project Location

The Project is a hybrid photovoltaic (PV) solar facility that would generate up to 500 MW and provide 2,000 MWh of energy storage capacity. The Project is proposed on 3,943 acres of private land in unincorporated Kern County. The Project is just south of the Kings County line and 2 miles east of Interstate 5, 2.5 miles west of the Kern National Wildlife Refuge, and 3 miles west of the Tulare Basin Wildlife Management Area.

The Project site is currently vacant with a mix of native and non-native vegetation cover including grasses and shrubs and has been used for cattle and sheep grazing over the past ten years. Additionally, no crop cultivation has occurred on the project site within the last ten years.

¹ Dashiell, S.; Buckley, M.; Mulvaney, D. *Green Light Study: Economic and Conservation Benefits of Low-Impact Solar Siting in California*, 2019.

The Project is proposed in a location designated as sensitive with high-conservation value through a state agency collaborative project with multiple stakeholders, as demonstrated by Figure 1 located below. The red represents the approximate outline of the Project area.

Figure 1: Approximate Vicinity of the Project with the Environmental Conservation Value



2

Leaders from the agricultural, conservation, and solar PV development communities, tribes, and key state and federal agencies identified this area as a “high conflict” area due to the important high-value biological resources present as depicted by the gradient within the map.

Development projects should avoid areas with high-conservation values for natural resources, such as the presence of special-status species, high biodiversity, or connectivity corridors. Aside from the Project site containing high-conservation values, it is also surrounded by high-conservation value lands and is near crucial wildlife areas: the Kern National Wildlife Refuge and the Tulare Basin Wildlife Management Area. Given the level of disturbance in the San Joaquin Valley, relatively intact habitat lands near protected wildlife areas have even greater importance due to their rarity. This project site is one of those exceedingly rare habitat areas within this region.

According to the California Natural Diversity Database (CNDDDB), the Project site is expected to provide habitat to numerous special-status wildlife and plant species including but not limited to the following:

² See <https://databasin.org/maps/new/#datasets=5678d8175d694e5ea89183730af3d1a4>

Common Name	Scientific Name	Status
American badger	<i>Taxidea taxus</i>	State Species of Special Concern
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	Federally and State Endangered
Burrowing owl	<i>Athene cunicularia</i>	CA Species of Special Concern
Loggerhead shrike	<i>Lanius ludovicianus</i>	CA Species of Special Concern
Kern mallow	<i>Eremalche parryi subsp. kernensis</i>	Federally Endangered
Mountain plover	<i>Charadrius montanus</i>	State Species of Special Concern
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Federally Endangered and State Threatened
San Joaquin woolly threads	<i>Monolopia congdonii</i>	Federally Endangered
Tipton kangaroo rat	<i>Dipodomys nitratoides nitratoides</i>	Federally and State Endangered
Tricolored blackbird	<i>Agelaius tricolor</i>	State Threatened
Swainson's hawk	<i>Buteo swainsoni</i>	State Threatened

While mitigation is an essential tool for conservation, it is difficult to mitigate for special-status species when a project is located in a high-value habitat area such as this Project site.

Alternative Sites Must be Considered

Given the suite of special status species that can be anticipated to utilize the Project site and the proximity to the Kern National Wildlife Refuge and the Tulare Basin Wildlife Management Area, this Project location is not appropriate for any form of intensive development, renewable energy, or otherwise. This Project is poorly sited and we can anticipate a difficult and expensive permitting process. Any alternative on-site project configuration or location within the immediate vicinity would face the same issues.

We recommend robust alternatives analysis in the DEIR that prioritizes alternative Project sites on impaired or degraded lands, including the drainage-impaired, least-conflict lands within the

Westlands Water District.³ Solar development within the Westlands Water District has the broad support of environmental groups and is an ecologically superior location for solar development, and therefore should be considered as an alternative location for this Project.

Potential Impacts to Rare Plants and Sensitive Natural Communities

The plant communities of the southern San Joaquin Valley are among the most threatened habitats in California. Historical and current conversion to agriculture and urban development has led to the destruction of all but a small fraction of the original habitat in this region. As a result, many rare plant populations have been extirpated from the San Joaquin Valley, and remaining intact habitat should be prioritized for conservation. The NOP indicates that the project site is comprised of native and non-native vegetation; which includes grasses and shrubs. Furthermore, the project area is currently vacant and for the past 10 years has been used for limited cattle and sheep grazing. Based on this description we are concerned that a significant amount of intact habitat, including habitat for numerous globally imperiled species could be present on the site. An initial review of the CNDDDB includes dozens of known rare plant occurrences immediately adjacent to the project site. While very few rare plants have been documented from the project site itself, this is likely the result of a lack of botanical survey history, as is often the case on private land. The plants in the table below are known to occur in the project vicinity. All rare plants with the potential to occur on the site should be surveyed for and documented, in order to establish baseline conditions and to accurately assess and mitigate for impacts.

Scientific name	Common name	CRPR	CESA	FESA
<i>Atriplex coronata</i> var. <i>vallicola</i>	Lost Hills crownscale	1B.2	none	none
<i>Atriplex minuscula</i>	lesser sawscale	1B.1	none	none
<i>Cirsium crassicaule</i>	slough thistle	1B.1	none	none
<i>Delphinium recurvatum</i>	recurved larkspur	1B.2	none	none
<i>Eremalche parryi</i> subsp. <i>kernensis</i>	Kern mallow	1B.2	none	Endangered
<i>Lasthenia chrysantha</i>	alkali-sink goldfields	1B.1	none	none

³ See <https://sjvp.databasin.org/pages/least-conflict/>

<i>Lasthenia glabrata</i> subsp. <i>coulteri</i>	Coulter's goldfields	1B.1	none	none
<i>Monolopia congdonii</i>	San Joaquin woollythreads	1B.2	none	Endangered
<i>Tropidocarpum californicum</i>	King's gold	1B.1	none	none

Conduct Protocol Level Surveys

We recommend that the County consult with the trustee and responsible wildlife agencies to determine the scope and protocols for the biological surveys needed to support the biological resources analysis in the DEIR. Considering the sensitive species and habitat located on the Project site, the surveys must adhere to species-specific protocols to provide thorough and accurate results that support impact analysis and identification of appropriate impact mitigation measures for each species. The DEIR must, at a minimum, include avoidance, minimization, and compensatory mitigation measures for the species and habitats that the project will adversely impact. The DEIR must address both direct impacts from the proposed Project and cumulative impacts on special-status species and sensitive habitats. We recommend avoidance and minimization measures should be exhausted, with concurrence by responsible and trustee agencies, before the compensatory mitigation options are considered.

a. Blunt-Nosed Leopard Lizard (BNLL)

The Project site is expected to provide suitable habitat for BNLL and has a probability of BNLL occurrence.⁴ The BNLL is a federal and state listed endangered species and a state fully protected species, for which take is not permitted. According to the US Fish and Wildlife Service (USFWS), the BNLL's current habitat range has been reduced to 15% of its historical range due to widespread agricultural development of the San Joaquin Valley.⁵ Decreasing the current habitat due to renewable projects within BNLL's predicted habitat could be extremely detrimental to the species.

Given the Project site provides suitable habitat for this sensitive species, complete protocol-level surveys for BNLL must be performed. We recommend that surveys for the species be performed that, at a minimum, conform to the current survey standards established in the *Approved Survey Methodology for the Blunt-Nosed Leopard Lizard*

⁴ See <https://databasin.org/maps/new/#datasets=e02db184ff08428eb9a6da4072a4ebfd>

⁵ See <https://www.fws.gov/species/blunt-nosed-leopard-lizard-gambelia-silus>

from the California Department of Fish and Wildlife⁶ (CDFW). Additionally, we recommend consultation with USFWS and CDFW for guidance on the implementation of ground-disturbing activities and avoidance. Because incidental take is not permitted, any presence of BNLL on the project site will require strict avoidance and could result in significant delays, substantial expense and may require a reduction in project size, all of which could lead to the Project being unfeasible.

b. Burrowing Owl

The Project site may provide habitat for the burrowing owl, which is listed as a Species of Special Concern by CDFW. It is estimated that there are fewer than 10,000 breeding pairs of burrowing owls and most exist on privately owned land.⁷ The surveys should follow the State of California's *Staff Report on Burrowing Owl Mitigation recommendations*.⁸ If burrowing owls are observed on or adjacent to the Project site based on the survey, the DEIR must, at a minimum, include avoidance, minimization and mitigation measures for the species based on those listed within the *Staff Report on Burrowing Owl Mitigation*.

c. Tipton Kangaroo Rat

The Tipton kangaroo rat is a federally and state listed endangered species. The Project site contains predicted suitable habitat and a probability of occurrence for the species.⁹ According to the USFS 5-year review for the Tipton kangaroo rat, the species is particularly sensitive to stressors such as poor habitat conditions due to their short life cycle.¹⁰ Furthermore, the review cited the surrounding area of the Project as an area of large decline for the species, noting that part of the Kern National Wildlife Refuge had a confirmed population of the species up until several years ago. This Project would significantly degrade available habitat for this species. Therefore, complete protocol-level surveys must be conducted to identify signs or sightings of the species and we recommend that surveys for the species be performed that, at a minimum, conforms to the current survey standards established in the *Survey Protocol for Determining*

⁶ California Department of Fish and Wildlife. 2019. Approved Survey Methodology for the Blunt-Nosed Leopard Lizard.

⁷ California Department of Fish and Wildlife. 2012. Staff report on burrowing owl mitigation. The 7 March 2012 memo replacing 1995 staff report, State of California Natural resources Agency, Department of Fish and Wildlife. Sacramento, California.

⁸ California Department of Fish and Wildlife. 2012. Staff report on burrowing owl mitigation. The 7 March 2012 memo replacing 1995 staff report, State of California Natural resources Agency, Department of Fish and Wildlife. Sacramento, California.

⁹ See <https://databasin.org/maps/new/#datasets=d060bc1d1afb47beab688553beee2394>

¹⁰ U.S. Fish and Wildlife Service. 2020. Tipton Kangaroo Rat 5-Year Review. Sacramento, California.

Presence of San Joaquin Kangaroo Rats prepared by USFWS, which covers the Tipton kangaroo rat.

d. San Joaquin Kit Fox

The San Joaquin kit fox (SJKF) is listed as federally endangered and state listed as threatened. According to the USFWS 5-year review on SJKF, populations continue to persist around the nearby Kern National Wildlife Refuge.¹¹ It is reasonable to assume populations may exist on the Project site itself. We recommend protocol-level surveys for the species be performed that, at a minimum, conform to the current survey standards established in the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior To or During Ground Disturbance*.¹² Additionally, the DIER must not only analyze the impacts of the Project on the site but also analyze any cumulative, population-level impacts the project will have on SJKF within the Kern National Wildlife Refuge and on the movement of kit fox across this landscape.

e. Swainson's Hawk

The Swainson's hawk is listed as threatened under the California Endangered Species Act. The project site is located on land where the species may be present, and we recommend that a survey for the species be conducted that, at a minimum, conforms to CDFW and the California Energy Commission's survey guidelines.¹³ If the species is observed on or adjacent to the Project site based on the survey, the DEIR must include avoidance, minimization and mitigation measures developed in consultation with CDFW.

f. Floristic Surveys

Comprehensive floristic surveys must be conducted on the project site in compliance with the CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*.¹⁴ Surveys must be floristic in nature and conducted by qualified botanists, preferably California Certified Botanists.

¹¹ U.S. Fish and Wildlife Service. 2020. San Joaquin Kit Fox 5-Year Review. Sacramento, California.

¹² U.S. Fish and Wildlife Service. 2011. Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior To or During Ground Disturbance. Sacramento, California.

¹³ Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley.

¹⁴ See <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>

This means that all plants present on the site, both common and rare, must be identified to the species level and subspecies or variety level, when appropriate. These surveys must be accurately timed to ensure that all rare plants are identifiable. This means that multiple surveys throughout the growing season are likely necessary. For example, several rare *Atriplex* species have a reasonable likelihood of occurring on the site, and these species are typically not identifiable until the summer months. In contrast, *Monolopia congdonii* is only identifiable for a very limited period (a couple of weeks) during the early spring. All surveys must be guided by visits to reference rare plant populations by qualified botanists. Reference site checks are necessary to ensure that each rare species is detectable during surveys. Reference site visits should be guided by prospective species lists created by a 9-quad search, which incorporate known rare plants from the project site and surrounding areas.

It is of utmost importance that all surveys are conducted in a year (or years) with adequate precipitation. The nature of rainfall patterns and persistent drought means that protocol-level surveys for rare plant species may not be possible in some years. CDFW's Protocols caution that, "habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components, may require multiple annual surveys to fully capture baseline conditions." This statement applies to the habitats on the project site. Establishing baseline conditions is a basic tenet of the California Environmental Quality Act and is critical to informing the public and decision makers about potential impacts. Last, it is crucial that comprehensive botanical surveys are completed prior to and incorporated into the DEIR.

Lake Effect

The Project is close to the Kern National Wildlife Refuge and the Tulare Basin Wildlife Management Area, both of which serve as an important hotspot for migratory birds within the Pacific Flyway, including waterfowl and shorebirds such as the great egret, white geese, ferruginous hawk, and numerous duck species. Defenders is extremely concerned about the Project's potential impact on avian species. Studies indicate various species of birds may be attracted to the vast arrays of PV solar panels due to the "lake effect" caused by reflected polarized light.¹⁵ Given the Project's proximity to the Kern National Wildlife Refuge, the Tulare Basin Wildlife Management Area, both of which falls within a critical migratory pathway, there

¹⁵ Upton, J. 2014. Solar farms threaten birds. Scientific American. <https://www.scientificamerican.com/article/solar-farms-threaten-birds/#:~:text=It%20was%20one%20of%20233,fatally%20crippled%20by%20the%20facilities.>

is a likelihood migratory birds may be injured or killed due to collisions with Project facilities. We recommend the DEIR include consideration of lake effect impacts to migratory birds. Furthermore, we recommend coordination with the CDFW and USFWS on Incidental Take Permit(s) requirements for migratory birds.

Need for Detailed Vegetation Mapping

CDFW's Protocols outline the need to document onsite vegetation in order to assess the presence of Sensitive Natural Communities (SNCs). This involves identification and mapping of onsite vegetation to the association level, and documenting any SNCs with a Combined Vegetation Rapid Assessment and Relevé Field Form. The current list of SNCs is available from CDFW.¹⁶ Many of the same principles detailed above for rare plant surveys are also necessary to document SNCs. This includes conducting vegetation surveys throughout the growing season and ensuring that surveys are conducted in years with a level of precipitation that is adequate to locate and identify all plant communities that are present.

Need for Meaningful Mitigation for Impacts to Rare Plants and Sensitive Natural Communities

Given the level of impact to habitats in the San Joaquin Valley, we are very concerned that developing meaningful mitigation measures will be challenging and that there are no feasible mitigation measures that will adequately address impacts to rare plants and/or SNCs documented on the project site. Very little private land is available for purchase should offsite mitigation lands be necessary to mitigate project impacts to less than significant. Likewise, translocation of the vast majority of San Joaquin Valley species is not likely to be successful. Last, the creation of *de novo* habitat for rare plants for project impacts (i.e., establishing offsite populations of rare plants as mitigation) is also not likely to be successful. In general, establishing new offsite rare plant populations has a very minimal history of success and this decreases for rare plants that are typical of xeric habitats.^{17,18} As a result, the purchase of offsite mitigation lands, translocation as mitigation, and the establishment of new offsite populations should be avoided as mitigation measures for impacts to rare plants found on the project site. We strongly recommend that the Project be designed to completely avoid direct

¹⁶ See <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>

¹⁷ Fiedler, P.L., 1991. *Mitigation-related Transplantation, Relocation and Reintroduction Projects Involving Endangered and Threatened, and Rare Plant Species in California, Final Report*. California. Department of Fish & Game. Endangered Plant Program.

¹⁸ See https://www.researchgate.net/profile/Magdalena-Vicens-Fornes/publication/229104055_How_successful_are_plant_species_reintroductions_Biol_Cons/links/5a003ea8458515a835b8c527/How-successful-are-plant-species-reintroductions-Biol-Cons.pdf

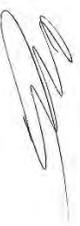
and indirect impacts to all rare plants and SNCs.

Conclusion

We are long-time supporters of responsible renewable energy development and encourage a smart-from-the-start approach to siting and development. This project is clearly and undeniably poorly sited and is misguided at best. Special-status species will not be alone in feeling the impacts from this unsuitable location; the developer will face hurdles due to this high-value location. This project will likely be expensive and time-consuming, which, in turn, can be expected to undermine project viability. It will be difficult to meet project deliverables and deadlines while meeting various Endangered Species Act requirements at a marketable price.

Thank you for the opportunity to provide comments on the Project and for considering our input. We look forward to reviewing the DEIR and request to be notified when it is available. Please feel free to contact us with any questions.

Respectfully submitted,



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Conservation Program Director
California Native Plant Society
916-447-2677
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Senior California Representative
Defenders of Wildlife
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11 July 2023

Kern County Planning and Natural Resources Department

2700 "M" Street, Suite 100

Bakersfield, CA 93301-2323

Sent electronically to: Craig Murphy MurphyC@kerncounty.com & Katrina Slayton

SlaytonK@kerncounty.com

RE: Notice of Preparation – of a Draft Environmental Impact Report for the Pelican’s Jaw Hybrid Solar Project by Pelican’s Jaw Solar LLC (PP21124)

Dear Ms. Klayton & Mr. Murphy,

The Tejon Tribe has reviewed the NOP and Initial Study (pursuant to the California Environmental Quality Act) for Pelican’s Jaw Hybrid Solar Project, Kern/Kings County, California (the “Project”) and have the following formal comments.

The tribe strongly urges Kern County Planning and Natural Resources Department to treat this location as “highly culturally sensitive” especially for Tribal Cultural Resources (“TCRs”)¹ still exists. Therefore, **we recommend and respectfully request utilizing Native American Monitoring Services (“NAMS”) for all ground disturbing activities, including but not limited to: any over-excavating, ground leveling, all trenches, tree removals, ground cutting, basin cutting, etc. Survey should be done prior to ground disturbance (if possible). A Cultural Presentation should be given to construction prior to any ground disturbances and a curation agreement should be in place for discoveries.**

Should you have any questions, please feel free to contact me. We look forward to continuing consultation for the Project.

Respectfully,

Candice Garza

Tejon Indian Tribe

Office: 661-834-8566 Cell: 661-345-0632

cgarza@tejonindiantribe-nsn.gov

¹ Tribal Cultural Resources (“TCRs”) are defined in California State Assembly Bill 52 – Native Americans: California Environmental Quality Act (approved by Governor September 25, 2014) as: “Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe”, § 4(a)(1), available online at http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52.



From: [Paige Berggren](#)
To: [Matthew Hall](#)
Cc: [Shana Powers](#); [Samantha McCarty](#)
Subject: CUP and GPA by Pelican's Jaw Solar, LLC for the pelicans Jaw Solar Project (PP21124)
Date: Wednesday, August 31, 2022 15:47:24

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

Dear Mr. Hall,

Thank you for contacting Santa Rosa Rancheria Tachi-Yokut Tribe regarding the Pelicans Jaw Solar Project CUP and GPA application in Kern County. The Tribe has serious concerns regarding the location of this project in relation to culturally sensitive areas. The Tribe requests that we be retained for Native American monitoring of any Ground Disturbing Activity, as well as a Cultural Presentation for all construction staff **prior to ground disturbance**, and a curation agreement put in place for any inadvertent cultural discoveries. Please contact myself, Shana Powers, or Samantha McCarty if you have any questions or concerns, thank you.

Respectfully,

Paige Berggren (she/her/hers)

Santa Rosa Rancheria Tachi-Yokut Tribe

Cultural Specialist Monitor I

PBerggren@tachi-yokut-nsn.gov

Office: (559) 924-1278 x 4092

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Appendix B
Agricultural Conversion Technical Study

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Agricultural Conversion Technical Study

Pelicans Jaw Hybrid Solar Project

FEBRUARY 2023

Submitted To:

KERN COUNTY PLANNING AND NATURAL RESOURCES DEPARTMENT

2700 M Street, #100
Bakersfield, California 93301
661.862.8600

Prepared for:

PELICANS JAW SOLAR, LLC

3 Lagoon Drive, Suite 280
Redwood City, CA 94065
Contact: Tandy McMannes

Prepared by:

DUDEK

605 Third Street
Encinitas, California 92024
Contact: Keith Carwana

Executive Summary

This Agricultural Conversion Technical Study was prepared in support of an application submitted by Pelicans Jaw Solar, LLC for the proposed development of the Pelicans Jaw Hybrid Solar Project (Project), a solar energy facility on unincorporated lands in northwestern Kern County. The Project site is located adjacent, and to the south of the border of Kern County with Kings County, approximately two miles east of the U.S. Interstate 5. This Study was prepared using the California Agricultural Land Evaluation and Site Assessment model, developed by the California Department of Conservation and follows the guidelines prescribed by Kern County in their Pathway for Processing: Conversion of Agricultural Land to Solar PV Use (Kern County 2012).

The acreage calculations for this Agricultural Conversion Technical Study report are based on Geographic Information Systems (GIS) data provided by Kern County. Based on Kern County's GIS data, the Project area includes approximately 3,303 acres. In accordance with Kern County Assessor's maps, the Project includes approximately 3,371 acres.

The Pelicans Jaw Hybrid Solar Project would result in a conversion of up to 1,752 acres of land mapped as Grazing Land under the Farmland Mapping and Monitoring Program of the California Department of Conservation. This report concludes that the conversion of grazing land to solar facility uses would be a less than significant impact. This report also determines that cumulative impacts resulting from the Project's conversion of grazing land to solar facility uses, when combined with other projects within the vicinity of the Project site, would also be less than significant.

Implementation of the Project would not result in a significant impact from cancellation of Williamson Act contracts, as the Project site is not subject to a Williamson Act contract.

The Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use. There are no open space contracts and no Farmland Security Zone contracts on the Project site, so there are no such impacts.

This Agricultural Conversion Technical Study was prepared by Erin Phillips and Brian Grattidge. Resumes are provided in Appendix A.

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APPENDIX

Appendix A Resumes

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
amsl	above mean sea level
Applicant	Pelicans Jaw Solar, LLC
APN	Assessor's Parcel Number
CEQA	California Environmental Quality Act
County	Kern County Planning and Natural Resources Department
CUP	Conditional Use Permit
DOC	California Department of Conservation
DWR	California Department of Water Resources
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
I-5	Interstate 5
LCC	Land Capability Classification
LESA	Land Evaluation & Site Assessment
MW	Megawatt
MWhr	Megawatt hour
NRCS	Natural Resources Conservation Science
PG&E	Pacific Gas & Electric
Project	Pelicans Jaw Hybrid Solar Project
SJVKCGS	San Joaquin Valley - Kern County Groundwater Subbasin
ZOI	Zone of Influence

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1 Introduction

1.1 Purpose of the Study

This Agricultural Conversion Technical Study was prepared in support of a conditional use permit application submitted by Pelicans Jaw Solar, LLC for the proposed development of a solar energy facility on unincorporated lands in northwestern Kern County. This Agricultural Conversion Technical Study (Study) has been prepared to assess the significance of the proposed Pelicans Jaw Hybrid Solar Project potential farmland conversion impact. This Study was prepared using the California Agricultural Land Evaluation and Site Assessment (LESA) model, developed by the California Department of Conservation (DOC) and also follows the guidelines prescribed by Kern County in their Pathway for Processing: Conversion of Agricultural Land to Solar PV Use (Kern County 2012).

This analysis has been completed using publicly available information from the U.S. Department of Agriculture and DOC, GIS data, information from Kern County records, and other information provided by Pelicans Jaw Solar, LLC (Applicant).

1.2 Project Description

The Applicant proposes to entitle, construct, and operate the Pelicans Jaw Hybrid Solar Project (Project). The Project would include up to 500-megawatt (MW) of photovoltaic solar generation and a battery energy storage system with a capacity up to 4,000-megawatt hours (MWhr) located on approximately 3,371 acres of private property in unincorporated Kern County, California.

The Applicant is pursuing a Conditional Use Permit (CUP) and General Plan Amendment from the Kern County Planning and Natural Resources Department (County). Construction of the Project is anticipated to occur in three phases, with the first phase consisting of the installation of 300 MW of photovoltaic solar and the installation of up to 2,000-MWhr of battery energy storage beginning in the first quarter 2024 and becoming commercially operational in the fourth quarter of 2024 (up to 12 months). The second and third phase would consist of the installation of 200 MW of photovoltaic solar (phase two) and the installation of up to 2,000-MWhr of battery energy storage (phase three) to begin construction in the first quarter of 2024 and become commercially operational in the fourth quarter 2024 (up to 12 months). The operational life of the Project is anticipated to be 35 years.

The Project would primarily consist of photovoltaic (PV) panels, a single-axis tracker system, inverters and transformers, electrical cabling and communication lines, on-site switchgear, an underground or above ground (or a combination of both) 34.5-kV collection system, a collector substation, generation interconnection (gen-tie) line, access roads, security fence, an operations and maintenance (O&M) facility, and a supervisory control and data acquisition (SCADA) system. The Project would also include a Pacific Gas and Electric (PG&E) switching station that would interconnect with the existing PG&E 230-kilovolt (kV) overhead transmission lines that traverse the Project site. The PG&E switching station would be located on-site, within the Project boundaries. The final location of the PG&E switching station is subject to change pending ongoing environmental surveys and consultation with PG&E.

1.3 Project Location

The Project site is proposed to be located in northwestern Kern County, adjacent to the southern border of Kings County with direct access from Interstate 5 (I-5) located approximately two miles to the west. The Project is situated within portions of Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East, San Bernardino Base and Meridian. The Project site is generally bordered by Twisselman Road to the south, Lost Hills Road to the east, Kern and Kings County line to the north, and I-5 to the west. Please refer to Figure 1, Regional Map, and Figure 2, Vicinity Map.

1.4 Project Setting

The Project site is located west of the Kern River Channel. The topography is relatively flat and characterized by an overall slope to the east/northeast. Elevations range from approximately 215 feet above mean sea level (amsl) near the eastern edge to approximately 220 feet amsl at the northwestern corner of the site.

As shown in Figure 3, FMMP Important Farmland, the Project site is designated as Vacant or Disturbed Land, Grazing Land, and Nonagricultural or Natural Vegetation according to the Farmland Mapping and Monitoring Program (DOC 2018). Approximately 1,547 acres of the Project site are designated as Vacant or Disturbed Land, 1,752 acres of the Project site are designated as Grazing Land, and 4 acres are designated as Nonagricultural or Natural Vegetation. Please note that the Farmland Mapping and Monitoring Program acreage is estimated based on GIS data and aerial imagery. The acreage does not include access roads. The DOC defines Vacant or Disturbed Land as “open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, and rural freeway interchanges,” Grazing Land as “land on which the existing vegetation is suited to the grazing of livestock,” and Nonagricultural or Natural Vegetation as “heavily wooded, rocky/barren areas, riparian and wetland areas, grassland areas which do not qualify as Grazing Land due to their size or land management restrictions, small water bodies and recreational water ski lakes. Constructed wetlands are also included in this category.” The Project site does not contain lands designated by DOC as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or Farmland of Local Importance.

The Project site and surrounding properties are currently vacant and have been used for cattle and sheep grazing over the past 10 years. No crop cultivation has occurred within the last 10 years on Project site, between the years 2012 and 2022.

Each of the Project parcels are zoned as “A – Exclusive Agriculture”. The County Zoning Ordinance states “The purpose of the Exclusive Agriculture (A) District is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Uses in the A District are limited primarily to agricultural uses and other activities compatible with agricultural uses.” Permitted land uses in this type of district fall into the categories of agricultural uses, residential uses, commercial uses, utility and communications facilities, resource extraction and energy development uses, and other miscellaneous uses. Solar energy electrical generators are considered a compatible use within Exclusive Agriculture zoning with the issuance of a CUP, pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance and the Kern County Agricultural Preserve Standard Uniform Rules.

2 Regulatory Setting

2.1 Federal

2.1.1 Farmland Protection Policy Act (7 U.S.C. Section 4201)

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It additionally directs federal programs to be compatible with State and local policies for the protection of farmlands. The FPPA does not authorize the Federal Government to regulate the use of private or nonfederal land or, in any way, affect the property rights of owners of such land. Information regarding the FPPA is provided for background information in this report.

The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland.

Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and farmland of statewide or local importance, defined as follows in 7 U.S.C. Section 4201: *Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary. Prime farmland includes land that possesses the above characteristics but is being used currently to produce livestock and timber. It does not include land already in or committed to urban development or water storage; Unique farmland is land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables; and Farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oilseed crops, as determined by the appropriate State or unit of local government agency or agencies, and that the Secretary determines should be considered as farmland for the purposes of this chapter.*

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency (NRCS 2008). None of the Project site is affected by the FPPA requirements.

2.2 State

2.2.1 Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was created by the California Legislature in 1982. It requires the California Department of Conservation (DOC) to prepare, update, and maintain Important Farmland Series Maps and other soils and land capability information. Under the FMMP, DOC categorizes land into the following categories:

Prime Farmland. This has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing seasons and moisture supply needed to produce sustained high yield crops when treated and managed, including water management, according to current farming methods.

In order to be shown on FMMP's Important Farmland Maps as Prime Farmland, land must meet both the following criteria: First, it must have been used for irrigated agricultural production at some time during the four years prior to the FMMP Important Farmland Map date. FMMP staff determines irrigated land use by analyzing current aerial photos, local comment letters, and related GIS data, supplemented with field verification. Second, the soil must meet the physical and chemical criteria for Prime Farmland or Farmland of Statewide Importance as determined by the USDA Natural Resources Conservation Service (NRCS). NRCS compiles lists of which soils in each survey area meet the quality criteria. Factors considered in qualification of a soil by NRCS include:

- Water moisture regimes, available water capacity, and developed irrigation water supply
- Soil temperature range
- Acid-alkali balance
- Water table
- Soil sodium content
- Flooding (uncontrolled runoff from natural precipitation)
- Erodibility
- Permeability rate
- Rock fragment content
- Soil rooting depth

Prime farmland soils commonly get an adequate and dependable supply of moisture from precipitation or irrigation. Temperature and growing season are favorable, and the level of acidity or alkalinity is acceptable. The soils have few rocks and are permeable to water and air, not excessively erodible or saturated with water for long periods and are not flooded during the growing season.

Farmland of Statewide Importance. This is land other than prime farmland that has a good combination of physical and chemical characteristics for the production of crops, and has been used for the production of irrigated crops within the four years prior to the mapping date.

Unique Farmland. This is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, and land that is currently used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of specific crops (i.e., oranges, olives, avocados, cut flowers) when treated and managed according to current farming methods. This category excludes abandoned orchards or vineyards. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance. This land produces crops or has the capability of production or is used for the production of confined livestock. It may be important to the local economy due to its productivity. A local advisory committee set up by the SCS in each county initially identified farmland of Local Importance. The Kern County Board of Supervisors has determined that there will be no Farmland of Local Importance in Kern County.

Grazing Land. This is land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. It is identified in minimum mapping units of 40 acres and does not include land previously identified above.

Urban and Built-up Land. This land is used for residential, industrial, commercial, construction, institutional, public administrative purposes, etc.

Other Land. This is land not included in any of the other mapping categories and generally includes rural development with a density of less than one structure per 1.5 acres, marginal agricultural lands, brush, timber, roads and other rural land uses.

2.2.2 California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, also known as the Williamson Act, was established with the basic intent of encouraging the preservation of the state’s agricultural lands in view of the increasing trends toward their “premature and unnecessary” urbanization. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments, which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments have traditionally received annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971, but payments have been reduced or eliminated in the current economic crises.

Williamson Act contracts must have an initial term of at least 10 years. Williamson Act Contracts are available only when the land is located within an established agricultural preserve. Every year, absent a notice of nonrenewal, the contract is automatically extended, or “renewed” for an additional year.

Williamson Act Contract Termination Methods

Nonrenewal. The landowner or the local government files a notice of nonrenewal. The automatic renewal does not occur, and the contract eventually expires at the end of the term (usually nine years). During this time, the property taxes gradually rise to the full, unrestricted rate at the end of the nonrenewal period.

Cancellation. If a landowner desires to terminate a contract prior to the nine-year nonrenewal period, contract cancellation is an option under limited circumstances and conditions set forth in Government Code Section 51280

et seq. In such cases, landowners may petition the Board of Supervisors for Williamson Act contract cancellation. The Board may grant tentative cancellation if it makes required statutory findings (Government Code Section 51282(a)). If the required findings are met, the landowner is required to pay a cancellation fee equal to 12.5% of the unrestricted fair market value of the property (Government Code Section 51283(b). Alternatively, instead of paying the fee, the landowner may provide a restrictive easement on other land under the California Department of Conservation’s easement exchange program. (Government Code sections 51256-51256.3)

2.2.3 Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. (Government Code sections 51296-51297.4) Farmland Security Zone Act contracts are sometimes referred to as “Super Williamson Act Contracts.” Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone contracts must be for an initial term of at least 20 years. As with Williamson Act contracts, each year an additional year is automatically added to the contract term unless a notice of nonrenewal is given. In return for a further 35% reduction in the property tax value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses during the term of the contract. Farmland Security Zone contracts may also be cancelled, but only upon a finding that cancellation would both service the purposes of the Williamson Act, and that cancellation would be in the public interest (Government Code section 51297).

2.3 Local

2.3.1 Kern County General Plan

The Kern County General Plan is a policy document designed to give long-range guidance to those County officials making decisions affecting the growth and resources of the unincorporated Kern County jurisdiction (Kern County 2009).

The Kern County General Plan provides goals, policies, and implementation measures for the conservation and/or improvements on agricultural lands. Below is an outline of the policy that addresses agricultural land (Land Use, Conservation, and Open Space Element, Section 1.9 - Resource Land Use Designation). These goals, policies and implementation measures express legislative, policy determinations that will be evaluated by Kern County when deciding whether to approve the Project.

Goals

1. To contain new development within an area large enough to meet generous projections of foreseeable need, but in locations that will not impair the economic strength derived from the petroleum, agriculture, rangeland, or mineral resources, or diminish the other amenities that exist in the County.
2. Protect areas of important mineral, petroleum, and agricultural resource potential for future use.
3. Ensure the development of resource areas minimize effects on neighboring resource lands.

4. Encourage safe and orderly energy development within the County, including research and demonstration projects, and to become actively involved in the decision and actions of other agencies as they affect energy development in Kern County.
5. Conserve prime agriculture lands from premature conversion.
6. Encourage alternative sources of energy, such as solar and wind energy, while protecting the environment.

Policies

1. Appropriate resource uses of all types will be encouraged as desirable and consistent interim uses in undeveloped portions of the County regardless of General Plan designation.
7. Areas designated for agricultural use, which include Class I and II and other enhanced agricultural soils with surface delivery water systems, should be protected from incompatible residential, commercial, and industrial subdivision and development activities.
12. Areas identified by the Natural Resource Conservation Service (Formerly Soil Conservation Service) as having high range-site value should be conserved for Extensive Agriculture uses or Resource Reserve, if located within a County water district.
16. The County will encourage development of alternative energy sources by tailoring its Zoning and Subdivision Ordinances and building standards to reflect Alternative Energy Guidelines published by the California State Energy Commission
18. Actively monitor the actions of local, State, and federal agencies related to energy development in Kern County and lobby and present its position on such matters as needed to protect County interests.
19. Work with other agencies to define regulatory responsibility concerning energy related issues.

Implementation Measures

Implementation Measure F: Prime agricultural lands, according to the Kern County Interim- Important Farmland 2000 map produced by the Department of Conservation, which have Class I, or II soils and a surface delivery water system shall be conserved through the use of agricultural zoning with minimum parcel size provisions.

Implementation Measure G: Property placed under the Williamson Act/Farmland Security Zone Contract must be in a Resource designation.

Implementation Measure I: Periodically review the Zoning Ordinance to reflect new technology and energy sources, and encourage these types of uses for new development.

Implementation Measure J: The County shall continue to monitor new legislation as it relates to energy production and periodically review the General Plan and Zoning Ordinance for any required updates.

2.3.2 Kern County Zoning Ordinance

The Kern County Ordinance Title 19 - Zoning (2021) was adopted to promote and protect the public health, safety, and welfare through the orderly regulation of land uses throughout the unincorporated area of the County.

The Project site is zoned Exclusive Agriculture. According to the zoning ordinance, the exclusive agriculture designation is applied to areas that are suitable for agricultural uses to prevent the encroachment of incompatible uses onto agricultural lands and premature conversion of such lands to nonagricultural uses. Allowable land uses within this zone include growing and harvesting crops, breeding and raising animals, agricultural industries, residential uses to house farm workers or the landowner, Christmas tree farms, utility corridors, resource extraction, waste facilities, institutional/educational uses, and various miscellaneous uses such as animal shelters and clubs. Solar development is permitted within the exclusive agriculture zone with a CUP.

2.3.3 Agricultural Preserve Standard Uniform Rules

Kern County has adopted a set of Agricultural Preserve Standard Uniform Rules that identify land uses that are considered compatible uses within agricultural preserves established under the Williamson Act. These rules are designed to restrict the uses of land enrolled in a Williamson Act contract to agriculture or other compatible uses. Agricultural uses include crop cultivation grazing operations, commercial wind farms, livestock breeding, dairies, and uses that are incidental to agricultural uses. Other compatible uses include the erection of gas, electric, communications, water, and other similar public utilities.

3 Environmental Setting

3.1 State of California Agricultural Production

According to the most recent “California Agricultural Statistics Review” prepared by the California Department of Food and Agriculture (2020), California had 69,900 farms and ranches in 2019. The state’s 69,900 farms and ranches received \$50.1 billion in cash receipts for their output, up from the \$49.6 billion received in 2018. California’s revenue, from agriculture, was led by the dairy industry followed by almonds and grapes.

Almost 29 percent of California farms generated commodity sales over \$100,000, greater than the national average of 18.5 percent. The amount of land devoted to farming and ranching in California was 24.3 million acres in 2019, the same as in 2018. The average farm size was 348 acres in 2019, down slightly from the 2018 average farm size of 350 acres and below the national average of 444 acres.

California remained the leading state in cash farm receipts in 2019 with combined commodities representing over 13 percent of the U.S. total. California’s leading crops remained fruits, nuts and vegetables.

3.2 Kern County Agricultural Production

The most recent Annual Crop & Livestock Report prepared by the Kern County Department of Agriculture and Measurement Standards states that in 2020 Kern County contained 843,289 acres of harvested land. Within that acreage, the top commodities include 554,580 acres harvested for fruit and nut crops, 215,158 acres of field crops and rangeland and 71,310 acres of vegetable crops (Kern County 2020). The 2020 total value of agricultural commodities produced in Kern County was \$7,669,409,070. The top five commodities for 2020 were Grapes, Citrus, Almonds, Pistachios, and Milk, which make up more than \$5.5 billion (72%) of the total value.

3.3 Agricultural Production on the Project Site

A review of the Kern County Annual Crop & Livestock Reports (2016-2021) and Kern County Department of Agricultural and Measurements Standards GIS database (Kern County 2022a) was completed in order to determine the agricultural crop production at the Project site and within the Project’s Zone of Influence (ZOI)¹.

Data from 2016 through 2021 showed that agricultural production on the Project site each year consisted of uncultivated agriculture on approximately 1,312 acres of the total approximately 3,303 acres. Please note that acreage is estimated based on Kern County Department of Agricultural and Measurements Standards GIS database and aerial imagery. The acreage does not include access roads.

Table 1 includes the acreage of agricultural production from 2016 through 2021 within the ZOI.

¹ A project’s “Zone of Influence” (ZOI) is defined as that land near a given project, both directly adjoining and within a defined distance away, that is likely to influence, and be influenced by, the agricultural land use of the subject project site.

Table 1. Agricultural Production within the Zone of Influence

Year	Crop Type	Acres
2016	Uncultivated Agriculture, Pomegranate, Almond, Barley, Wheat	7,678.18
2017	Uncultivated Agriculture, Pistachio, Pomegranate, Almond, Barley, Safflower-Organic, Wheat-Organic	7,291.80
2018	Uncultivated Agriculture, Pistachio, Pomegranate, Almond	4,610.13
2019	Uncultivated Agriculture, Pistachio, Pomegranate, Barley	5,736.38
2020	Uncultivated Agriculture, Pistachio, Pomegranate	4,501.15
2021	Uncultivated Agriculture, Pistachio, Pomegranate	4,501.15

3.4 Williamson Act and Farmland Security Zone Lands

Based on a review of Kern County data and confirmation from the property owner and title reports, the Project site is not enrolled in the Williamson Act program (Kern County 2022b). Williamson Act and Farmland Security Zone designations within the Project’s ZOI are shown in Figure 4, Williamson Act Contracts. As shown on Figure 4 and according to data provided via the County’s GIS database (2022b), there are approximately 6,521 acres of Williamson Act and Farmland Security Zone lands within the ZOI.

3.5 Soils

As shown on Figure 5 and detailed in Table 2, the Project site contains the following soils onsite: Houser fine sandy loam, partially drained; Nahrub clay, partially drained; Nahrub, partially drained-Lethent complex; Twisselman clay, saline-alkali, moderately wet, 0 to 2 percent slopes; and Twisselman sandy loam, saline-alkali, moderately wet, 0 to 2 percent slopes.

Table 2. Soil Types on the Project Site

Soil Type Number	Soil Type Name	Acres on the Project Site
164	Houser fine sandy loam, partially drained	981.9
208	Nahrub clay, partially drained	1,407.1
210	Nahrub, partially drained-Lethent complex	175.5
234	Twisselman sandy loam, saline-alkali moderately wet, 0 to 2 percent slopes	321.0
238	Twisselman clay, saline-alkali moderately wet, 0 to 2 percent slopes	417.6
Total		3,303.1²

² The USDA Soils boundary (acres) has been estimated based on GIS data and aerial imagery. The acreage does not include access roads.

3.6 Water

The Project site is within the service area of the Lost Hills Water District (LHWD). The LHWD was formed in 1963 to provide irrigation water from the State Water Project (SWP) to the LHWD. Agricultural activities within LHWD's service area rely primarily on surface water from the Aqueduct. Groundwater use in the LHWD is mostly limited to periods of contracted surface water shortfalls and is generally relied upon for the purpose of blending. During periods of drought the LHWD also relies on groundwater coordination with adjacent Water Districts or growers as well as for surface water transfers, supplemental water purchases and nearby water banking programs (i.e., Berrenda Mesa and Pioneer Projects) (WDWA 2019). The LHWD owns and operates over 23 miles of concrete or geomembrane-lined canals, 42 miles of pipelines, and an additional 27 miles of unlined canals, most of which are out of use (WDWA 2019). As shown in Figure 6, the Project site is in Service Area 6 of the LHWD, which consists of dirt canals that historically delivered water for irrigation; however, the area is no longer receiving deliveries of irrigation water since farming stopped in the 1990s in this area. Further, based on a review of the LHWD's Agricultural Water Management Program, a portion of Service Area 6 has been excluded from the LHWD's water service area (LHWD 2021). The program further states that 27.4 miles of unlined canals are listed as not currently in use (note, all the canals in Service Area 6 are unlined). It is also known that the LHWD has installed interceptor drains adjacent to a significant portion of the unlined canals and has taken a majority of the unlined canals out of service. The LHWD has also facilitated the long-term transfer of contract water from lands considered less productive in the eastern area (i.e., Service Area 6) of the LHWD to lands better suited for permanent crop planting.

As confirmed by the property owner who has owned the Project parcels since 2004, no crop cultivation or associated irrigation water delivery has occurred on the Project site within the last 10 years (between the years of 2012 and 2022) (Wonderful Orchards 2022). The land has been used for cattle and sheep grazing.

The Project site is located within the San Joaquin Valley – Kern County Groundwater Subbasin (SJKCGS or Subbasin), a 1,945,000-acre subbasin located within the southernmost portion of the Tulare Lake Hydrologic Region of the San Joaquin River Basin and is bounded by the Sierra Nevada on the east; by the Tehachapi Mountains, San Emigdio Mountains, and White Wolf Subbasin on the South; and the Coast Range (Temblor Range) on the west (KGA 2020). Groundwater comprises approximately 80% of the water supply within the Subbasin and most of the land use within the Subbasin is agricultural, with most of the irrigated acreage dedicated to field crops and fruit and nut orchards. Kern County Water Agency estimates the total water in storage to be 40,000,000 acre-feet and dewatered aquifer storage to be 10,000,000 acre-feet contained within sediments that comprise the shallow to intermediate depth water-bearing deposits which are primarily continental deposits of Tertiary and Quaternary age.

The SJKCGB is designated as “high priority” by the California Department of Water Resources (DWR) (DWR 2019). This designation requires the preparation of a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act. Basin priority is based on a combination of existing population and anticipated population growth; groundwater well density; agricultural demands; and the historical and current documented impacts to water levels and storage, groundwater quality, subsidence, or groundwater-dependent ecosystems. DWR determined the high ranking for the SJKCGB with consideration of the following:

- Total population overlying the basin, which was 699,730 in 2010, is expected to grow by 54% by the year 2030 to an estimated population of 1,074,931.
- Land subsidence

- Groundwater quality
- Groundwater levels are showing decline over time, and groundwater is a significant component of the SJVKCGB water supply. In some areas of critical overdraft, such as in Kern County, complete disconnection between groundwater and overlying surface water systems has occurred.
- There is approximately 725,633 acres of irrigated agriculture within the SJVKCGB, resulting in an irrigated agriculture density of approximately 260.56 acres per square mile.

A Water Supply Assessment (WSA) has been prepared under separate cover in accordance with Senate Bill (SB) 610 to examine the availability of the identified water supply under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection, accounting for the projected water demand of the Project plus other existing and planned future uses of the identified water supply.

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4 Farmland Conversion Impacts

4.1 Methodology

This section evaluates the impacts of farmland conversion with respect to the factors identified by Kern County and the LESA model. The LESA model is a systematic model that can be used to assess the relative value of farmland in California and is the methodology cited in Appendix G of the CEQA Guidelines. This section also relies on the Kern County Pathway for Processing: Conversion of Agricultural Land to Solar PV Use for impact significance determination (Kern County 2012).

4.2 Land Evaluation and Site Assessment

The Project has been evaluated pursuant to the LESA model, developed by the DOC. As stated in the LESA Model Instruction Manual (DOC 1997):

Land Evaluation and Site Assessment (LESA) is a term used to define an approach for rating the relative quality of land resources based upon specific measurable features. The formulation of a California Agricultural LESA Model is the result of Senate Bill 850 (Chapter 812 /1993), which charges the Resources Agency, in consultation with the Governor’s Office of Planning and Research, with developing an amendment to Appendix G of the California Environmental Quality Act (CEQA) Guidelines concerning agricultural lands. Such an amendment is intended “to provide lead agencies with an optional methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process” (Public Resources Code Section 21095).

The California Agricultural LESA Model is composed of six different factors. Two Land Evaluation factors are based upon measures of soil resource quality. Four Site Assessment factors provide measures of a given project’s size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, each of these factors is separately rated on a 100-point scale. The factors are then weighted relative to one another and combined, resulting in a single numeric score for a given project, with a maximum attainable score of 100 points. It is this project score that becomes the basis for making a determination of a project’s potential significance, based upon a range of established scoring thresholds.

4.2.1 Land Evaluation Factors

The first factors of the LESA model calculation are part of the Land Evaluation component, which entails determining two relative scores for on-site soil types, including the U.S. Department of Agriculture’s Land Capability Classification (LCC) rating, and Storie Index rating. According to the LESA model instructions, the LCC rating indicates the suitability of soils for most kinds of crops; groupings are made according to the limitations of the soils when used to grow crops, and the risk of damage to soils when they are used in agriculture. Soils are rated from Class I to Class VIII, with soils having the fewest limitations receiving the highest rating (Class I). The first four classes are arable land—suitable for cropland—in which the limitations on their use and necessity of conservation measures and

careful management increase from I thru IV. The criteria for placing a given area in a class involve the landscape location, slope of the field, depth, texture, and reaction of the soil. The remaining four classes, V thru VIII, are not to be used for cropland, but may have uses for pasture, range, woodland, grazing, wildlife, recreation, and esthetic purposes. Within the broad classes are subclasses that signify special limitations such as (e) erosion, (w) excess wetness, (s) problems in the rooting zone, and (c) climatic limitations (Helms 1992).

The Storie Index provides a numeric rating (based on a 100-point scale) of the relative degree of suitability or value of a given soil for intensive agriculture and is based upon soil characteristics only (DOC 1997). LCC and Storie ratings for the on-site soil types was obtained from the current soil survey information available at the U.S. Department of Agriculture Natural Resources Conservation Service website:

<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

On-site soils and their respective acreages, LCC rating, and Storie Index rating are presented below in Table 3.

Table 3. LESA Model Land Evaluation Worksheet

Soil Type	Size of Project Site (acres)	Proportion of Project Site	LCC (Irrigated)	LCC Rating (Irrigated)	LCC Score	Storie Index	Storie Score
164	981.9	29.73%	IIIw	60	17.83	26	7.73
208	1,407.1	42.60%	IIIw	60	25.56	20	8.52
210	175.5	5.31%	IIIw	60	3.19	20	1.06
234	321.0	9.72%	IIIw	60	5.83	27	2.62
238	417.6	12.64%	IIIw	60	7.59	25	3.16
	3,303.1	100%			60.00		23.10

Notes:

LCC = Land Capability Classification; 164 = Houser fine sandy loam, partially drained; 208 = Nahrub clay, partially drained; 210 = Nahrub, partially drained-Lethent complex; 234 = Twisselman sandy loam, saline-alkali moderately wet, 0 to 2 percent slopes; 238 = Twisselman clay, saline-alkali moderately wet, 0 to 2 percent slopes.

* Totals may not sum precisely due to rounding. Acreage calculations are based on GIS data and aerial imagery. The acreage does not include access roads.

4.2.2 Site Assessment Factors

The LESA model evaluates four Site Assessment factors, including project size, water availability, surrounding land, and protected land. These factors are analyzed in detail below.

4.2.2.1 Project Size

A secondary analysis derived from the LCC scores is the project size score, which is one of four factors in the Site Assessment component of the LESA model. Acreages within three groupings of LCC scores are tallied and used to determine a relative score that considers the amount of a project site’s high-value and low-value soils, pursuant to Table 3 of the LESA Model Instruction Manual. Table 4 shows the results of this project size scoring for the Project. The highest score from the three classification groupings is entered as the site’s project size score. As seen in Table 4, the Project’s project size score is 100.

Table 4. LESA Model Site Assessment Worksheet - Project Size

Soil Map Unit	LCC Class I-II	LCC Class III	LCC Class IV-VIII
164	-	981.9	-
208	-	1,407.1	-
210	-	175.5	-
234	-	321.0	-
238	-	417.6	-
Totals	0	3,303.1	0
Project Size Scores	0	100	0

* Totals may not sum precisely due to rounding. Acreage calculations are based on GIS data and aerial imagery. The acreage does not include access roads.

4.2.2.2 Water Availability

A water resources availability score is applied based on the site’s existing water sources, factoring in potential restriction scenarios that affect the site’s ability to receive enough water to make agriculture economically viable during drought and non-drought years.

Irrigated agricultural production is not feasible onsite and has not occurred on-site in the last 10 years (2012-2022). This is because there is no existing irrigation system that serves the Project site has been excluded from the LHWD’s water service area, interceptor drains have been installed adjacent to a significant portion of the unlined canals, which has taken a majority of the unlined canals out of service, and LHWD has also facilitated the long term transfer of contract water from lands considered less productive in the eastern area (i.e., Service Area 6) to lands better suited for permanent crop planting. This represents a physical restriction (i.e., an occasional or regular interruption or reduction in a water supply that forces a change in agricultural practices).

The Project area is also experiencing extreme drought. Per the National Oceanic and Atmospheric Administration’s National Integrated Drought Information System, Kern County is ranked as experiencing D3 - Extreme Drought (NOAA 2022), which means:

- Livestock need expensive supplemental feed; cattle and horses are sold; little pasture remains; fruit trees bud early; producers begin irrigating in the winter
- Fire season lasts year-round; fires occur in typically wet parts of state; burn bans are implemented
- Water is inadequate for agriculture, wildlife, and urban needs; reservoirs are extremely low; hydropower is restricted

Additionally, per a review of the DWR California’s Groundwater Live data, most wells within the vicinity of the Project site have a depth to groundwater of 200 to 500 feet. Most wells also have a classification of current groundwater level conditions ranging from ‘all time low’ to ‘below normal’ (DWR 2022). As discussed above, the SJVKCGS is a high priority basin. This designation requires the preparation of a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act. Basin priority is based on a combination of existing population and anticipated population growth; groundwater well density; agricultural demands; and the historical and current

documented impacts to water levels and storage, groundwater quality, subsidence, or groundwater-dependent ecosystems. The Project site’s drought and groundwater level conditions represent an economic restriction (i.e., a rise in the cost of water to a level that forces a reduction in consumption, for example because of the extra cost of pumping more groundwater to make up for losses in surface water supplies, or extra energy costs of pumping the same amount of groundwater from deeper within an aquifer).

Based on the site’s lack of cultivation over the past 10 years (2012-2022) (Wonderful Orchards 2022) and lack of irrigation system on site, and since the site is experiencing extreme drought and a lower groundwater table, it is assumed that there are both physical and economic restrictions during drought years. It is assumed dryland agricultural production would be feasible when rainfall is adequate to allow a viable return on a nonirrigated crop. As such, the relative water-resource score is 20, pursuant to Table 5 of the LESA model.

4.2.2.3 Zone of Influence: Surrounding Land and Protected Land

The two-remaining Site Assessment scores are related to the site’s ZOI which provides information on the site’s relationship to other existing land uses that are deemed compatible with on-site agriculture. The ZOI is mapped by drawing the smallest rectangle that completely contains all the Project parcels, creating a second rectangle extending 0.25 miles out from that rectangle, and then mapping all parcels that intersect the outer rectangle. The ZOI parcels are shown in Figures 3 and 4. The total ZOI acreage for the Project site is approximately 14,269 acres.

Once a ZOI has been identified, the LESA model requires identification of parcels currently used for crop production and those that are “protected resource” lands, meaning they “possess long-term restrictions that are compatible with or supportive of agricultural use.” Protected resource lands are those lands with long-term use restrictions that are compatible with or supportive of agricultural uses of land. Included among them are the following: (1) Williamson Act contracted lands; (2) publicly owned lands maintained as park, forest, or watershed resources; and 3) lands with agricultural, wildlife habitat, open space, or other natural resource easements that restrict the conversion of such land to urban or industrial uses.

Current agricultural use within the ZOI (4,501 acres) was identified based on review of Kern County data as stated above in Section 3.3 and Table 1. Regarding protected resource lands and as stated above in Section 3.4, there are approximately 6,521 acres of Williamson Act and Farm Security Zone lands within the ZOI.

Table 5 shows the total acreages of parcels within agricultural use, and those considered protected resources, with percentage comparisons to the total ZOI acreage. Scores are derived from Table 6 and Table 7 of the LESA Model Instructions. According to the LESA model, a site is given ZOI-related scores of 0 when the acreages of surrounding agricultural land and surrounding protected resource lands, respectively, are less than 40% of the total ZOI acreage, a score of 20 when the acreages are between 45-49% of the total ZOI acreage.

Table 5. LESA Model Site Assessment Worksheet - Surrounding Agricultural Lands and Protected Resources Lands

Total Zone of Influence (ZOI) (acres)	
ZOI in agriculture (acres)	4,501 acres
ZOI % in agriculture	31.54%
ZOI Surrounding Agricultural Score	0
ZOI protected resource lands (acres)	6,521 acres
ZOI % protected resource lands	45.70%
ZOI Surrounding Protected Resource Score	20

4.2.3 Land Evaluation and Site Assessment Summary

Based on the LESA analyses discussed above, the scores are entered into a summary worksheet for final scoring, as provided below in Table 6. Each score category is shown with the weighted factor dictated by the LESA Model Instructions.

Table 6. Final LESA Scoresheet

	Factor Score	Factor Weight	Weighted Score
Land Evaluation Factors			
Land Capability Classification	60.00	25%	15.00
Storie Index	23.10	25%	5.77
<i>Land Evaluation Subtotal</i>			<i>20.77</i>
Site Assessment Factors			
Project Size	100	15%	15
Water Availability	20	15%	3
Surrounding Land	0	15%	0
Protected Land	20	5%	1
<i>Site Assessment Subtotal</i>			<i>19</i>
LESA Total			39.77

As shown in the table above, the total LESA score for the Project site is 39.77. Pursuant to Table 9 of the LESA Model Instructions, sites scoring under 40 points are not considered significant agricultural. In addition, sites scoring between 40 and 60 points are considered potentially significant only if the Land Evaluation and Site Assessment subscores are each at least 20 points. Here, the Project site’s LESA total is less than 40 points, and its Site Assessment subscore is less than 20 points. Therefore, the Project-related conversion of farmland to nonagricultural uses is not considered a significant impact pursuant to CEQA under the optional LESA model.

4.3 Kern County CEQA Thresholds

As noted above, based on the Kern County CEQA thresholds for impacts, a proposed project may have a significant impact on agricultural resources if the proposed project would:

- 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.
- Conflict with existing zoning for agricultural use or a Williamson Act Contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.
- Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone contract for any parcel of 100 or more acres (Section 15205(b)(3) Public Resources Code.

The information below evaluates whether the Project would result in a significant impact to agricultural resources per the thresholds presented above.

4.3.1 Would the Project Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance?

Implementation of the Project would result in conversion to solar use of approximately 1,752 acres of land mapped as Grazing Land by the California Department of Conservation as part of the FMMP (see Figure 3). Because the Project site includes only Grazing Land and would not impact Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, there is no impact under this threshold.

Although the California Department of Conservation has designated the Project site as Grazing Land, successful agricultural production depends not only on the suitability of the land for agricultural production but also on irrigation and the availability of water. As determined by the optional LESA model, the Project is not considered a significant agricultural impact (see Section 4.2.3 above).

Further, the Project would have a lifespan of 35 years, and the Project site would be restored should the solar generating operations be removed in the future. The Applicant would decommission and remove the system and its components at the end of the life of the Project and work with the County to restore the Project to meet the County's next use (i.e., restore the Project site to preconstruction conditions or to a condition that best meets future land use). Therefore, the development of the site for solar generating operations does not preclude future agricultural use at the site.

In accordance with the County's Pathway for Processing: Conversion of Agricultural Land to Solar PV Use, the Project parcels have not been actively farmed 4 years or less out of the last 10 years (in fact, the Project site has not been farmed in the last 10 years). Based on this classification, Kern County requires analysis to include but not be limited to water availability, soils, and surrounding land uses. Water limitations and the lack of regular or recent agricultural

activity on the parcels indicate that regardless of future Project development, these parcels do not have viability for long term farmland use and is therefore not considered the site to be the most productive farmland. Therefore, the Project would have a less than significant direct impact to the loss of farmland. As discussed in the Pathway for Processing: Conversion of Agricultural Land to Solar PV Use, the Project will prepare and submit a vertebrate pest and weed management plan to reduce potential impacts to surrounding properties.

4.3.2 Would the Project Conflict with Existing Zoning for Agricultural Use or a Williamson Act Contract?

Existing Zoning. The Kern County Zoning Ordinance designates the Project site as “A – Exclusive Agriculture”. The Zoning Ordinance states “The purpose of the Exclusive Agriculture (A) District is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Uses in the A District are limited primarily to agricultural uses and other activities compatible with agricultural uses.” Permitted land uses in this type of district fall into the categories of agricultural uses, residential uses, commercial uses, utility and communications facilities, resource extraction and energy development uses, and other miscellaneous uses. Solar energy electrical generators are considered a compatible use within Exclusive Agriculture zoning with the issuance of a CUP, pursuant to Section 19.12.030.G of the Kern County Zoning Ordinance and the Kern County Agricultural Preserve Standard Uniform Rules.

Therefore, upon approval of the CUP, the Project would be consistent with and would not conflict with existing zoning for agriculture use.

Williamson Act Contract. The Project site does not contain any active or non-renewal Williamson Act contracted lands or Farmland Security Zone lands.

Therefore, the Project would not conflict with a Williamson Act contract or Farmland Security Zone. Impacts would be less than significant.

4.3.3 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?

Although the Project may cause changes in the existing environment, it is not anticipated that the Project could affect adjacent Farmland or even other agricultural land by limiting the agricultural feasibility of the land. With implementation of a pest and weed management plan, the Project would be compatible with nearby agricultural operations and would have no impacts on adjacent properties. With an approved CUP, the operation of solar facilities is a compatible use on agriculturally zoned property. Energy Element policies found in the Kern County General Plan specifically encourage the development of solar generation facilities in the valley on previously disturbed land. The conversion of land adjacent to or surrounding agricultural uses would not result in further conversions of agricultural land. Removing the Grazing Land at the Project site from production is not anticipated to affect nearby growers and will not require additional restrictions and limitations on pesticides, fungicides, and herbicides used on the crops. In addition, the Project would not place additional restrictions on noise, burning, and dust because the Project would not introduce sensitive receptors.

In summary, the Project would not include activities that would restrict or impair agricultural production on adjacent land. Because the activities proposed on the sites are not anticipated to affect the existing environment, the Project is not expected to result in the conversion of Farmland on adjacent or nearby properties to non-farmland uses.

4.3.4 Would the Project Result in the Cancellation of an Open Space Contract Made Pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for Any Parcel of 100 or More Acres?

As indicated in Section 3.5, there are no open space contracts or Farmland Security Zone contracts on the Project site. Impacts would be less than significant.

5 Cumulative Impacts

The CEQA guidelines for determining the significance of cumulative impacts are based on the same guidelines used to determine the significance of project level impacts; that is, analyzing the significance of individual project impacts in combination with the impacts caused by other projects in the cumulative study area.

In many cases, the impact of a single project may not be significant, but when combined with other projects, the “cumulative” impact may be significant. Section 15355 of the CEQA Guidelines defines “cumulative impacts” as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. As set forth in the CEQA Guidelines, cumulative projects consist of “closely related past, present, and reasonable foreseeable probable future projects that would likely result in similar impacts and are located in the same geographic area” (CCR, Title 14, Division 6, Chapter 3, Section 15355). The geographic scope for cumulative impacts includes past, present, and future projects within 6 miles of the Project site. Within six miles of the site, there are two pending projects: a farmland security zone rescission and re-entry and a CUP for temporary construction staging yards. There are no cumulative projects within 1 mile of the Project site.

The farmland security zone rescission and re-entry project would entail voiding the existing farmland security zone contract and entering into a new contract where there is no reduction in the amount of land under contract.

The temporary construction staging yards project, like the proposed Project, would require CUP approval and would not result in the permanent conversion of agricultural land to a designated nonagricultural use. This would be because the staging yard use would be temporary and because the temporary construction staging yards project parcel is designated Urban and Built Up Land by the FMMP. Furthermore, temporary construction staging yards, like solar facilities, are a permitted use on areas zoned A (Exclusive Agriculture) with a CUP.

The proposed Project would convert agricultural land currently used for grazing to nonagricultural use to accommodate development of a solar facility. As presented above in Section 4.3, it was concluded that, on the project level, the conversion of farmland to solar facility uses would be a less than significant impact. Likewise, cumulative impacts from the loss of farmland resulting from the proposed Project, when combined with other proposed projects in the area, would also be considered less than significant. There would be no loss of farmland through approval of the pending cumulative projects in the area. The Project’s incremental effect is not cumulatively considerable when viewed in connection with the effects of other closely related past projects, the effects of other current projects and the effects of probable future projects and thus cumulative impacts would be less than significant.

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6 Conclusion

The Project will result in a conversion of grazing land, but would not impact prime farmland, unique farmland, or farmland of statewide importance. As presented above, it was concluded that, on the project level, the conversion of grazing land at the Project site to solar facility uses would be a less than significant impact. Likewise, cumulative impacts from the loss of grazing land resulting from the Project, when combined with other projects within the vicinity of the Project site, would also be considered less than significant.

Implementation of the Project would not result in a significant impact from cancellation of Williamson Act contracts, as the Project site is not subject to a Williamson Act contract.

The Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. There are no open space contracts and no Farmland Security Zone contracts on the Project site, so there are no such impacts.

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7 References

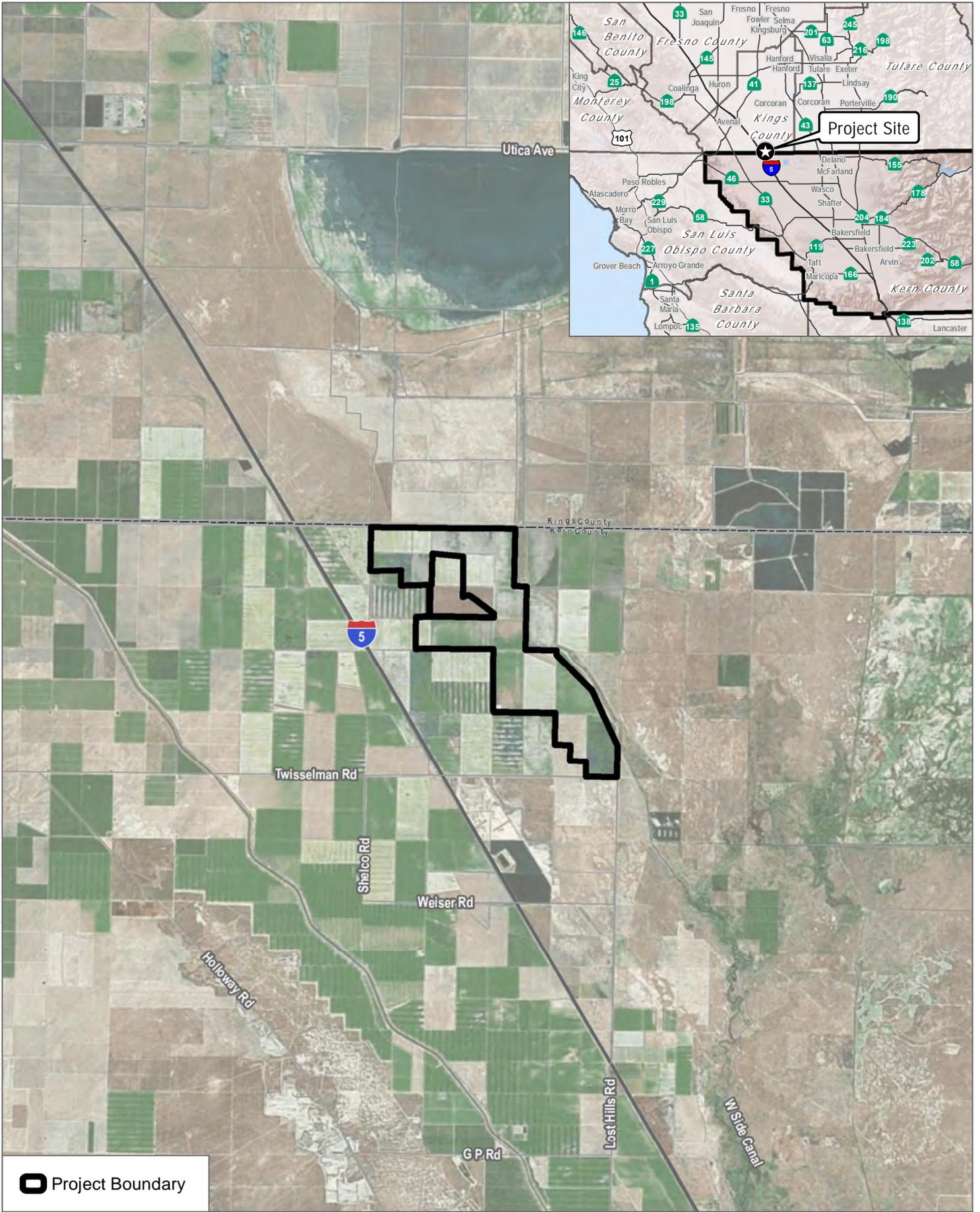
- 14 CCR 15000–15387 and Appendix A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- California Department of Conservation (DOC). 1997. California Agricultural Land Evaluation and Site Assessment Model, Instruction Manual. Accessed May 23, 2022.
https://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx.
- California Department of Food and Agriculture. 2020. California Agricultural Statistics Review 2019-2020. Accessed May 19, 2022. https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf.
- California Department of Water Resources (DWR). 2022. California Groundwater Live, California Latest Groundwater Information and Conditions. Accessed May 23, 2022.
<https://sgma.water.ca.gov/CalGWLive/>.
- California Public Resources Code, Section 21000–21177. California Environmental Quality Act (CEQA), as amended.
- Kern County. 2009. Kern County General Plan. September 22, 2009, as amended. Accessed May 23, 2022.
<https://kernplanning.com/planning/planning-documents/general-plans-elements/>.
- Kern County. 2012. Pathway for Processing: Conversion of Agricultural Land to Solar PV Use. July 17, 2012. Accessed June 7, 2022. https://psbweb.co.kern.ca.us/planning/pdfs/renewable/solar_ag_flowchart.pdf
- Kern County. 2020. Department of Agriculture and Measurement Standards, Annual Crop & Livestock Report. Accessed May 19, 2022. http://www.kernag.com/caap/crop-reports/crop20_29/crop2020.pdf.
- Kern County. 2021. Kern County Zoning Ordinance. April 2021 Revision. Accessed May 23, 2022.
<https://kernplanning.com/planning/planning-documents/zoning-ordinance/>.
- Kern County. 2022a. Department of Agriculture and Measurement Standards, Kern Crop Map. Accessed May 19, 2022. <https://maps.kerncounty.com/H5/Index.html?Viewer=Agriculture>.
- Kern County. 2022b. Interactive County Map (GIS Tool). Accessed May 19, 2022.
<https://www.kerncounty.com/government/gis-menu/interactive-county-map-gis-tool>.
- KGA (Kern Groundwater Authority) 2020. Groundwater Sustainability Plan, Kern County, CA. Prepared by GEI Consultants, Inc. January 2020.
- Kings County. 2021. Kings County Department of Agriculture, 2020 Crop Report. August 24, 2021. Accessed May 23, 2022.
<https://www.countyofkings.com/home/showpublisheddocument/27389/637654154589100000>.

Lost Hills Water District (LHWD). 2021. 2020 Agricultural Water Management Program. Adopted April 8, 2021. Accessed June 7, 2022. <https://www.lhwd.org/awmp/>

National Oceanic and Atmospheric Administration (NOAA). 2022. Drought Conditions for Kern County webpage. Accessed May 23, 2022. <https://www.drought.gov/states/california/county/kern>.

Wonderful Orchards. 2022. Wonderful Orchards – Samsung Solar Facility Previous 10 Year Farming History.

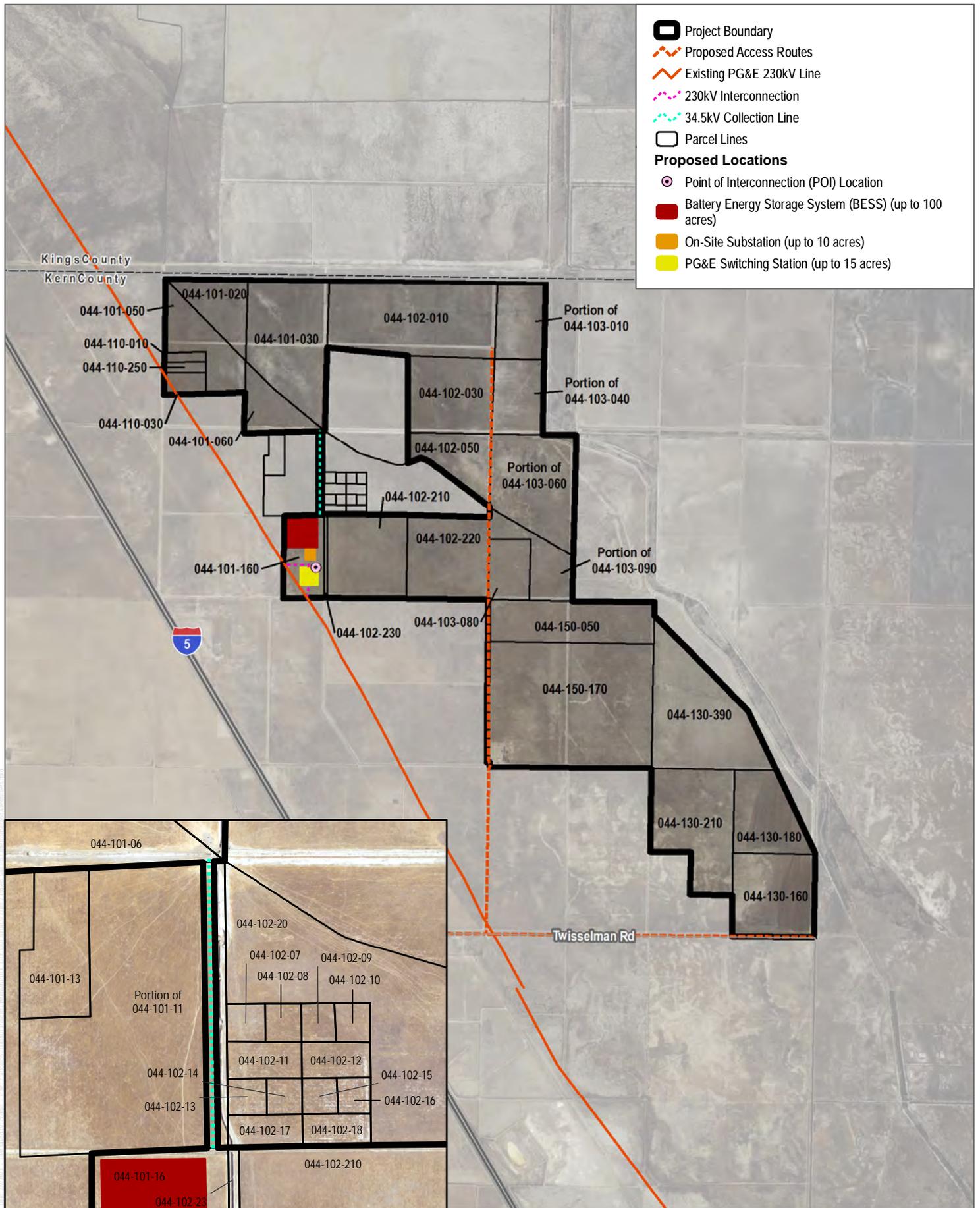
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SOURCE: Bing 2022, Open Street Map 2019

FIGURE 1
Project Location

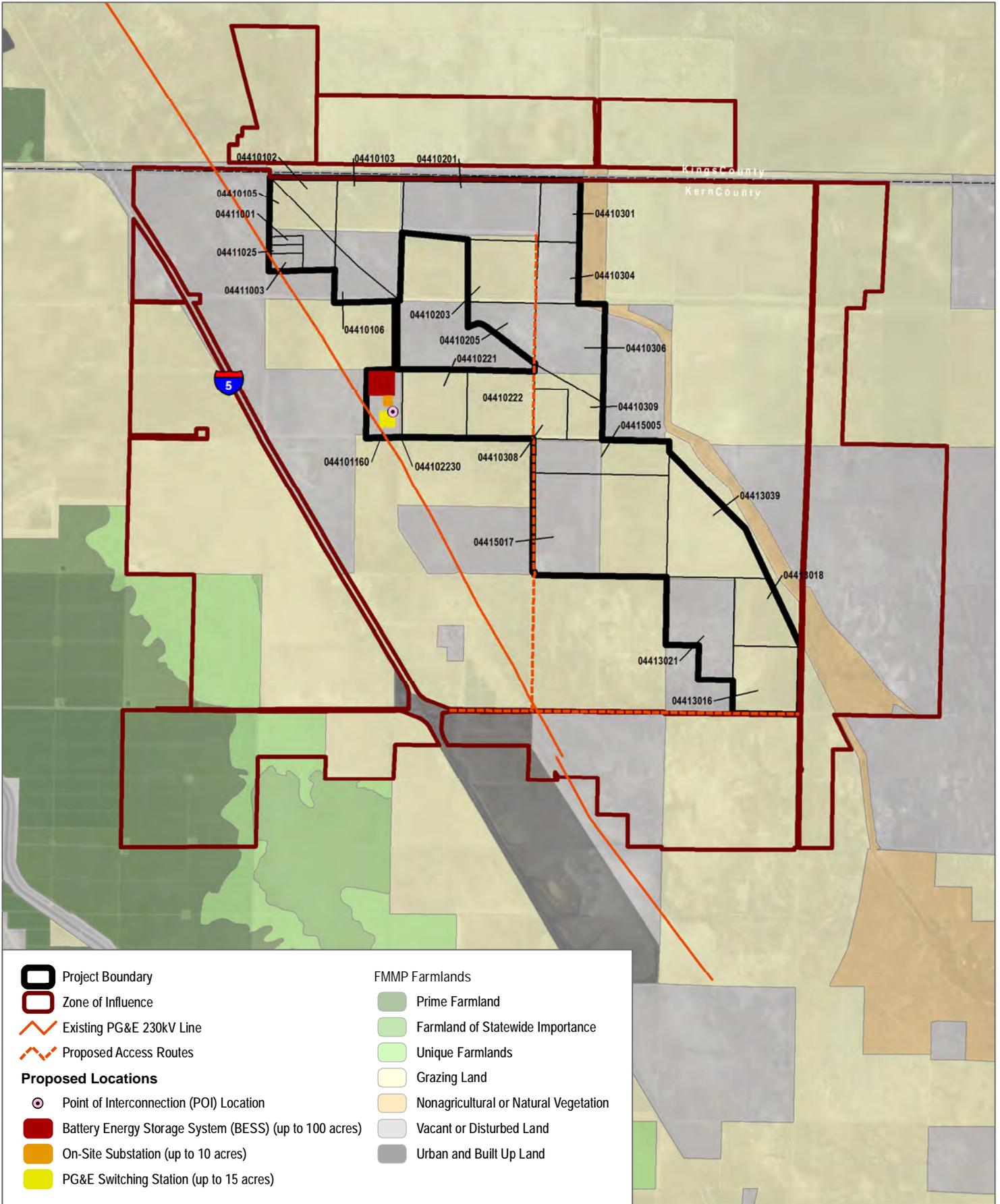
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SOURCE: Bing 2022, Samsung 2022, County of Kern 2020

FIGURE 2
Project Vicinity

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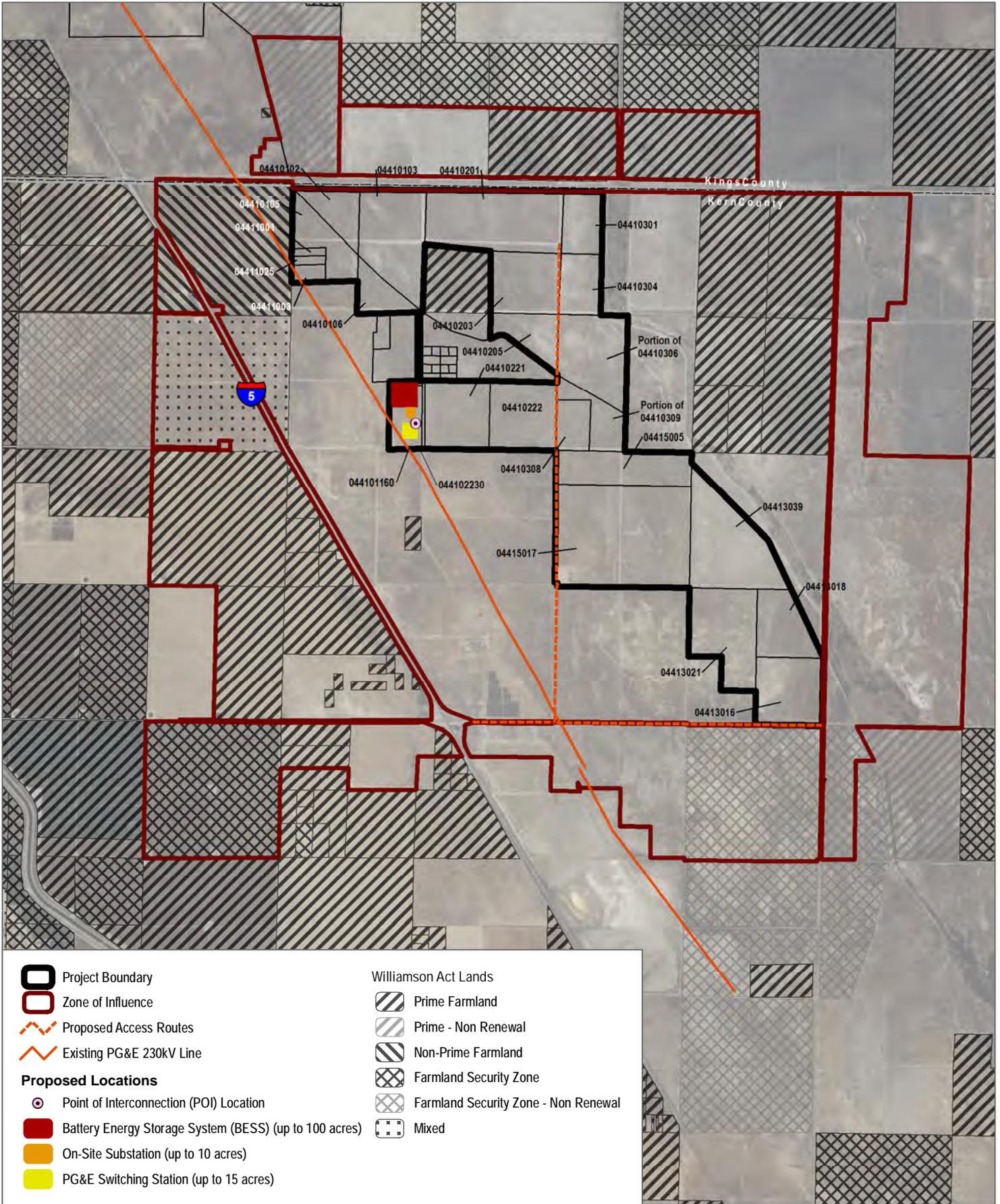


SOURCE: Bing Imagery 2022, CA Dept. of Conservation 2018

FIGURE 3

FMP Farmlands

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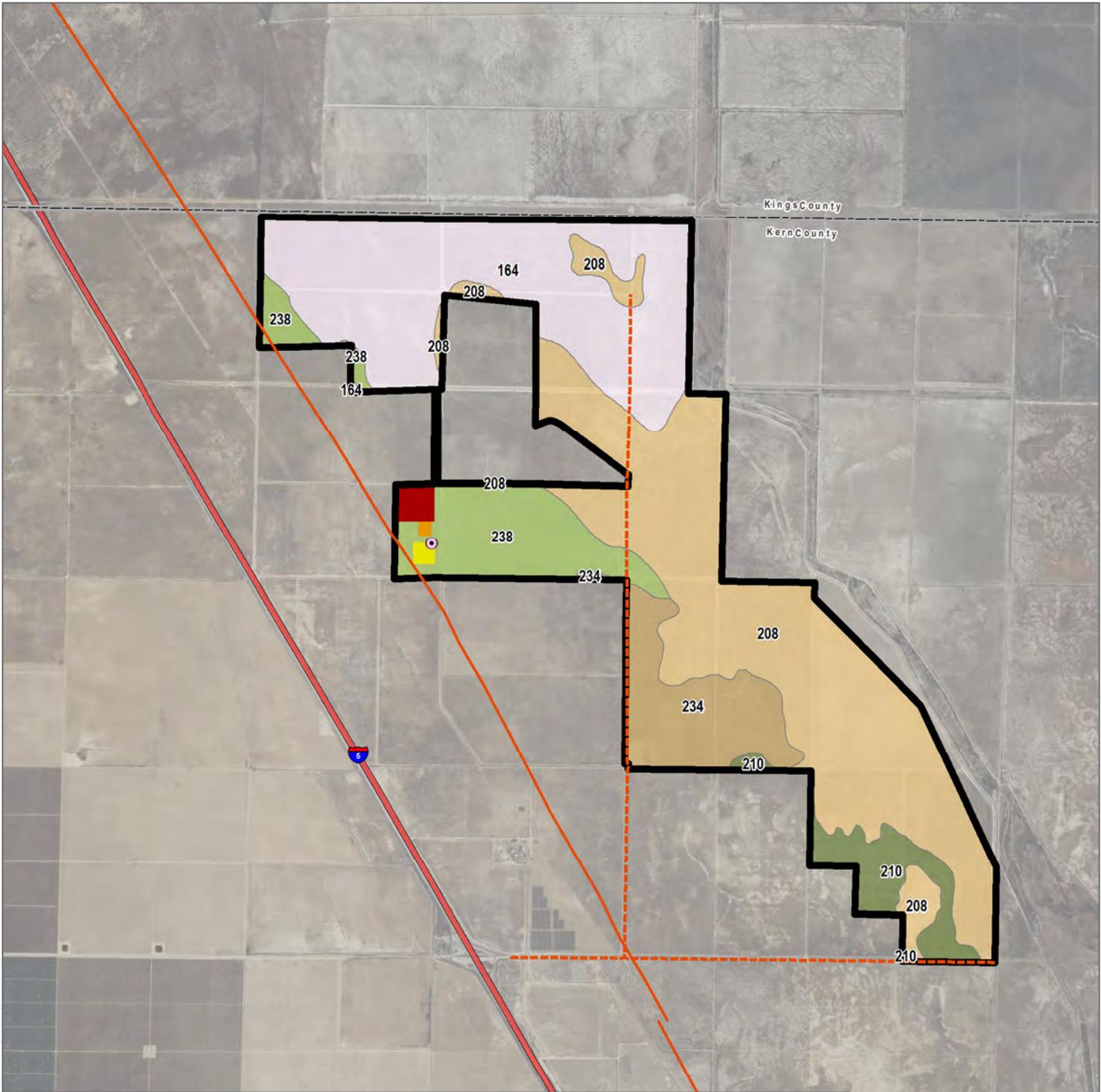
Project Boundary	Williamson Act Lands
Zone of Influence	Prime Farmland
Proposed Access Routes	Prime - Non Renewal
Existing PG&E 230kV Line	Non-Prime Farmland
Proposed Locations	Farmland Security Zone
Point of Interconnection (POI) Location	Farmland Security Zone - Non Renewal
Battery Energy Storage System (BESS) (up to 100 acres)	Mixed
On-Site Substation (up to 10 acres)	
PG&E Switching Station (up to 15 acres)	

SOURCE: Bing Imagery 2022, CA Dept. of Conservation 2018

FIGURE 4

Williamson Act Contracts

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Project Boundary

Proposed Access Routes

Existing PG&E 230kV Line

Existing PG&E 230kV Line

Proposed Locations

Point of Interconnection (POI) Location

Battery Energy Storage System (BESS) (up to 100 acres)

On-Site Substation (up to 10 acres)

PG&E Switching Station (up to 15 acres)

USDA Soils*

164 - Houser fine sandy loam, partially drained (981.9 acres)

208 - Nahrub clay, partially drained (1,407.1 acres)

210 - Nahrub, partially drained-Lethent complex (175.5 acres)

238 - Twisselman clay, saline-alkali, moderately wet, 0 to 2 percent slopes (338.6 acres)

234 - Twisselman sandy loam, saline-alkali, moderately wet, 0 to 2 percent slopes (321.0 acres)

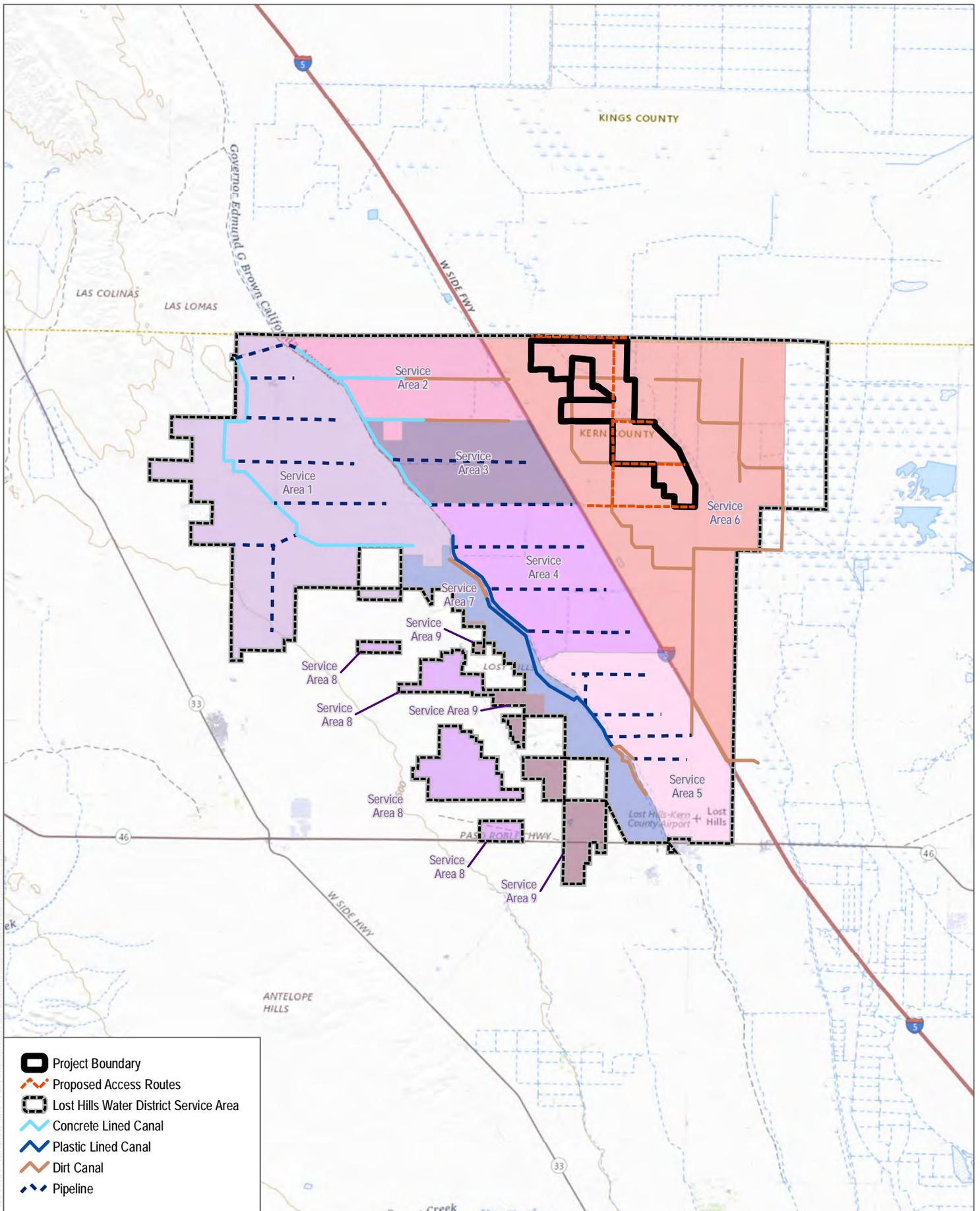
*The USDA Soils boundary (acres) has been estimated based on GIS data and aerial imagery. The acreage does not include access roads.

SOURCE: Bing 2022, USDA 2008



FIGURE 5
USDA Soils

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SOURCE: USGS National Map 2022, CA Dept. of Water Resources 2016

FIGURE 6

Lost Hills Water District Infrastructure and Services Areas

Agricultural Conversion Technical Study - Pelicans Jaw Hybrid Solar Project

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Appendix A

Resumes

Brian Grattidge

LAND USE SPECIALIST

Brian Grattidge is an environmental land use planner with 23 years' experience. Mr. Grattidge has worked extensively in the areas of California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) compliance as a senior project manager. His project experience includes a wide range of residential, commercial, industrial, mining, and infrastructure projects. Mr. Grattidge has assisted clients with airport compatibility planning, development review, environmental permitting, specialized planning studies, and project management.

Prior to his consulting work, Mr. Grattidge was a member of the Governor's Office of Planning and Research, where he prepared the 2003 update of the General Plan Guidelines, assisted with the 2003 CEQA Guideline Amendments, and contributed to the 2003 draft Environmental Goals and Policy Report. He provided CEQA support and technical training, and coordinated state review of environmental documents. Mr. Grattidge was also a planner at the City of Woodland.

Project Experience

Development

Arboretum Environmental Impact Statement/Environmental Impact Report (EIS/EIR), U.S. Army Corps of Engineers (ACOE)/City of Rancho Cordova, California.

Managed the preparation of a joint NEPA/CEQA document for a large mixed-use specific plan in the Grant Line North planning area of Rancho Cordova. Key issues EIS/EIR included impacts to wetlands, water quality, water supply, traffic, air quality, greenhouse gases, noise, and public utilities. The document includes an extensive alternatives analysis to comply with both the objectives of the 404(b)(1) analysis (Clean Water Act) and the planning objectives of the City.

Walmart Expansion EIR, City of Ukiah, California. Managed the preparation of an EIR for the proposed expansion of an existing Walmart store in Ukiah. Key environmental issues included traffic, noise, air quality, greenhouse gas emissions, urban decay, land use, and stormwater runoff. The CEQA process included an extensive scoping process and numerous public hearings

Walmart Expansion Draft EIR, City of Clearlake, California. Managed the preparation of a Draft EIR for a proposed expansion of the existing Walmart store in Clearlake. The proposed expansion includes the addition of approximately 40,000 square feet of building area for a variety of uses, including food and general merchandise sales, a medical/vision clinic, and two additional loading docks. Key environmental issues included aesthetics, air quality, greenhouse gas emissions, land use, urban decay, noise, traffic/transportation, and utilities/public service systems.



Education

University of California, Davis
MA, Political Science, 1992

BA, International Relations, 1989

Professional Affiliations

American Planning Association, Legislative Liaison for Sacramento Valley Chapter

Sunrise Mall Expansion EIR, City of Citrus Heights, California. Managed the preparation of a Draft EIR for the Sunrise Mall Expansion Project in the City of Citrus Heights. The proposed expansion project, to be constructed in two phases, would require a change of zone by the City Council. Key environmental issues include traffic, air quality, noise, and greenhouse gas emissions. Other issues examined in the EIR include aesthetics/lighting, land use, hazardous materials, and water quality.

Weston Ranch EIR, City of Stockton, California. Managed the preparation of an EIR for the City of Stockton to analyze a proposed regional shopping center in the French Camp area of Stockton. In addition to extensive traffic, noise, and air quality analysis, the EIR included an urban decay analysis which looked at the indirect environmental effects of “big box” retail sales in the Stockton area. The Final EIR also took into account several additional factors, including a new City general plan, a new “big box” zoning ordinance, and changes in climate change analysis.

Orciuoli Residential Development EIR, Yolo County, California. Managed the preparation of an EIR for a 180-unit residential subdivision in the community of Esparto. Located in Yolo County, the project also included a park, a dual-use detention basin, street construction, and utilities. Important environmental issues included farmland conversion, raptor habitat, water supply, traffic, noise, and growth inducement

Clarksburg Old Sugar Mill Specific Plan EIR, Yolo County, California. The Old Sugar Mill Specific Plan included planned development with a mix of retail, entertainment, office, business services, industrial, and residential uses in and around the old mill buildings and surrounding site, while addressing the unique physical setting of the community. Mr. Grattidge prepared the land use, visual impact, and alternatives analysis sections of the EIR.

Tri-C Tire Recycling MND, City of Woodland, California. Prepared a mitigated negative declaration (MND) for a proposed tire recycling facility. The facility would convert waste tires into material suitable for roadway and playground uses. Environmental issues included noise, air quality, water quality, and fire hazards.

Panattoni Mixed-Use Project MND, City of Woodland, California. Prepared an MND for a proposed mixed retail/office development project. The project would include an auto dealership.

Velocity Island Wakeboard Park MND, City of Woodland, California. Prepared an MND to allow a former city park facility and detention area to be used for a recreational wakeboard park. Environmental issues included water quality, drainage, and traffic.

Arch Road MND, City of Stockton, California. Managed the preparation of an MND on behalf of the City and coordinated the entitlement process, including a general plan amendment and annexation approval from the Local Agency Formation Commission (LAFCO). The Arch Road Industrial Project involves the development of 60 acres of former state property for light industrial and warehouse uses. Project issues focused on transportation impacts, habitat conversion. Key issues included agricultural land, air quality, archaeological/historical resources, biological resources, drainage, geologic/seismic issues, noise, erosion, toxic/hazardous materials, traffic/circulation, wildlife, and land use.

Jackson Valley Quarry Expansion EIR, Amador County, California. Managed the preparation of an EIR for the potential expansion of the Jackson Valley Quarry. The modified use permit and reclamation plan would allow mining on the 86 acres to the east of the existing operations and increase rock production from 500,000 tons per year to 2 million tons per year over a 25-year period. Key environmental issues included air quality, noise, vibration (from blasting), traffic impacts, biological resources, cultural resources, hydrology/water quality, visual quality, and land use compatibility.

Archtown Industrial Project MND, City of Stockton, California. As project manager, managed the planning and environmental compliance support efforts for a 70± acre industrial project adjacent to Arch and Newcastle Roads. Key environmental issues included drainage, agricultural conversion, air quality, and transportation.

Munn & Perkins Use Permit Modification, San Joaquin County, California. Managed the preparation of an EIR to assess revisions to an existing quarry. The quarry is in San Joaquin County approximately 2 miles southeast of the City of Escalon. The project would revise the quarry's existing permit to extend the hours of operation of the asphalt plant from 9:00 p.m. to 5:00 a.m. to serve roadway projects that contain specifications that limit work to nighttime hours. The EIR focused on traffic, noise, odor (air quality), and lighting (visual impacts).

Kunzler Terrace Mine EIR, Mendocino County, California. Managed the preparation of an EIR for a proposed terrace mining operation in Mendocino County's Ukiah Valley. The applicant filed for a use permit and reclamation plan for an aggregate mining operation at the confluence of the Russian River and Ackerman Creek. The proposed project would extract an estimated 2.25 million cubic yards of material over a period of approximately 25 years, with an annual maximum of 250,000 tons. Key environmental issues include pit capture and fish entrapment, traffic, diesel particulate matter emissions, greenhouse gas emissions, and agricultural resources.

Ostrom Road Quarry EIR, Yuba County, California. Managed the preparation of a Draft EIR for a proposed aggregate quarry in Yuba County. The proposed sand and gravel mining operation would extract 6 million cubic yards over a 20-year period, in two phases. Environmental issues included agricultural resources, biological resources (raptor foraging habitat), hydrology, groundwater, air quality, noise, traffic, and aesthetics.

Borden Ranch Surface Mine Draft EIR, Sacramento County, California. Assisted in the preparation of the Draft EIR and provided technical analysis in the areas of land use, agriculture, and project alternatives for the Borden Ranch aggregate mining project in southern Sacramento County. The project required a rezone and use permit. Key environmental issues included conversion of prime farmland, land use compatibility, air quality, water quality, and habitat impacts to Dry Creek.

RMC Pacific Vernalis Quarry EIR, San Joaquin County, California. Managed the preparation of an EIR for a proposed 680-acre sand and gravel quarry. The project site is in the Vernalis area, covering portions of San Joaquin and Stanislaus Counties. Key environmental issues included agricultural resources. In addition to working on the land use and agriculture section of the Draft EIR, Mr. Grattidge prepared the Final EIR for San Joaquin County.

Baldwin-Hallwood Quarry Expansion, Yuba County, California. Managed the preparation of an EIR for the expansion of an aggregate (sand and gravel) mining operation located in the Yuba Goldfields east of Marysville. The project required a County General Plan Amendment, zone change, and surface mining permit. Under the Surface Mining and Reclamation Act, the project also required approval of a mine reclamation plan and financial assurances by the State Mining and Geology Board. Environmental issues included agricultural issues (removal of a peach orchard), water quality, air quality, noise, and traffic. Mr. Grattidge also provided staff support to Yuba County for certification of the EIR and approval of the surface mining permit.

Education

California State University, Chico, CEQA Consulting Services, Chico, California. As the on-call CEQA consultant, managed the preparation of CEQA documents for two master-planned projects on the Chico campus: the Northern California Natural History Museum and the University Housing and Food Service Facility Phase 1. For these projects, MNDs were prepared tiered from the Campus Master Plan EIR. Key issues included construction noise, air quality, and transportation impacts.

Natomas Unified School District CEQA Consulting Services, Sacramento, California. Assisted the Natomas Unified School District with CEQA compliance and site approval from the California Department of Education for several elementary and intermediate schools.

Municipal

Merced County Downtown Government Center EIR, Merced County, California. Managed the preparation of a Draft EIR for a proposed Downtown Government Center. Key issues included traffic, air quality, noise, views of historical structures, and hazardous materials. The EIR included an alternatives analysis of several different building configurations and demolition scenarios.

Woodland Park Specific Plan, City of Woodland, California. Provided project management for the Woodland Park Specific Plan. Coordinated the work of the various consultants to the City; reviewed work products on the City's behalf; met with agency staff, consultants, and project sponsors; and provided staff support for public workshops and hearings.

Hoblit Auto Dealer Use Permit, City of Woodland, California. As contract staff, prepared a conditional use permit for the relocation of an auto dealer into a historical building in the Downtown Specific Plan Area.

On-Call Development Review Services, City of Woodland, California. Managed on-call design and site plan review for residential projects in the Springlake Specific Plan Area. Services included reviewing applications for completeness, coordinating with City staff, preparing staff reports, and coordinating Design Review Committee and/or Planning Commission hearings.

Resource Management

City of Ukiah Climate Action Plan, City of Ukiah, California. Managed the preparation of a climate action plan for the City of Ukiah.

City of Stockton Farmland Conversion Fee Study, City of Stockton, California. Managed the preparation of a nexus study (or Assembly Bill (AB) 1600 study) for the adoption of a farmland conversion fee by the City of Stockton. The study explains the nexus between the fee and the type of development subject to the fee and how the amount of the fee is reasonably related to its purpose. Worked with City staff, economists, and a technical advisory committee to craft the final program.

San Joaquin Farmland Conversion Fee Nexus Study, San Joaquin County, California. Managed the preparation of a nexus study (or AB 1600 study) for the adoption of a farmland conversion fee by the cities of Manteca, Tracy, and Lathrop, in San Joaquin County. The study explains the nexus between the fee and the type of development subject to the fee and how the amount of the fee is reasonably related to its purpose. As project manager, worked closely with City attorneys to meet the requirements of the Mitigation Fee Act.

City of Oakley Agricultural Impact Study, City of Oakley, California. Prepared the agricultural impact assessment for a specific plan in the City of Oakley. The analysis included a Land Evaluation Site Assessment and an analysis of potentially feasible mitigation measures.

Transportation

2011 California Airport Land Use Planning Handbook Update, Caltrans, California. Managed the update of the 2002 California Airport Land Use Planning Handbook for the California Department of Transportation's (Caltrans') Division of Aeronautics. The project included managing a multidisciplinary consulting team, developing and

facilitating the efforts of a technical assistance committee, overseeing technical development of the updated text, coordinating stakeholder input, and publishing the revised Handbook. The updated Airport Land Use Planning Handbook was published at the end of 2011.

Westover Field, Amador County, California. Managed the preparation of a Federal Aviation Administration-funded environmental baseline report and managed the noise and safety analysis for the Westover Airport Land Use Compatibility Plan update.

Alameda County Airport Land Use Policy Plan, Alameda County, California. Assisted in the preparation and revision of proposed policies and implementation measures for the Alameda County Airport Land Use Policy Plan (ALUPP). The ALUPP, which focuses on the compatible land uses in the vicinity of Oakland International, Livermore Municipal, and Hayward Executive Airports, was prepared to be consistent with the Caltrans guidelines regarding the preparation of Airport Land Use Plans. The ALUPP includes countywide policies for addressing compatibility issues as well as specific guidelines that address compatible land uses in the vicinity of each of the three airports in the county.

Preliminary Planning for General Plan Amendment, Master Development, and EIR for Crowe's Landing Air Facility, Stanislaus County, California. Assisted in managing a large project team to identify potential development alternatives for the former naval air station, including existing and potential infrastructure needs and costs; environmental conditions and constraints; airport development and compatibility plan; general plan update; EIR; and community outreach. Alternatives and infrastructure development were identified for phased implementation over an approximately 20-year period.

Stanislaus Council of Governments Regional Transportation Plan (RTP) and EIR, Stanislaus County, California. Managed a multidisciplinary consulting team to complete the 2011 RTP and EIR within an accelerated schedule. The 2011 RTP is unique in that it used the two foundational concepts of fiscal constraint and system planning as part of its development. Consequently, the stakeholder involvement process for the RTP was very extensive, with RTP team members providing public facilitation and Spanish translation services throughout the process. The team also led the preparation of the program-level EIR and worked with the larger consultant team to develop a Sustainable Communities Strategy.

Stanislaus Council of Governments Half-Cent Sales Tax 2006 and 2008 Programmatic EIRs, Stanislaus County, California. Managed the preparation of the two programmatic EIRs. The Stanislaus Council of Governments directed the preparation an EIR to address the impacts of a proposed sales tax ballot measure to fund transportation improvements in the county. The EIR was prepared within a compressed time frame to meet state-mandated deadlines and certified by the Stanislaus Council of Governments Board for consideration in the November 2006 elections. In 2008, a new Programmatic EIR was prepared for a revised sales tax program, with a revised list of projects. This EIR was also successfully completed in time to be eligible for the 2008 elections.

Canal School Road Bridge Replacement Project, Merced County, California. Managed the preparation of technical studies for the Canal School Road Bridge Replacement Project. The project includes a Federal Highway Administration grant and is therefore subject to Section 106 of the National Historic Preservation Act. The project included an environmental assessment for hazardous materials, air quality and noise analysis, a wetland delineation, and consultation with the U.S. Fish and Wildlife Service per Section 7 of the Endangered Species Act. The technical studies supported a categorical exclusion (CE) under NEPA and an MND under CEQA.

Cottonwood Road Realignment, Merced County, California. Managed the preparation of technical studies and environmental document for a roadway realignment in Merced County. Environmental issues included agricultural resources, water quality, biological resources, and cultural resources. The technical studies supported a CE under NEPA and an MND under CEQA.

Lower Sacramento Road Project, Sacramento County, California. As subconsultant to the project engineer, managed biological surveys and preparation of an addendum to the previous CEQA compliance document, and coordinated with the ACOE on wetlands issues.

Calaveras River/Sutter Street Bicycle and Pedestrian Bridge Project, Siegfried Engineering, Stockton, California. Provided environmental services for the City of Stockton's Calaveras River/Sutter Street Bicycle and Pedestrian Gap Closure Project, which included three main elements, the design and construction of a bicycle/pedestrian bridge over the Calaveras River at Sutter Street, the conversion of approximately 6,700 linear feet of Sutter Street into a Class II bike lane, and the conversion of approximately 1,200 linear feet of Alpine Avenue into a Class III bike route.

Tahoe City Intermodal Transit Center EIR/EIS Recirculation, Placer County, California. Prepared the alternatives analysis for this project for Placer County, identifying and assessing a variety of potential locations.

Port of Stockton West Complex Development Plan Final EIR, Stockton, California. Managed the preparation and certification of the Final EIR for the Development Plan, working closely with Port staff and the project legal team. Important environmental issues included agricultural resources, invasive species, air quality, water quality, cultural resources, noise, and traffic.

Water/Wastewater

Sacramento Area Flood Control Agency Mayhew Levee Replacement Project, Sacramento Area Flood Control Agency/ACOE, Sacramento County, California. Provided peer review and technical assistance to the Sacramento Area Flood Control Agency, including air quality analysis, for an EIR/EIS. The project replaced a portion of the Lower American River levee system near the Mayhew Drain in Sacramento County.

Roseville Regional Wastewater System Master Plan Update 2005, Placer County, California. Analyzed current and planned land use in the South Placer Wastewater Authority service area to verify original assumptions used to prepare the 1996 Wastewater Master Plan. Examined build-out analysis of land use plans and developed future land use scenarios for intensification of the Roseville urban center as part of the EIR growth-inducement analysis,

Stockton Delta Water Supply Project EIR, City of Stockton, California. Prepared the land use, agricultural resources, visual resources, and growth-inducement impact analysis for the EIR. The project would divert water from the San Joaquin River under the California Water Code and Area of Origin statutes.

Contra Costa Water District/U.S. Bureau of Reclamation Los Vaqueros Reservoir Expansion Project EIS/EIR, Contra Costa County, California. Prepared the land use and agricultural sections for the Draft EIR addressing the expansion of the Los Vaqueros Reservoir from 100,000-acre-foot capacity up to 500,000-acre-foot capacity.

Erin Phillips

PROJECT MANAGER

Erin Phillips is a project manager with 8 years' experience working for clients in both the private and public sectors. Ms. Phillips is responsible for preparing and reviewing environmental documentation in support of development and design for utility-scale energy, water, transportation, residential, and commercial projects in accordance with local regulations, resource agency requirements, California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA). Ms. Phillips is also responsible for implementing project requirements and permit conditions during construction of large-and small-scale projects throughout California, as well as for both traditional construction projects and design-build projects. She has proven communication skills that help project deliverables and construction activities stay on track, while also ensuring the proper steps are taken to implement adopted mitigation measures and relevant environmental requirements. Ms. Phillips works closely with all team members, including the project applicant, technical team members, clients, and subconsultants, and construction managers to facilitate effective communication throughout the permitting, entitlement, pre-construction, construction, and operations phases.



Education

California Polytechnic
State University,
San Luis Obispo
BS, City and Regional
Planning, 2014

Professional Affiliations

Association of
Environmental
Professionals, San Diego
Chapter

Project Experience

Energy

Proxima Solar Energy Center, Confidential Client, Stanislaus County, California. Provides day-to-day environmental compliance construction management services support for this large-scale solar development project in Stanislaus County. Works closely with the project owner and construction contractor overseeing on-site biological monitors to ensure project requirements and permit conditions were implemented and adhered to.

Desert Sunlight Battery Energy Storage System, Confidential Client, Riverside County, California. Provides day-to-day environmental compliance construction management services support for this battery energy storage project in Riverside County. Works closely with the project owner and construction contractor overseeing on-site biological and cultural monitors to ensure project requirements and permit conditions were implemented and adhered to.

Nider Solar, Confidential Client, Imperial County, California. Prepared the agricultural impact assessment for a solar project in Imperial County. The analysis included a Land Evaluation and Site Assessment and an analysis of potentially feasible mitigation measures.

JVR Energy Park, BayWa r.e., Jacumba, California. Project manager for the development of several pre-construction compliance plans to support construction. Will provide day-to-day environmental compliance management services support for this large-scale solar development project in San Diego County, California once construction commences. Works closely with the project owner and construction contractor overseeing on-site biological, cultural, and tribal monitors to ensure project requirements and permit conditions were implemented and adhered to. Also provided agricultural conversion impact analysis during the project's CEQA phase.

Critical Issues Analyses, Various Clients, California. Lead preparer of due diligence memoranda for renewable energy projects throughout the western United States. Responsible for investigating potential environmental and land use fatal flaws regarding aesthetics, agriculture, biological resources, cultural resources, hydrology and water quality, and land use and planning.

Bluff Trail Battery Energy Storage System, Confidential Client, San Luis Obispo County, California. Project manager supporting entitlement and environmental technical studies for a battery energy storage project in San Luis Obispo County. Key environmental issues include agricultural resources, biological resources, fire protection planning, noise, and air quality and greenhouse gas emissions.

Drew Solar Project, D.E. Shaw Renewable Investments, Imperial County, California. Provides day-to-day environmental compliance management services support for this large-scale solar development project in Imperial County. Works closely with the (project owner and construction contractor overseeing on-site biological, cultural, and tribal monitors to ensure project requirements and permit conditions were implemented and adhered to.

Devers-Palo Verde No. 1 Mitigated Negative Declaration, Southern California Edison, Riverside County, California. Served as deputy project manager for CEQA documentation for a 500-kilovolt (kv) transmission line reconductoring and structure replacement project. Responsible for analyzing impacts to non-technical MND sections and coordinating with technical specialists. Maintained project schedule and assisted with invoicing.

Development

Skylark, Lennar Homes, San Marcos, California. As project manager, managed environmental compliance monitoring and support during construction of a residential project in the City of San Marcos. Key environmental issues included cultural resources and biological resources.

Sunrise, Lennar Homes, San Marcos, California. As project manager, managed environmental compliance monitoring and support during construction of a residential project in the City of San Marcos. Key environmental issues included cultural resources and biological resources.

Sunbow II, Lennar Homes, Chula Vista, California. As project manager, managed environmental compliance monitoring and support during construction of a residential project in the City of San Marcos. Key environmental issues included cultural resources.

Oak Knoll, Lennar Homes, Poway, California. As project manager, managed planning and environmental due diligence support efforts for a residential project in the City of Poway. Key environmental issues included historical resources and biological resources.

The Exchange, JPI, Riverside, California. As project manager, managed planning and environmental due diligence support and construction compliance efforts for a residential project in the City of Riverside. Key environmental issues included cultural resources and biological resources.

Otay Ranch Villages, HomeFed Corporation. As project manager, managed planning and environmental due diligence support and construction compliance efforts for various residential project in the City of Chula Vista. Key environmental issues included cultural resources and biological resources.

Station Square South, JPI, Monrovia, California. As project manager, managed planning and environmental due diligence support and construction compliance efforts for a residential project in the City of Monrovia. Key environmental issues included cultural resources and biological resources.

4th and J Supplemental Environmental Impact Report (EIR), Heidelberg Law Office, San Diego, California. Served as primary author for the preparation of a Supplemental EIR for the development of a hotel in downtown San Diego. The Supplemental EIR tiered from the City of San Diego's Downtown Community Plan EIR with a focused analysis on historic resources.

California Theatre 15168 Consistency Evaluation, Caydon Property Group, San Diego, California. Served as primary author for the preparation of a CEQA Consistency Evaluation to tier from the City of San Diego's Downtown Community Plan and previous California Theatre Supplemental EIR. The Consistency Evaluation assisted in processing the project's entitlement process for a revised project that involves a hotel component and retaining features of the historic California Theatre.

Transportation

Midcoast Transit Corridor (MCTC) Projects, San Diego Association of Governments (SANDAG), PGH Wong Engineering, Inc., San Diego County, California. Provided day-to-day project management and environmental compliance management services support for five concurrent railroad projects being constructed simultaneously, including: construction of a double-track light rail from Old Town San Diego to La Jolla, construction of new bridges, installation of a new bike path, and double-tracking of an existing rail line, in San Diego, California. The design-build projects are collectively referred to as the Midcoast Transit Corridor (MCTC) Projects. In support of the MCTC Projects, Dudek is providing biological, archaeological, and paleontological mitigation monitoring services, environmental coordination and inspections, and on-site restoration and noise monitoring services.

Peninsula Corridor Electrification Project (PCEP), Caltrain Modernization Program, Balfour Beatty Infrastructure, Inc. (BBII), San Mateo, San Francisco, and Santa Clara Counties, California. Provided day-to-day environmental compliance services support for construction of the Caltrain PCEP per the project specifications. Provides support for on-site biological, cultural, and tribal monitors and surveyors, hazardous materials specialists, and works closely with the construction contractor (BBII) to ensure permit conditions are adhered to, while also keeping the construction teams moving with no delays. Is responsible for reporting and documentation. Also oversees pre-construction measures including archaeological exploratory trenching, as well as protocol wildlife surveys for multiple sensitive species with the potential to occur along the right-of-way.

Foothill Gold Line Azusa to Montclair Phase 2B Supplemental EIR, Los Angeles County Metropolitan Transportation Authority, Los Angeles and San Bernardino Counties, California. Served as lead author and deputy project manager for the preparation of CEQA documentation to analyze changes to the previously approved project. Project changes analyzed were parking and access changes for several proposed stations along the Gold Line corridor. Responsible for managing client communication, meeting notes, and CEQA noticing.

Municipal

PW11-10, City of Temecula, Temecula, California. Served as project manager for environmental compliance support during construction of a flood control project in the City of Temecula. Key environmental issues included biological resources.

Mt. Etna Community Plan Amendment, County of San Diego, Department of General Services, California. Served as deputy project manager to support the County of San Diego Department of General Services with a community plan amendment in the City of San Diego to rezone a property for the development of affordable housing. Responsible for complying with City amendment processes, assisting in development the community plan amendment text, and engaging in public outreach for the project.

Midway-Pacific Highway and Old Town Community Plan Update EIRs, City of San Diego, California. Served as deputy project manager for the preparation of two EIRs to update two community plans in the City of San Diego. Responsible for coordinating with technical specialists internally as well as externally with the client. Responsible for drafting non-technical EIR sections.

Recode LA, City of Los Angeles, California. Served as primary author for the preparation of CEQA analysis for the City of Los Angeles' zoning code update. Analysis was filtered into the Downtown Community Plan EIR to allow for application once the Downtown Community Plan and EIR is adopted. Responsible for conducting programmatic analysis for all CEQA resource topics.

Telecommunication

Cell Phone Tower Development, InterConnect Towers LLC, Riverside and San Bernardino Counties, California. Served as lead author of environmental compliance documentation for the development of cellphone towers in southern California desert regions. Documents prepared included Environmental Assessments, Mitigated Negative Declarations, and wildlife and waters permit applications. Responsible for ensuring pre-construction compliance with the California Desert Conservation Area Plan and the Desert Renewable Energy Conservation Plan, as well as federal and state species-specific requirements.

Water / Wastewater

Export Sludge Force Main Replacement Project, South Orange County Wastewater Authority. Served as project manager for environmental compliance support during construction of a sewer line replacement project within Aliso and Woods Canyon Wilderness Park. Key environmental issues included biological resources.

As-Needed Environmental Services, San Diego County Water Authority, California. Served as deputy project manager and project manager for tasks under a multi-year as-needed environmental services contract. Worked on numerous projects for the Water Resources Department to support compliance with their Natural Community Conservation Plan/Habitat Conservation Plan and other federal and state requirements. Responsible for providing support on environmental compliance strategy and assisted with a host of CEQA documentation and permitting tasks related to pipeline relining projects, pump station construction and modification, habitat revegetation, and emergency repairs. Responsible for administrative tasks such as drafting task order proposals, invoicing, and contract management.

Groundwater Reliability Improvement Program (GRIP) Recycled Water Project, Water Replenishment District of Southern California, Los Angeles County, California. Authored CEQA sections for the preparation of a Recirculated EIR. Responsible for analyzing a new project alternative that would construct an advanced water treatment plant. Responsible for drafting hazards and hazardous materials, land use and planning, mineral resources, and population and housing CEQA sections.

Environmental Plan Checks, Riverside County Flood Control District, California. Responsible for reviewing environmental compliance documentation for warehouse, tract map, and specific plan storm drain infrastructure improvements. Responsible for ensuring construction and maintenance of proposed improvements were not constrained by CEQA or wetland permit requirements.

Lake Wohlford Dam Replacement Recirculated EIR, Black & Veatch, Escondido, California. Served as primary author for the preparation of a Recirculated EIR to analyze changes to biological resource impacts. Responsible for coordinating the preparation of updated greenhouse gas emissions analysis, drafting construction level VMT analysis, and assisting in the public review and noticing processes.

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Appendix C
10 Year Farming History

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August 5, 2022

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

Re: Wonderful Orchards – Samsung Solar Facility Previous 10 Year Farming History

This memorandum has been prepared by Wonderful Orchards to provide the previous ten year farming history for the proposed Samsung Solar Facility site ("Solar Facility site").

Project Location

The proposed Solar Facility site is located in unincorporated southern Kern County and is situated within portions of Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East, San Bernardino Base and Meridian. The Solar Facility site is generally bordered by Twisselman Road to the south, Lost Hills Road to the east, Kern/Kings County line to the north and Interstate 5 to the west. Refer to **Figure 1** showing the Project boundary. The Solar Facility site encompasses approximately 3,371 acres, and is comprised of 26 parcels with the following assessors' parcel numbers (APN):

- 044-101-02 044-102-03 044-103-04 044-110-03 044-130-39
- 044-101-03 044-102-05 044-103-06 044-110-25 044-150-05
- 044-101-05 044-102-21 044-103-08 044-130-16 044-150-17
- 044-101-06 044-102-22 044-103-09 044-130-18 044-101-11
- 044-102-01 044-103-01 044-110-01 044-130-21 044-101-16
- 044-102-23



Farming History

No farming has occurred within the last 10 years on the proposed Solar Facility site (between the years 2012 and 2022), based on the fact that Wonderful has owned the Proposed Facility site since 2004. The land use is cattle and sheep grazing.

Please let me know if you have any questions or concerns,

Best regards,

A handwritten signature in blue ink that reads "Mike Widhalm".

Mike Widhalm

Director, Property and Risk Management

Direct: (661) 776-1307

Mobile: (661) 301-3973

wonderful.com

Appendix D-1

Air Quality, Greenhouse Gas Emissions, and Energy Technical Report

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Air Quality, Greenhouse Gas Emissions, and
Energy Technical Report

Pelicans Jaw Hybrid Solar Project, Kern County, California

FEBRUARY 2023

Prepared for:

PELICANS JAW SOLAR, LLC

3 Lagoon Drive, Suite 280

Redwood City, CA 94065

Contact: Tandy McMannes

Prepared by:

DUDEK

1701 Westwind Drive, Suite 227

Bakersfield, California 93301

Contact: Adam Poll

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
ADMRT	Air Dispersion and Risk Tool
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
amsl	above mean sea level
AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CALGreen	California's Green Building Standards
CALINE4	California LINE Source Dispersion Model
CalRecycle	California Department of Resources Recycling and Recovery
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH ₄	methane
C/M1	commercial manufacturing
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CPUC	California Public Utilities Commission
DPM	diesel particulate matter
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
GHG	greenhouse gas
GWP	global warming potential
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant
HARP2	Hotspots Analysis and Reporting Program Version 2
HFC	hydrofluorocarbon
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers

Acronym/Abbreviation	Definition
KCOG	Kern Council of Governments
LCFS	Low Carbon Fuel Standard
LED	light emitting diode
LOS	level of service
LST	localized significance thresholds
MM	Mitigation Measure
MMT	million metric ton
MT CO ₂ e	metric tons of CO ₂ equivalent
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NF ₃	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
PDF	project design feature
PF	public facilities
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to 10 microns
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
ppb	parts per billion
ppm	parts per million
PV	photovoltaic
RCP	Regional Comprehensive Plan
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	short-lived climate pollutant
SO ₂	sulfur dioxide
SO ₄	sulfates
SO _x	sulfur oxides
SRA	source-receptor area
TAC	toxic air contaminants

Acronym/Abbreviation	Definition
TIA	Transportation Impact Analysis
TRU	transport refrigeration unit
UNFCCC	United Nations Framework Convention on Climate Change
USGS	U.S. Geological Survey
VOC	volatile organic compound
ZNE	zero net energy

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Executive Summary

The purpose of this technical report is to assess the potential air quality and greenhouse gas (GHG) emissions impacts associated with implementation of the proposed Pelicans Jaw Hybrid Solar project (project). This assessment utilizes the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.).

Project and Approach Overview

The project would include up to 500-megawatt (MW) of photovoltaic solar generation and a battery energy storage system (BESS) with a capacity up to 4,000-megawatt hour (MWhr) located on approximately 3,371 acres of private property in Kern County, California. The project will also include an on-site substation, a Pacific Gas & Electric (PG&E) switching station, generation tie line, and operations and maintenance building. Construction of the project is anticipated to occur in three phases, with the first phase consisting of the installation of 300 MW of photovoltaic solar and the installation of up to 2,000 MWhr of battery energy storage beginning in the first quarter 2024 and becoming commercially operational in the fourth quarter of 2024 (up to 12 months). The second and third phases would consist of the installation of 200 MW of photovoltaic solar (phase two) and the installation of up to 2,000 MWhr of battery energy storage (phase three), with construction beginning in the first quarter of 2024 and commercial operation anticipated in the fourth quarter of 2024 (up to 12 months). The operational life of the proposed project is anticipated to be 35 years. At the end of the operational life the project will be decommissioned and the system and components would be removed from the site.

The project site is located within the San Joaquin Valley Air Basin (SJVAB) and is under the jurisdiction of Kern County and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Kern County's *Guidelines for Preparing an Air Quality Assessment for Use in Environmental Impact Reports* (Kern County 2006) and the SJVAPCD *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI) (SJVAPCD 2015a) were followed as applicable to the project. Construction and operational criteria air pollutant and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0.

Air Quality

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants include ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), and lead. Pollutants that are evaluated include reactive organic gases (ROGs), oxides of nitrogen (NO_x), CO, sulfur oxides (SO_x), PM₁₀, and PM_{2.5}. ROGs and NO_x are important because they are precursors to O₃.

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. The SJVAPCD has prepared plans to attain federal and state O₃ and particulate matter ambient air quality standards as required under the federal Clean Air Act. The SJVAPCD has established thresholds of significance for criteria pollutant emissions, and projects with emissions below the thresholds of

significance for criteria pollutants that would be determined to “not conflict or obstruct implementation of the District’s air quality plan” (SJVAPCD 2015a). As determined in the assessment of project-generated construction and operational emissions, with mitigation pertaining to best practices for procuring and operating construction equipment (**MM-AQ-1, Construction Equipment**), the project would result in emissions that would not exceed SJVAPCD thresholds or result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations. The ambient air quality assessment showed the project would not exceed applicable air quality standards. Therefore, the project would not conflict with or delay the implementation of the SJVAPCD attainment plans and would result in a **less than significant** impact with mitigation.

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 potential for the project to result in a cumulatively considerable impact, per the SJVAPCD guidance and thresholds, is based on the project’s impact compared to the SJVAPCD significance criteria. The annual construction emissions would not exceed the SJVAPCD significance thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}; however, emissions without mitigation would exceed thresholds for NO_x. Mitigation measure MM-AQ-1 will require the project to utilize equipment with Tier 4 Interim or better engines during construction to reduce emissions of NO_x. With mitigation and compliance with SJVAPCD Rule 9510, emissions of NO_x would be reduced below the significance threshold. The project’s construction and operational emissions would be less than the SJVAPCD localized thresholds for ROG, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. Therefore, with mitigation, the project construction and operational impacts would not be cumulatively considerable and would be **less than significant**.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

The nearest sensitive-receptor land use (existing residence) is located over 3.8 miles from the project site.

Carbon Monoxide Hotspot

Operation of the project would not expose sensitive receptors to localized high concentrations of CO or contribute traffic volumes to intersections that would cause a CO hotspot. As neither the 1-hour nor the 8-hour CO California Ambient Air Quality Standards (CAAQS) would be equaled or exceeded at any of the studied intersections, potential CO hotspot impacts would be **less than significant**.

Valley Fever

Coccidioidomycosis, more commonly known as Valley Fever, is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The project would be required to comply with Rule 8021, Section 6.3, which would require the project to develop, prepare, submit, obtain approval of, and implement a dust control plan. Compliance with the required dust control plan would reduce fugitive dust impacts to less than significant for project construction, which would also minimize the release of the *Coccidioides immitis* fungus from construction activities. In addition, the project would implement various dust control strategies and provide Valley Fever awareness and training to all project construction employees as included in **MM-AQ-2** and **MM-AQ-3**. The nearest sensitive-receptor land use (existing residence) is located over 3.8 miles from the project site. Therefore, the project would have a **less than significant** impact with mitigation with respect to valley fever exposure for sensitive receptors.

Toxic Air Contaminants

Project construction activities would produce diesel particulate matter (DPM) due to combustion equipment such as loaders and backhoes, and haul truck trips. Due to this relatively short period of exposure (12 months) and minimal particulate emissions on site, TACs generated by the project is not anticipated to result in concentrations causing significant health risks. In addition, diesel equipment would also be subject to the California Air Resources Board's (CARB) Airborne Toxic Control Measures for in-use off-road diesel fleets, which would minimize DPM emissions. Furthermore, the nearest sensitive receptor is located over 3.8 miles from the project site. Operation of the project would not result in TAC emissions. Thus, sensitive receptor exposure to TACs associated with the project would be **less than significant**.

Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People

The analysis of the project's potential to result in other emissions is focused on potential odor impacts. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application, which would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Impacts associated with odors during construction would be less than significant. The project would not include land-use types that would generate odors during operation. Therefore, project construction and operations would result in odor impacts that are **less than significant**.

Greenhouse Gas Emissions

Global climate change is primarily considered a cumulative impact, but must also be evaluated on a project-level under CEQA. A project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gas (GHG) emissions. GHGs are gases that absorb infrared radiation in the atmosphere. Principal GHGs regulated under state and federal law and regulations include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). GHG emissions are measured in metric tons of CO₂ equivalent (MT CO₂e), which account for weighted global warming potential (GWP) factors for CH₄ and N₂O.

Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment

Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The estimated total GHG emissions during construction would be approximately 4,780 MT CO₂e. Estimated project-generated construction emissions amortized over 35 years would be approximately 137 MT CO₂e per year. The estimated total GHG emissions during decommissioning would be approximately 2,267 MT CO₂e. Estimated project-generated decommissioning emissions amortized over 35 years would be approximately 65 MT CO₂e per year.

Operation of the project would generate GHG emissions through motor vehicle and delivery truck trips to and from the project site; landscape maintenance equipment operation; energy use (generation of electricity consumed by the project); solid waste disposal; water; and on-site septic system. Estimated annual project-generated operational emissions plus amortized project construction and decommissioning emissions would be approximately 2,335 MT CO₂e per year. When accounting for offsetting of the use of fossil fuels for electricity generation, the Proposed project would avoid

a total of 667,793 MT CO_{2e} from 2025 through 2044, or a net 586,062 MT CO_{2e} when accounting for the project's emissions. Therefore, the project's impacts with respect to GHG emissions would be **less than significant**.

Conflict With an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

Development of the project site would be consistent with the County's General Plan, support the Kern Council of Governments (KCOG) 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and demonstrate consistency with the Scoping Plan, which all promote economic growth while achieving greater energy efficiency. The project would be consistent with KCOG's 2022 RTP/SCS, Senate Bill 32, and Executive Order S-3-05. The project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the project's impacts with respect to GHG plans, policies, and regulations would be **less than significant**.

Energy

Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources, During Project Construction or Operation

The project would result the use of electricity, natural gas, and petroleum during construction and operation. However, the amount of energy used by the project would be minimal compared to regional demands. Regarding solar power, the project is designed as a 500 MW solar system. According to PVWatts, the project is estimated to produce 816,783,040 kWh per year of renewable energy. Furthermore, the project includes a 2,000 MWh BESS system capable of storing renewable energy onsite and discharging it to the grid on an as-needed basis. The project would use renewable energy onsite as determined to be feasible and would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during project construction or operation, and impacts would be **less than significant**.

Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency regarding during project construction, and impacts would be **less than significant**. The project would not conflict with applicable plans for renewable energy as it would be required to include solar pursuant to Title 24. As such, the project in combination with other reasonably foreseeable projects, would not conflict with a state or local plan for renewable energy or energy efficiency.

1 Introduction

1.1 Report Purpose and Scope

The purpose of this technical report is to assess the potential air quality, greenhouse gas (GHG) emissions, and energy impacts associated with implementation of the proposed Pelicans Jaw Hybrid Solar Project (project). This assessment uses the significance thresholds in Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.) and is based on the emissions-based significance thresholds recommended by Kern County, the San Joaquin Valley Air Pollution Control District (SJVAPCD), and other applicable thresholds of significance.

This introductory section provides a description of the project and the project location. Chapter 2, Air Quality, describes the air quality-related environmental setting, regulatory setting, existing air quality conditions, and thresholds of significance and analysis methodology, and presents an air quality impact analysis per Appendix G of the CEQA Guidelines. Chapter 3, Greenhouse Gas Emissions, follows the same format as Chapter 2 and similarly describes the GHG emissions-related environmental setting, regulatory setting, existing climate changes conditions, and thresholds of significance and analysis methodology, and presents a GHG emissions impact analysis per Appendix G of the CEQA Guidelines. Chapter 4, Energy, follows the same format as Chapters 2 and 3 and similarly describes the energy-related environmental setting, regulatory setting, existing conditions, and thresholds of significance and analysis methodology, and presents an energy impact analysis per Appendix G of the CEQA Guidelines. Chapter 5, References Cited, includes a list of the references cited. Chapter 6, List of Preparers, includes a list of those who prepared this technical report.

1.2 Regional and Local Setting

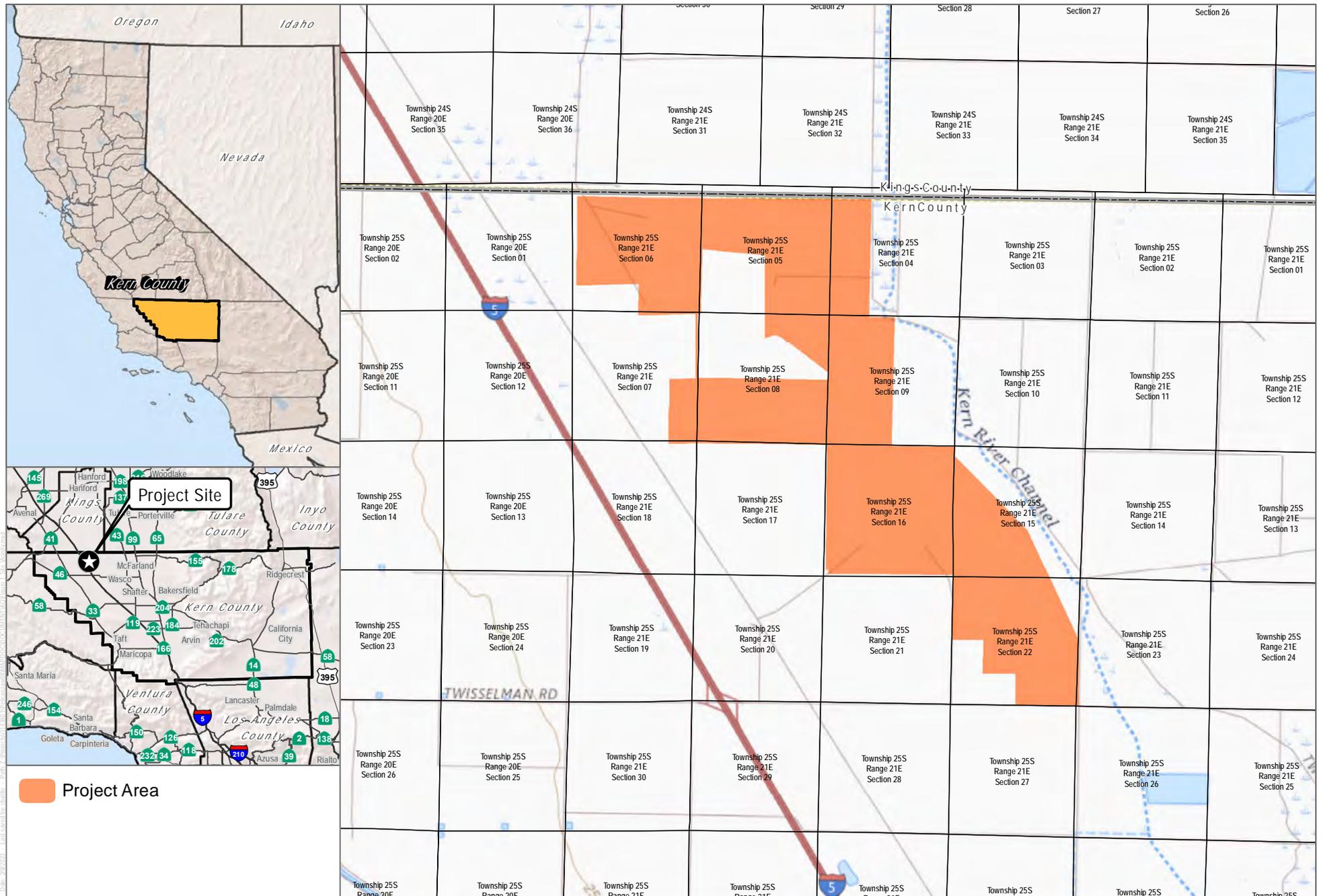
The proposed project would be located on approximately 3,371 acres of private property in unincorporated Kern County, California, adjacent to the southern border of Kings County with direct access from Interstate 5 (I-5) located approximately 2 miles to the west. The project site is situated within portions of Sections 4, 5, 6, 8, 9, 15, 16, and 22 of Township 25 South, Range 21 East, San Bernardino Base and Meridian. The project site is generally bordered by Kern and Kings County line to the north, Lost Hills Road to the east, Twisselman Road to the south, and I-5 to the west. Please refer to Figure 1, Regional Map.

The project site is located entirely within Kern County, to the west of the Kern River Channel. The topography is characterized by an overall slope to the east/northeast. Elevations range from approximately 212 feet above mean sea level near the northeastern corner of the project site to approximately 223 feet above mean sea level at the central portion of the site. The project site and surrounding properties are currently vacant and have been used for cattle and sheep grazing since 2012. No crop cultivation has occurred on the project site within the last 10 years (between 2012 and 2022).

1.3 Project Description

The project would include up to 500-megawatt (MW) of photovoltaic solar generation and a battery energy storage system (BESS) with a capacity up to 4,000-megawatt hour (MWhr) located on approximately 3,371 acres of private

property in Kern County, California. The project will also include an on-site substation, a Pacific Gas & Electric (PG&E) switching station, generation tie line, and operations and maintenance building. Construction of the project is anticipated to occur in three phases, with the first phase consisting of the installation of 300 MW of photovoltaic solar and the installation of up to 2,000 MWhr of battery energy storage beginning in the first quarter 2024 and becoming commercially operational in the fourth quarter of 2024 (up to 12 months). The second and third phases would consist of the installation of 200 MW of photovoltaic solar (phase two) and the installation of up to 2,000 MWhr of battery energy storage (phase three), with construction beginning in the first quarter of 2024 and commercial operation anticipated in the fourth quarter of 2024 (up to 12 months). The operational life of the proposed project is anticipated to be 35 years. At the end of the operational life the project will be decommissioned and the system and components would be removed from the site. Figure 1 provides the regional location of the project and Figure 2 shows the project site plan.

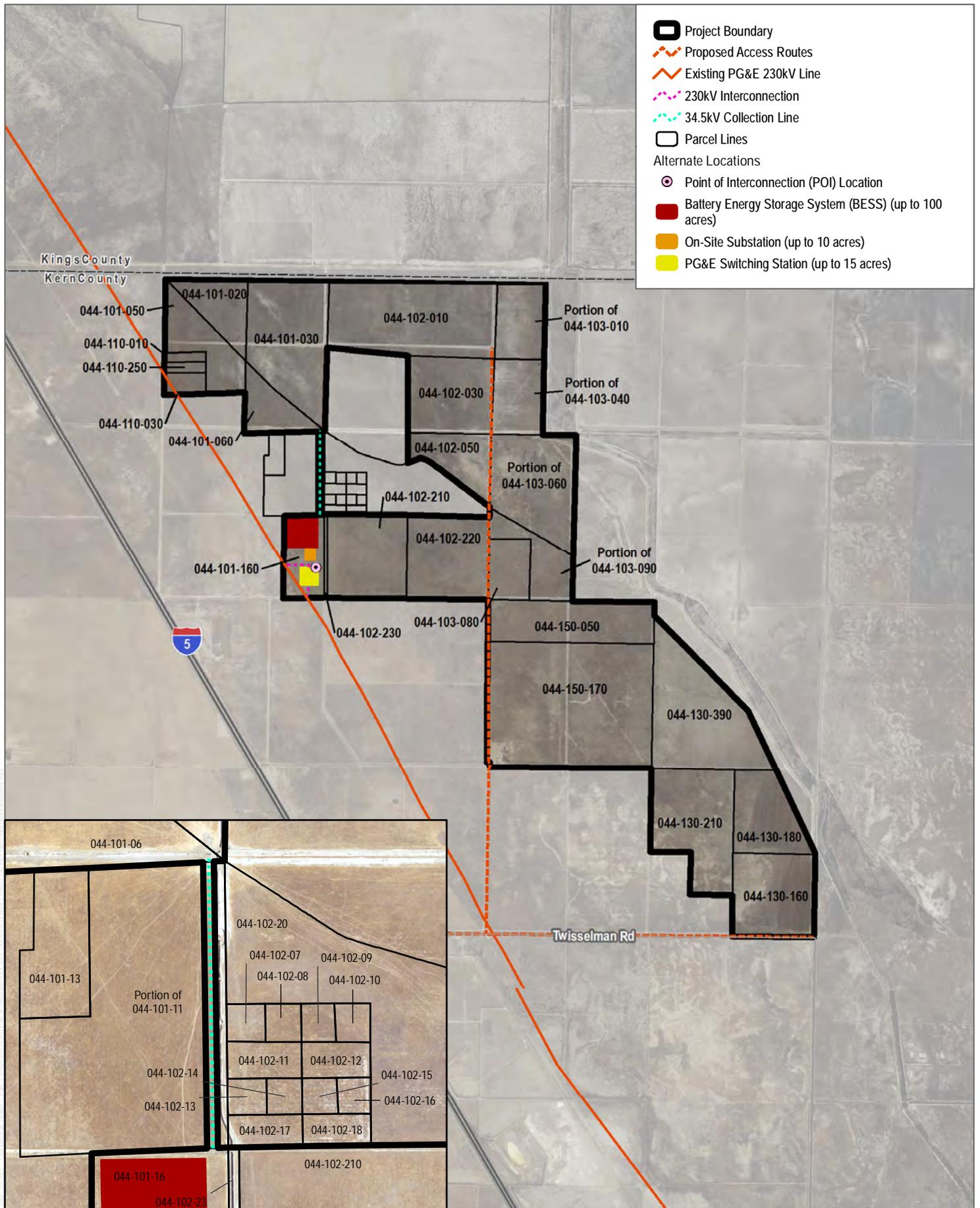


SOURCE: USGS National Map 2021
West Camp, Lone Tree Well and Lost Hills NW Quadrangles



FIGURE 1
Site Vicinity

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SOURCE: Bing 2022, Samsung 2022, County of Kern 2020

FIGURE 2
Project Site Plan

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2 Air Quality

2.1 Environmental Setting

As stated previously, the project site is located within the SJVAB.

2.1.1 Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Meteorological and topographical conditions, however, also are important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of criteria air pollutants. The analysis was prepared in accordance with the SJVAPCD *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI). These factors are described below.

Topography

The project lies within the SJVAB, which consists of eight counties and is spread across 25,000 square miles of Central California. The SJVAB is bordered on the east by the Sierra Nevada (8,000 to 14,491 feet in elevation); on the west by the Coast Ranges (averaging 3,000 feet in elevation); and to the south by the Tehachapi Mountains (6,000 to 7,981 feet in elevation). The San Joaquin Valley comprises the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide, with a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the San Joaquin Valley opens to the San Francisco Bay at the Carquinez Strait. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The region's topographic features restrict air movement through and out of the SJVAB. As a result, the SJVAB is highly susceptible to pollutant accumulation over time.

Climate

The San Joaquin Valley is in a Mediterranean Climate Zone, influenced by a subtropical high-pressure cell most of the year and characterized by warm, dry summers and cooler winters. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summertime maximum temperatures in the San Joaquin Valley often exceed 100°F.

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by the presence of persistent temperature inversions. Air temperatures usually decrease with an increase in altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. A temperature inversion can act like a lid, restricting vertical mixing of air above and below an inversion because of differences in air density and thereby trapping air pollutants below the inversion. The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions. Most of the surrounding mountains are above the normal height of summer inversions (1,500–3,000 feet). Wintertime high pressure events can often last many weeks with surface temperatures often lowering into the 30s°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet.

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Winds in the San Joaquin Valley most frequently blow from the northwesterly direction, especially in the summer. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the San Joaquin Valley. Marine air can flow into the SJVAB from the Sacramento–San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow through the San Joaquin Valley, over the Tehachapi Pass, into the Mojave Desert Air Basin (MDAB). The Coastal Range and the Sierra Nevada are barriers to air movement to the west and east, respectively. A secondary but significant summer wind pattern is from the southeasterly direction and can be associated with nighttime drainage winds, prefrontal conditions and summer monsoons. During winter, winds can be very weak, which minimizes the transport of pollutants and results in stagnation events.

Two significant diurnal wind cycles that occur frequently in the San Joaquin Valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the San Joaquin Valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period.

Temperature, Sunlight and Ozone Production

Solar radiation and temperature are particularly important in the chemistry of O₃ formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily O₃) results from the atmospheric ROGs and NO₂ under the influence of sunlight. O₃ concentrations are very dependent on the amount of solar radiation, especially during late spring, summer and early fall. O₃ levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and O₃ begins to dominate. This reaction tends to reduce O₃ concentrations in the metropolitan areas through the early morning hours. At sunrise, NO_x tends to peak, partly due to low levels of O₃ at this time and also due to the morning commuter vehicle emissions of NO_x.

Reaction rates generally increase with temperature, which results in greater O₃ production at higher temperatures. However, extremely hot temperatures can “lift” or “break” the inversion layer. Typically, if the inversion layer remains intact, O₃ levels peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, O₃ levels peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB. O₃ levels are low during winter periods when there is much less sunlight to drive the photochemical reaction.

Precipitation, Humidity, and Fog

Precipitation and fog can result in the reduction or increase in some pollutant concentrations. For instance, O₃ needs sunlight for its formation, and clouds and fog can block the required solar radiation. In addition, wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Fog with less moisture content, however, can contribute to the formation of secondary ammonium nitrate particulate matter.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations. Between winter storms, high pressure and light winds allow cold, moist air to pool on the

San Joaquin Valley floor, resulting in strong low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of particulate matter.

Urban Heat Island Effect

The “urban heat island” refers to the effect of urbanized areas on surface and air temperature compared to their rural surroundings. Buildings, roads, and other “hardscape” create an island of higher temperatures within the regional landscape. As described by the EPA, “urban heat islands are caused by development and the changes in radiative and thermal properties of urban infrastructure as well as the impacts buildings can have on the local microclimate—for example tall buildings can slow the rate at which cities cool off at night. Heat islands are influenced by a city’s geographic location and by local weather patterns, and their intensity changes on a daily and seasonal basis.” (EPA 2008). The term is generally used to refer to community-wide effects, particularly for large metropolitan cities. The potential adverse effects of the urban heat island effect include increased energy consumption, elevated emissions of air pollutants and GHGs, compromised human health and comfort, and impaired water quality. Increased temperatures due to the urban heat island effect may also lead to increased energy consumption, which has implications for air quality and GHG emissions. In addition to energy-related increases in air emissions, elevated air temperatures increase the rate of ground-level O₃ formation. Communities have adopted various strategies to deal with these environmental impacts, such as increasing vegetation and using more energy-efficient building materials. These strategies are often part of more general energy savings or “sustainability” practices and are not identified as “urban heat island effect” mitigation, but nevertheless they provide the benefits of reducing surface and atmospheric heat islands.

2.1.2 Pollutants and Effects

2.1.2.1 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O₃, nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), PM₁₀, PM_{2.5}, and lead. Reactive organic gases (ROGs; also referred to as volatile organic compounds [VOCs])¹ and oxides of nitrogen (NO_x) are also important because they are precursors to O₃. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.² In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. A more detailed discussion of health effects of criteria air pollutants is provided in Appendix C.

Ozone. O₃ in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, respiratory symptoms, worsening of lung disease leading to premature death, increased

¹ The SJVAPCD threshold is set for ROG. However, ROG and VOC are generally considered equivalent for CEQA analyses; as such, ROG and VOC are used interchangeably in this analysis.

² The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA’s Criteria Air Pollutants (EPA 2016a) and the CARB Glossary of Air Pollution Terms (CARB 2016a).

susceptibility to infections, inflammation of and damage to the lung tissue, and some immunological changes (EPA 2013; CARB 2019a). These health problems are particularly acute in sensitive receptors such as the sick, older adults, and young children.

Inhalation of O₃ causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O₃ can reduce the volume of air that the lungs breathe in and cause shortness of breath. O₃ in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O₃ exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O₃ exposure. While there are relatively few studies of O₃'s effects on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O₃ and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents and adults who exercise or work outdoors, where O₃ concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2019a).

A number of population groups are potentially at increased risk for O₃ exposure effects. In the ongoing review of O₃, the EPA has identified populations as having adequate evidence for increased risk from O₃ exposures include individuals with asthma, younger and older age groups, individuals with reduced intake of certain nutrients such as Vitamins C and E, and outdoor workers. There is suggestive evidence for other potential factors, such as variations in genes related to oxidative metabolism or inflammation, gender, socioeconomic status, and obesity. However further evidence is needed (SCAQMD 2017).

The adverse effects reported with short-term O₃ exposure are greater with increased activity because activity increases the breathing rate and the volume of air reaching the lungs, resulting in an increased amount of O₃ reaching the lungs. Children may be a particularly vulnerable population to air pollution effects because they spend more time outdoors, are generally more active, and have a higher specific ventilation relative to their body weight, compared to adults (SCAQMD 2017).

Nitrogen Dioxide. A large body of health science literature indicates that exposure to NO₂ can induce adverse health effects. The strongest health evidence, and the health basis for the AAQS for NO₂, is results from controlled human exposure studies that show that NO₂ exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO₂ than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO₂ exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2019b).

Carbon Monoxide. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, and light-headedness, dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2019c).

Sulfur Dioxide. SO₂ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter (PM), SO₂ can injure lung tissue and reduce visibility and the level of sunlight. SO₂ can worsen asthma resulting in increased symptoms, increased medication usage, and emergency room visits.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO₂ exposure, compared with the non-asthmatic population. Effects at levels near the one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO₂ (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2019d).

SO₂ is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in PM (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO₂-induced increase in resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO₂ is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter

A number of adverse health effects have been associated with exposure to both PM_{2.5} and PM₁₀. For PM_{2.5}, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, PM_{2.5} is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and world-wide based on the World Health Organization's Global Burden of Disease project. Short-term exposures to PM₁₀ have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2017a).

Long-term (months to years) exposure to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM₁₀ are less clear, although several studies suggest a link between long-term PM₁₀ exposure and respiratory

mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that PM in outdoor air pollution causes lung cancer (CARB 2017a).

People with influenza, people with chronic respiratory and cardiovascular diseases, and older adults may suffer worsening illness and premature death as a result of breathing PM. People with bronchitis can expect aggravated symptoms from breathing PM. Children may experience a decline in lung function due to breathing in PM₁₀ and PM_{2.5} (EPA 2009).

PM encompasses a physically and chemically diverse class of ambient air pollutants of both anthropogenic and biological origin. The PM standard is the only NAAQS that does not target a specific chemical or family of chemical species (NRC 2005). The range of human health effects associated with ambient PM levels or demonstrated in laboratory studies has expanded from earlier concerns for total mortality and respiratory morbidity to include cardiac mortality and morbidity, blood vessel constriction, stroke, premature birth, low birth weight, retarded lung growth, enhancement of allergic responses, reduced resistance to infection, degenerative lesions in the brain, and lung cancer (EPA 2004).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and, in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Reactive Organic Gases. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O₃ are referred to and regulated as ROG (also referred to as VOCs). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of ROG result from the formation of O₃ and its related health effects. High levels of ROG in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for ROG as a group.

2.1.2.2 Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancerous health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies

based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics “Hot Spots” Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of PM_{2.5} (CARB 2016b). DPM is typically composed of carbon particles (“soot,” also called black carbon, or BC) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016b). The CARB classified “particulate emissions from diesel-fueled engines” (i.e., DPM; 17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM_{2.5}, DPM also contributes to the same noncancerous health effects as PM_{2.5} exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016b). Those most vulnerable to noncancerous health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person’s reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

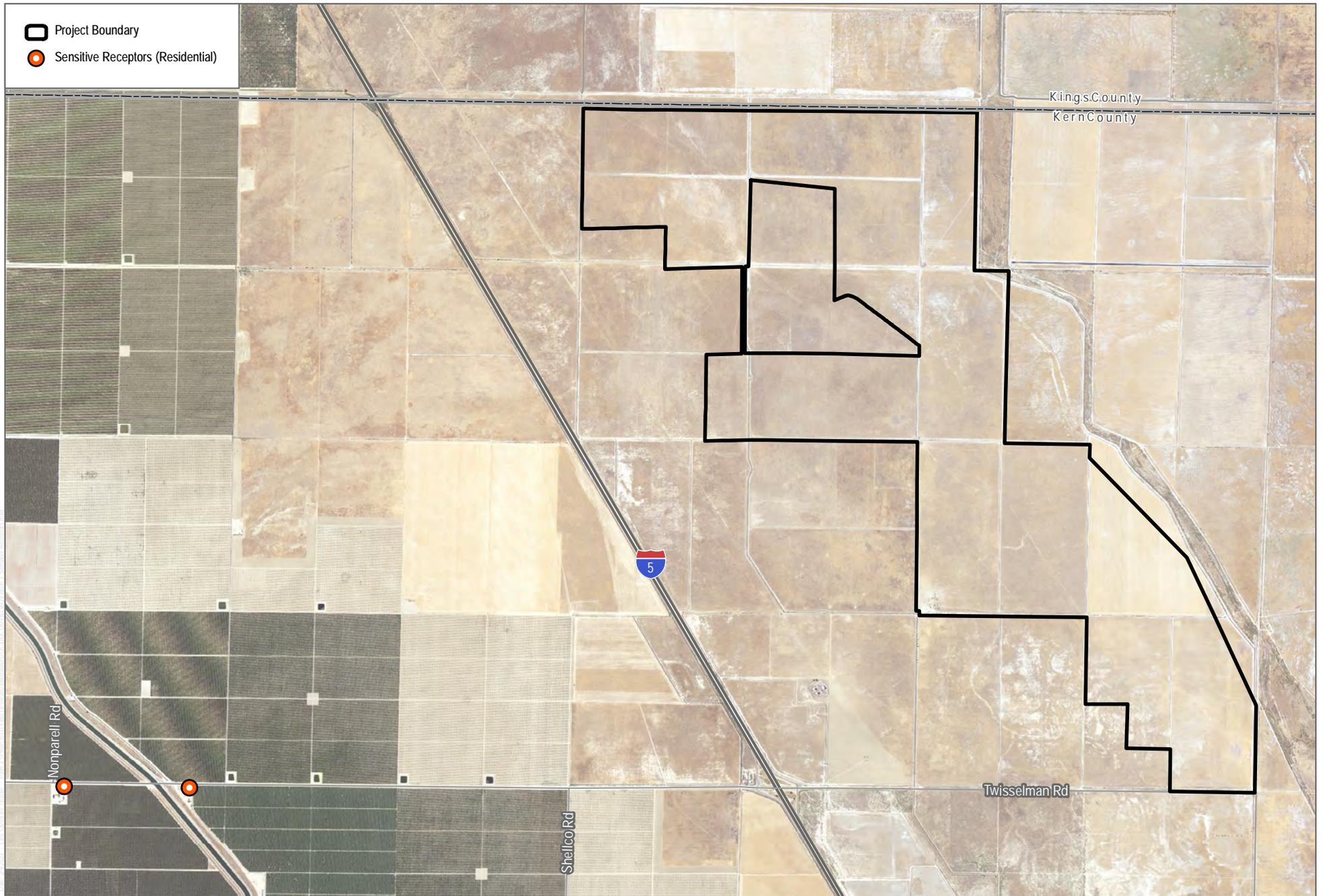
Valley Fever. Coccidioidomycosis, more commonly known as “valley fever,” is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils.

The fungus is very prevalent in the soils of California’s San Joaquin Valley. Per the California Department of Public Health (CDPH), the range over 7 years (2013–2019) for coccidioidomycosis cases in Kern County is 106 - 368 cases per 100,000 people per year. Statewide incidences in 2019 were 22.5 per 100,000 people (CDPH 2019). As such, it is considered highly endemic to Kern County.

The project would be required to comply with Rule 8021, Section 6.3, which would require the project to develop, prepare, submit, obtain approval of, and implement a dust control plan.

2.1.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The SJVAPCD identifies sensitive receptors as facilities that house or attract children, the elderly, people with illnesses, hospitals, schools, convalescent facilities, and residential areas (SJVAPCD 2000). The closest off-site sensitive receptor to the project site includes a residence located 3.8 miles west of the project site. Figure 3 shows the location of the closest sensitive receptor proximate to the project site.



SOURCE: USDA 2020



FIGURE 3

Sensitive Receptors

Pelicans Jaw Hybrid Solar Project

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2.2 Regulatory Setting

2.2.1 Federal Regulations

2.2.1.1 Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O₃ protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O₃, NO₂, SO₂, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O₃, NO₂, SO₂, PM₁₀, and PM_{2.5} are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames. A more detailed discussion of the NAAQS, as well as the CAAQS (discussed below), is provided in Appendix C.

2.2.1.2 Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants (HAPs) to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

2.2.2 State Regulations

2.2.2.1 Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For

each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, PM₁₀, and PM_{2.5} and visibility-reducing particles are values that are not to be exceeded.

The SJVAPCD has based their thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 1.

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a	National Standards ^b	
		Concentration ^c	Primary ^{c,d}	Secondary ^{c,e}
O ₃	1 hour	0.09 ppm (180 µg/m ³)	—	Same as Primary Standard ^f
	8 hours	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³) ^f	
NO ₂ ^g	1 hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	
CO	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	None
	8 hours	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	
SO ₂ ^h	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m ³)
	24 hours	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ^g	—
	Annual	—	0.030 ppm (for certain areas) ^g	—
PM ₁₀ ⁱ	24 hours	50 µg/m ³	150 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	20 µg/m ³	—	
PM _{2.5} ⁱ	24 hours	—	35 µg/m ³	Same as Primary Standard
	Annual Arithmetic Mean	12 µg/m ³	12.0 µg/m ³	
Lead ^{j,k}	30-day Average	1.5 µg/m ³	—	—
	Calendar Quarter	—	1.5 µg/m ³ (for certain areas) ^k	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 µg/m ³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)	—	—
Vinyl chloride ^l	24 hours	0.01 ppm (26 µg/m ³)	—	—
Sulfates	24- hours	25 µg/m ³	—	—
Visibility reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%		—

Source: CARB 2016c.

Notes: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; ppm = parts per million by volume; O₃ = ozone; NO₂ = nitrogen dioxide; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = particulate matter with an aerodynamic diameter less than or equal to 10 microns; PM_{2.5} = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

- a California standards for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, suspended particulate matter (PM₁₀, PM_{2.5}), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b National standards (other than O₃, NO₂, SO₂, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
- c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 °C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25 °C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
- e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- h On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- i On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
- j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

2.2.2.2 Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. “High-priority” facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

Safety Training on Valley Fever Assembly Bill 203

AB 203 adds Section 6709 to the Labor Code and requires employers to provide effective Valley Fever awareness and prevention training for all construction employees at risk of prolonged exposure to dust in Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura Counties by May 1, 2020, annually by that date thereafter, and again before an employee begins work that is reasonably anticipated to cause exposure to substantial dust disturbance.

2.2.3 Local Regulations

2.2.3.1 San Joaquin Valley Air Pollution Control District

The SJVAPCD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SJVAB. The SJVAPCD jurisdiction includes all of Merced, San Joaquin, Stanislaus, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County.

Air Quality Plans

The SJVAPCD has prepared several air quality attainment plans to achieve the O₃ and particulate matter standards, the most recent of which include the *2020 Reasonably Available Control Technology Demonstration for the 2015 8-Hour Ozone Standard* (SJVAPCD 2020a), *2016 Plan for the 2008 8-Hour Ozone Standard* (SJVAPCD 2016a), *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan* (SJVAPCD 2014a), *2013 Plan for the Revoked 1-Hour Ozone Standard* (SJVAPCD 2013), *2007 PM₁₀ Maintenance Plan and Request for Redesignation* (SJVAPCD 2007a), *2012 PM_{2.5} Plan* (SJVAPCD 2012), *2015 Plan for the 1997 PM_{2.5} Standard* (SJVAPCD 2015b), *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard* (SJVAPCD 2016b), and the *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards* (SJVAPCD 2020b). The following sections summarize key elements of these and other recent air quality attainment plans.

Extreme 1-Hour Ozone Attainment Demonstration Plan

The *Extreme 1-Hour Ozone Attainment Demonstration Plan*, adopted by the SJVAPCD Governing Board October 8, 2004, sets forth measures and emission-reduction strategies designed to attain the federal 1-hour O₃ standard by November 15, 2010, as well as an emissions inventory, outreach, and rate of progress demonstration. This plan was approved by the EPA on March 8, 2010; however, the EPA's approval was subsequently withdrawn effective November 26, 2012, in response to a decision issued by the U.S. Court of Appeals for the Ninth Circuit (*Sierra Club v. EPA*, 671 F.3d 955) remanding EPA's approval of these SIP revisions. Concurrent with the EPA's final rule, CARB withdrew the 2004 plan. The SJVAPCD developed a new plan for the 1-hour O₃ standard, the *2013 Plan for the Revoked 1-Hour Ozone Standard*, which it adopted in September 2013.

2007 8-Hour Ozone Plan

The *2007 8-Hour Ozone Plan*, adopted by the Governing Board on April 30, 2007, sets forth measures and a "dual path" strategy to attain the federal 1997 8-hour O₃ standard by 2023 for the SJVAB by reducing emissions of O₃ and particulate matter precursors (SJVAPCD 2007b). The plan also includes provisions for improved pollution control technologies for mobile and stationary sources, as well as an increase in state and federal funding for incentive-based measures to reduce emissions. All local measures would be adopted by the SJVAPCD before 2012. This plan was approved by the EPA on April 30, 2012. On November 26, 2012, however, the EPA withdrew its determination that the plan satisfied the federal Clean Air Act requirements regarding emissions growth caused by growth in vehicle miles traveled. All other determinations in the EPA's March 1, 2012, rule approving the plan remain unchanged and in effect. The SJVAPCD is currently in the process of developing an O₃ plan to address EPA's 2008 8-hour O₃ standard, with attainment required by 2032.

2009 Reasonably Available Control Technology (RACT) SIP

On April 16, 2009, the Governing Board adopted the *Reasonably Available Control Technology Demonstration for Ozone State Implementation Plans (2009 RACT SIP)* (SJVAPCD 2009a). In part, the 2009 RACT SIP satisfied the commitment by the SJVAPCD for a new RACT analysis for the 1-hour O₃ plan (see discussion of the EPA withdrawal of approval in the *Extreme 1-Hour Ozone Attainment Demonstration Plan* summary above) and was intended to prevent all sanctions that could be imposed by EPA for failure to submit a required SIP revision for the 1-hour O₃ standard. With respect to the 8-hour standard, the plan also assesses the SJVAPCD's rules based on the adjusted major source definition of 10 tons per year (due to the SJVAB's designation as an extreme O₃ nonattainment area), evaluates SJVAPCD rules against new Control Techniques Guidelines promulgated since August 2006, and reviews additional rules and rule amendments that had been adopted by the Governing Board since August 17, 2006, for RACT consistency.

2013 Plan for the Revoked 1-Hour Ozone Standard

The SJVAPCD developed a plan for EPA's revoked 1-hour O₃ standard after the EPA withdrew its approval of the 2004 *Extreme 1-Hour Ozone Attainment Demonstration Plan* as a result of litigation. As a result of the litigation, the EPA reinstated previously revoked requirements for 1-hour O₃ attainment plans. The 2013 plan addresses those requirements, including a demonstration of implementation of Reasonably Available Control Measures and a demonstration of a rate of progress averaging 3% annual reductions of ROG or NO_x emissions every 3 years. The *2013 Plan for the Revoked 1-Hour Ozone Standard* was approved by the Governing Board on September 19, 2013 (SJVAPCD 2013). Based on implementation of the ongoing control measures, preliminary modeling indicates that the SJVAB will attain the 1-hour O₃ standard by 2017, before the final attainment year of 2022 and without relying on long-term measures under the federal Clean Air Act Section 182(e)(5) ("black box reductions").

2014 RACT SIP

On June 19, 2014, the Governing Board adopted the *2014 Reasonably Available Control Technology Demonstration for the 8-Hour Ozone State Implementation Plan (2014 RACT SIP)* (SJVAPCD 2014a). This RACT SIP includes a demonstration that the SJVAPCD rules implement RACT. The plan reviews each of the NO_x reduction rules and concludes that they satisfy requirements for stringency, applicability, and enforceability, and meet or exceed RACT. The plan's analysis of further ROG reductions through modeling and technical analyses demonstrates that added ROG reductions will not advance SJVAB's O₃ attainment. Each ROG (i.e., VOC) rule evaluated in the 2009 RACT SIP, however, has been subsequently approved by the EPA as meeting RACT within the last 2 years. The O₃ attainment strategy, therefore, focuses on further NO_x reductions.

SJVAPCD 2016 Plan for the 2008 8-Hour Ozone Standard

The SJVAPCD adopted the 2016 Plan for the 2008 8-Hour Ozone Standard in June 2016. This plan demonstrates the practicable and expeditious attainment of the 75 parts per billion 8-hour O₃ standard.

SJVAPCD 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard

The SJVAPCD adopted the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard on September 15, 2016. This plan addresses the EPA federal annual PM_{2.5} standard of 12 µg/m³, established in 2012. This plan includes an attainment impracticability demonstration and request for reclassification of the San Joaquin Valley Air Basin (SJVAB) from Moderate nonattainment to Serious nonattainment.

SJVAPCD 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards on November 15, 2018. This plan addresses the U.S. Environmental Protection Agency (EPA) federal 1997 annual PM_{2.5} standard of 15 µg/m³ and 24-hour PM_{2.5} standard of 65 µg/m³; the 2006 24-hour PM_{2.5} standard of 35 µg/m³; and the 2012 annual PM_{2.5} standard of 12 µg/m³. This plan demonstrates attainment of the federal PM_{2.5} standards as expeditiously as practicable.

2020 RACT Demonstration

The SJVAPCD adopted the 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard on June 18, 2020. The Valley is classified as an Extreme nonattainment area for the 2015 O₃ standard. The 2020 RACT Demonstration includes a comprehensive evaluation of all NO_x and ROG SJVAPCD rules to ensure that each rule meets or exceeds RACT. The 2020 RACT Demonstration fulfills CAA requirements and demonstrates that all federal RACT requirements continue to be satisfied in the Valley.

Particulate Matter Attainment Plans

2007 PM₁₀ Maintenance Plan and Request for Redesignation

On September 20, 2007, the Governing Board approved the *2007 PM₁₀ Maintenance Plan and Request for Redesignation* (SJVAPCD 2007a). After achieving compliance with the annual and 24-hour NAAQS for PM₁₀ during the period from 2003 to 2006,³ the SJVAPCD prepared the *2007 PM₁₀ Maintenance Plan and Request for Redesignation*. The plan includes future emission estimates through 2020 and, based on modeling, projects that SJVAB will continue to attain the PM₁₀ NAAQS through 2020. The plan does not call for adoption of new control measures. Measures called for in the *2007 8-Hour Ozone Plan* and *2008 PM_{2.5} Plan* (discussed below) will also produce PM₁₀ benefits; however, the plan does include a contingency plan if future PM₁₀ levels were to exceed the NAAQS. It also includes a request that the EPA redesignate the SJVAB to attainment status for the PM₁₀ NAAQS. On October 25, 2007, CARB approved the SJVAPCD's plan with modifications to the transportation conformity budgets. On September 25, 2008, the EPA redesignated the SJVAB to attainment for the PM₁₀ NAAQS and approved the PM₁₀ maintenance plan.

2008 PM_{2.5} Plan

The SJVAPCD Governing Board adopted the *2008 PM_{2.5} Plan* on April 30, 2008 (SJVAPCD 2008). This plan is designed to assist the SJVAB in attaining all PM_{2.5} standards, including the 1997 federal standards, the 2006 federal standards, and the state standard, as soon as possible. On July 13, 2011, the EPA issued a proposed rule partially approving and disapproving the *2008 PM_{2.5} Plan*. Subsequently, on November 9, 2011, the EPA issued a final rule approving most of the plan with an effective date of January 9, 2012. However, the EPA disapproved the plan's contingency measures because they would not provide sufficient emission reductions.

³ Attainment is achieved if the 3-year annual average PM₁₀ concentration is less than or equal to 50 µg/m³ and the expected 24-hour exceedance days is less than or equal to 1.0.

2012 PM_{2.5} Plan

Approved by the Governing Board on December 20, 2012, the *2012 PM_{2.5} Plan* addresses attainment of EPA's 24-hour PM_{2.5} standard of 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) established in 2006. In addition to reducing direct emissions of PM_{2.5}, this plan focuses on reducing emissions of NO_x, which is a predominant pollutant in the formation of PM_{2.5} in the SJVAB. The plan relies on a multilevel approach to reducing emissions through SJVAPCD efforts (industry, the general public, employers, and small businesses) and state/federal efforts (passenger vehicles, heavy-duty trucks, and off-road sources), as well as SJVAPCD and state/federal incentive programs to accelerate replacement of on- and off-road vehicles and equipment. Through compliance with this attainment plan, the SJVAB would achieve attainment of the federal PM_{2.5} standard by the attainment deadline of 2019, with the majority of the SJVAB actually experiencing attainment well before the deadline. The EPA lowered the PM_{2.5} standard again in 2012 and is in the process of completing attainment designations.

2015 Plan for the 1997 PM_{2.5} Standard

The Governing Board adopted the *2015 Plan for the 1997 PM_{2.5} Standard* on April 16, 2015 (SJVAPCD 2015b). This plan addresses the EPA's annual PM_{2.5} standard of 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 24-hour PM_{2.5} standard of 65 $\mu\text{g}/\text{m}^3$ established in 1997. While nearly achieving the 1997 standards, the SJVAB experienced higher PM_{2.5} levels in winter 2013–2014 due to the extreme drought, stagnation, strong inversions, and historically dry conditions; thus, the SJVAPCD was unable to meet the attainment date of December 31, 2015. Accordingly, this plan also contains a request for a one-time extension of the attainment deadline for the 24-hour standard to 2018 and the annual standard to 2020. The plan builds on past development and implementation of effective control strategies. Consistent with EPA regulations for PM_{2.5} plans to achieve the 1997 standards, the plan contains Most Stringent Measures, Best Available Control Measures, additional enforceable commitments for further reductions in emissions, and ensures expeditious attainment of the 1997 standard.

2016 Moderate Area Plan for the 2012 PM_{2.5} Standard

On September 15, 2016, the Governing Board adopted the *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard* (SJVAPCD 2016b). This plan addresses the federal mandates for areas classified as “moderate nonattainment” for the 2012 PM_{2.5} NAAQS of 12 $\mu\text{g}/\text{m}^3$. Consistent with EPA's PM_{2.5} Implementation Rule, the plan satisfies the mandate to submit a moderate nonattainment plan to EPA by October 2016, demonstrates impracticability of attaining the 2012 PM_{2.5} standard by the moderate nonattainment deadline of 2021, includes a request to reclassify the San Joaquin Valley to a “serious nonattainment” area for the 2012 PM_{2.5} standard, satisfies all federal Clean Air Act requirements for moderate nonattainment areas, and demonstrates that emissions are continuing to be reduced in the San Joaquin Valley.

2017 Particulate Matter Plans

The SJVAPCD is in the process of developing an attainment strategy to address the 1997, 2006, and 2012 PM_{2.5} standards and a plan to demonstrate maintenance of the 1987 PM₁₀ standard, as required under the federal Clean Air Act.

Senate Bill 656 Particulate Matter Control Measure Implementation Schedule

Senate Bill (SB) 656 was enacted in 2003 and codified as California Health and Safety Code Section 39614. SB 656 seeks to reduce exposure to PM₁₀ and PM_{2.5} and to make further progress toward attainment of the NAAQS and CAAQS for PM₁₀ and PM_{2.5}. SB 656 required CARB, in consultation with local air districts, to develop and adopt lists of “the most readily available, feasible, and cost-effective” particulate matter control measures. Subsequently, the air districts were required to adopt implementation schedules for the relevant control measures in their district. In June 2005, the SJVAPCD adopted its SB 656 Particulate Matter Control Measure Implementation Schedule. The SJVAPCD analysis of the CARB list concluded that all but one of the measures that apply to SJVAPCD sources had been implemented or were in one of the SJVAPCD’s attainment plans for adoption within the next 2 years. The remaining measure pertains to a future amendment of a rule for gasoline transfer into stationary storage containers, delivery vessels, and bulk plants.

Applicable Rules

The SJVAPCD’s primary means of implementing air quality plans is by adopting and enforcing rules and regulations. Stationary sources within the jurisdiction are regulated by the SJVAPCD’s permit authority over such sources and through its review and planning activities. Unlike stationary source projects, which encompass very specific types of equipment, process parameters, throughputs, and controls, air emissions sources from land use development projects are mainly mobile sources (traffic) and area sources (small dispersed stationary and other non-mobile sources), including exempt (i.e., no permit required) sources such as consumer products, landscaping equipment, furnaces, and water heaters. Mixed-use land development projects may include nonexempt sources including devices such as small to large boilers, stationary internal combustion engines, gas stations, or asphalt batch plants.

Notwithstanding nonexempt stationary sources, which would be permitted on a case-by-case basis, SJVAPCD Regulations VIII and IX generally apply to land use development projects and are described below:

Regulation IV – Prohibitions

- **Rule 4102: Nuisance** – Prohibits discharge of air contaminants or other materials from any source which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- **Rule 4601: Architectural Coatings** – The purpose of the rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements.
- **Rule 4641: Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations** – The purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations.

Regulation VIII – Fugitive PM₁₀ Prohibition

- **Rule 8021: Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities** – The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. The rule outlines Dust Control Plan requirements for certain applicable construction activities.

- **Rule 8031:** Bulk Materials – The purpose of the rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials.
- **Rule 8041:** Carryout and Trackout – The purpose of this rule is to prevent or limit fugitive dust emissions from carryout and trackout.
- **Rule 8051:** Open Areas – The purpose of this rule is to limit fugitive dust emissions from open areas.
- **Rule 8061:** Paved and Unpaved Roads – The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria.
- **Rule 8071:** Unpaved Vehicle/Equipment Traffic Areas – The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas.

Pursuant to Rule 8021, Section 6.3, the project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant during project construction.

Regulation IX – Mobile and Indirect Sources

- **Rule 9110:** General Conformity – The rule specifies the criteria and procedures for determining the conformity of federal actions with the San Joaquin Valley Unified Air Pollution Control District’s air quality implementation plan.
- **Rule 9120:** Transportation Conformity – The rule sets forth the principles for determining conformity of transportation plans, programs, and projects which are developed, funded, or approved by the U.S. Department of Transportation (DOT), and by metropolitan planning organizations (MPOs) or other recipients of funds under Title 23 U.S.C. or the Federal Transit Act. The rule sets forth policy, criteria, and procedures for demonstrating and assuring conformity of such activities to an applicable implementation plan developed pursuant to the Clean Air Act.
- **Rule 9410:** Employer Based Trip Reduction – The purpose of this rule is to reduce vehicle miles traveled (VMT) from private vehicles used by employees to commute to and from their worksites to reduce emissions of oxides of nitrogen, volatile organic compounds, and particulate matter.
- **Rule 9510:** Indirect Source Review (ISR) – The purpose of this rule is to fulfill the District’s emission reduction commitments in the PM₁₀ and Ozone Attainment Plans, achieve emission reductions from the construction and use of development projects through design features and on-site measures, and provide a mechanism for reducing emissions from the construction of and use of development projects through off-site measures.
- **Rule 9610:** State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs – The purpose of this rule is to provide an administrative mechanism for the District to achieve credit towards State Implementation Plan requirements for emission reductions achieved in the San Joaquin Valley Air Basin through incentive programs administered by the District, U.S. Department of Agriculture Natural Resources Conservation Service, or CARB.

Rule 9510: Indirect Source Review

The ISR rule, which was adopted December 15, 2005, and went into effect March 1, 2006, requires developers of new residential, commercial, and some industrial projects to reduce NO_x and PM₁₀ emissions generated by their projects. Pursuant to Rule 9510, the purpose of the ISR program is to reduce emissions of NO_x and PM₁₀ from new land development projects. In general, development contributes to air pollution in the SJVAB increasing the number

of vehicles and vehicle miles traveled. ISR applies to development projects that require discretionary approval from the lead agency. The ISR rule also applies to transportation and transit projects whose construction exhaust emissions would equal or exceed 2 tons per year of NO_x or PM₁₀. The ISR rule requires submittal of an air impact assessment application no later than the date on which application is made for a final discretionary approval from the public agency. The air impact assessment contains the information necessary to calculate both construction and operational emissions of a development project.

Section 6.0 of the ISR rule outlines general mitigation requirements for developments that include reduction in construction emissions of 20% of the total construction NO_x emissions, and 45% of the total construction PM₁₀ exhaust emissions. The rule also requires the project to reduce operational NO_x emissions by 33.3% and operational PM₁₀ emissions by 50% compared to the unmitigated baseline. Section 7.0 of the ISR rule includes fee schedules for construction or operational excess emissions of NO_x or PM₁₀—those emissions above the goals identified in Section 6.0 of the rule. Monies collected from this fee are used by the SJVAPCD to fund emission reduction projects in the SJVAB on behalf of the project.

Rule 9610: State Implementation Plan Credit for Emission Reductions Generated through Incentive Programs

Rule 9610 provides an administrative mechanism for the SJVAPCD to receive credit towards SIP requirements for emission reductions achieved in the SJVAB through incentive programs administered by the SJVAPCD, U.S. Department of Agriculture Natural Resources Conservation Service, or CARB. On April 9, 2015, EPA finalized a limited approval and limited disapproval (for a minor administrative error) of Rule 9610 as a revision to the California SIP. Additional documentation regarding the effectiveness of the SJVAPCD's incentive programs can be found in *2015 Annual Demonstration Report SIP Credit for Emission Reductions Generated Through Incentive Programs* (SJVAPCD 2015c).

2.2.3.2 Kern Council of Governments

Kern Council of Governments (KCOG) Board adopted the 2022 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) on July 21, 2022 (KCOG 2022). The RTP/SCS is comprehensive in its response to new federal statutes embodied in the Moving Ahead for Progress in the 21st Century and state statutes including Senate Bill 375. The RTP/SCS continues to provide a sustainability vision through year 2046 that recognizes the significant impact the transportation network has on the region's public health, mobility, and economic vitality. As the region's comprehensive long-range transportation planning document, the RTP/SCS serves as a guide for achieving public policy decisions that will result in balanced investments for a wide range of multimodal transportation improvements.

2.2.3.3 Kern County

The County's General Plan Land Use, Open Space, and Conservation Element, Section 1.10.2 Air Quality is intended to protect public health and welfare by implementing measures that allow the SJVAPCD to attain federal and state air quality standards. The Element sets forth a number of policies and standards to reduce current pollutant emissions and to require new development to include measures to comply with air quality standards. The County's General Plan Land Use, Open Space, and Conservation Element, Section 1.10.2 Air Quality includes the following:

Policies

18. The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be placed on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals.

19. In considering discretionary projects for which an Environmental Impact Report must be prepared pursuant to the California Environmental Quality Act, the appropriate decision-making body, as part of its deliberations, will ensure that:

- (a) All feasible mitigation to reduce significant adverse air quality impacts have been adopted; and
- (b) The benefits of the proposed project outweigh any unavoidable significant adverse effects on air quality found to exist after inclusion of all feasible mitigation. This finding shall be made in a statement of overriding considerations and shall be supported by factual evidence to the extent that such a statement is required pursuant to the California Environmental Quality Act.

20. The County shall include fugitive dust control measures as a requirement for discretionary projects and as required by the adopted rules and regulations of the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District on ministerial permits.

21. The County shall support air districts' efforts to reduce PM10 and PM2.5 emissions.

22. Kern County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and the Kern County Air Pollution Control District toward air quality attainment with federal, State, and local standards.

23. The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District.

24. Kern County shall consult with transit providers to determine project effects and ensure that impacts are mitigated.

Implementation Measures

F. All discretionary permits shall be referred to the appropriate air district for review and comment.

G. Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to: a. Minimizing idling time. b. Electrical overnight plug-ins.

H. Discretionary projects may use one or more of the following to reduce air quality effects:

- a. Pave dirt roads within the development.
- b. Pave outside storage areas.
- c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans.
- d. Use of alternative fuel fleet vehicles or hybrid vehicles.

- e. Use of emission control devices on diesel equipment.
 - f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces.
 - g. Provide bicycle lockers and shower facilities on site.
 - h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86).
 - i. The use and development of park and ride facilities in outlying areas.
 - j. Other strategies that may be recommended by the local Air Pollution Control Districts.
- I. Work with transit providers to develop long-range transit strategies based on future and anticipated land use plans.
- J. The County should include PM10 control measures as conditions of approval for subdivision maps, site plans, and grading permits.

2.3 Regional and Local Air Quality Conditions

2.3.1 San Joaquin Valley Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as “attainment” or “nonattainment,” but based on CAAQS rather than the NAAQS. Table 2 depicts the current attainment status of the project site with respect to the NAAQS and CAAQS, as well as the attainment classifications for the criteria pollutants are outlined in Table 2.

Table 2. San Joaquin Valley Air Basin Attainment Status

Pollutant	Designation/Classification	
	National Designation	California Designation
Ozone (O ₃) – 1-hour	No national standard ¹	Nonattainment/Severe
Ozone (O ₃) – 8-hour	Nonattainment/Extreme ²	Nonattainment
Nitrogen dioxide (NO ₂)	Unclassifiable/attainment	Attainment
Carbon monoxide (CO)	Unclassifiable/attainment	Attainment
Sulfur dioxide (SO ₂)	Unclassifiable/attainment	Attainment
Respirable particulate matter (PM ₁₀)	Attainment (Maintenance) ³	Nonattainment

Table 2. San Joaquin Valley Air Basin Attainment Status

Pollutant	Designation/Classification	
	National Designation	California Designation
Fine particulate matter (PM _{2.5})	Nonattainment ⁴	Nonattainment
Lead (Pb) ⁵	Unclassifiable/attainment	Attainment
Sulfates (SO ₄)	No national standard	Attainment
Hydrogen sulfide (H ₂ S)	No national standard	Unclassified
Vinyl chloride ⁵	No national standard	No designation
Visibility-reducing particles	No national standard	Unclassified

Sources: SJVAPCD 2020c; EPA 2018 (national); CARB 2019e (California).

Notes: Attainment = meets the standards; Attainment (maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or unclassifiable = insufficient data to classify; Unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

- 1 Effective June 15, 2005, the EPA revoked the national 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan (SJVAPCD 2004) on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
- 2 Though the San Joaquin Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved San Joaquin Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).
- 3 On September 25, 2008, EPA re-designated the San Joaquin Valley to attainment for the PM₁₀ NAAQS and approved the PM₁₀ Maintenance Plan.
- 4 The San Joaquin Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the San Joaquin Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).
- 5 CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined.

In summary, the EPA has designated the SJVAB as a nonattainment area for the national 8-hour O₃ standard, and CARB has designated the SJVAB as a nonattainment area for the California 1-hour and 8-hour O₃ standards. The SJVAB has been designated as a nonattainment area for the California 24-hour and annual PM₁₀ standards, a nonattainment area for the national 24-hour and annual PM_{2.5} standards, and as a nonattainment area for the California annual PM_{2.5} standard. The SJVAB is designated as unclassified or attainment for all other criteria air pollutants.

2.3.2 Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SJVAPCD and CARB monitors local ambient air quality at the project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2018 to 2020 are presented in Table 3. The Shafter-Walker Street monitoring station, located at 548 Walker Street, Shafter CA, 93263, is the nearest air quality monitoring station to the project site, located approximately 29.5 miles away. The data collected at this station are considered representative of the air quality experienced in the project vicinity. Air quality data for O₃ and NO₂ from the Shafter-Walker Street monitoring station are provided in Table 3. Because CO, PM₁₀, and PM_{2.5} are not monitored at the Shafter-Walker monitoring station, CO, PM₁₀, and PM_{2.5} measurements were taken from the Bakersfield monitoring stations located at 2000 South Union Avenue (47.8 miles) and 5558 California Avenue (44.2 miles). SO₂ is not currently monitored in the County and data is not available. The number of days exceeding the ambient air quality standards are also shown in Table 3.

Table 3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2018	2019	2020	2018	2019	2020
Ozone (O₃)										
Shafter-Walker Street	ppm	Maximum 1-hour concentration	California	0.09	0.098	0.087	0.116	4	0	6
	ppm	Maximum 8-hour concentration	California	0.070	0.090	0.077	0.098	35	15	34
			National	0.070	0.090	0.077	0.098	33	14	34
Nitrogen Dioxide (NO₂)										
Shafter-Walker Street	ppm	Maximum 1-hour concentration	California	0.18	0.047	0.049	0.040	0	0	0
			National	0.100	0.048	0.049	0.041	0	0	0
	ppm	Annual concentration	California	0.030	0.009	0.008	0.008	0	0	0
			National	0.053	0.010	0.009	0.009	0	0	0
Carbon Monoxide (CO)										
Bakersfield-2000 South Union Avenue	ppm	Maximum 1-hour concentration	California	20	1.9	1.2	1.7	0	0	0
			National	35	1.9	1.2	1.7	0	0	0
	ppm	Maximum 8-hour concentration	California	9.0	1.3	1.0	1.6	0	0	0
			National	9	1.3	1.0	1.6	0	0	0
Coarse Particulate Matter (PM₁₀)^a										
Bakersfield-5558 California Avenue	µg/m ³	Maximum 24-hour concentration	California	50	142.0	125.9	196.8	— (13)	108.1 (17)	— (18)
			National	150	136.1	116.3	193.8	0.0 (0)	0.0 (0)	0.0 (0)
	µg/m ³	Annual concentration	California	20	—	39.0	—	—	—	

Table 3. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2018	2019	2020	2018	2019	2020
Fine Particulate Matter (PM_{2.5})^a										
Bakersfield-5558	µg/m ³	Maximum 24-hour concentration	National	35	98.5	59.1	150.7	40.3 (36)	12.3 (12)	46.4 (44)
California Avenue	µg/m ³	Annual concentration	California	12	17.6	11.8	19.7	—	—	—
			National	12.0	15.7	11.5	19.7	—	—	—

Sources: CARB 2020a; EPA 2020a.

Notes: — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value; ppm = parts per million

Data taken from CARB iADAM (<http://www.arb.ca.gov/adam>) and EPA AirData (<https://www.epa.gov/outdoor-air-quality-data>) represent the highest concentrations experienced over a given year. Exceedances of national and California standards are only shown for O₃ and particulate matter. Daily exceedances for particulate matter are estimated days because PM₁₀ and PM_{2.5} are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O₃, annual PM₁₀, or 24-hour SO₂, nor is there a California 24-hour standard for PM_{2.5}.

SO₂ is not currently monitored in the County and data is not available; therefore, it is not included in the table.

Shafter-Walker Monitoring Station is located at 548 Walker Street, Shafter, California, 93263.

Bakersfield Monitoring Station is located at 2000 South Union Avenue, Bakersfield, California 93307.

Bakersfield Monitoring Station located at 5558 California Avenue, Bakersfield, California, 93309.

^a Measurements of PM₁₀ and PM_{2.5} are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard

2.4 Significance Criteria and Methodology

2.4.1 Thresholds of Significance

The Kern County CEQA Implementation Document and Kern County Environmental Checklist identify the following criteria, as established in Appendix G of the CEQA Guidelines, to determine if a project could potentially have a significant adverse effect related to air quality. The significance criteria used to evaluate the project impacts to air quality is based on the recommendations provided in Appendix G of the CEQA Guidelines. For the purposes of this air quality analysis, a significant impact would occur if the project would (14 CCR 15000 et seq.):

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. 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.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the project would have a significant impact on air quality.

The SJVAPCD has adopted guidelines for implementing CEQA which are applied during CEQA review of projects for which SJVAPCD is the lead agency. However, Kern County is the CEQA lead agency for the proposed project and will make the determination as to whether or not the proposed project may have a significant effect on the environment. Kern County's determination will take into consideration SJVAPCD's criteria but will ultimately be based upon the thresholds adopted by Kern County. 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.

SJVAPCD

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable SJVAPCD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan (SJVAPCD 2015a).

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 SJVAPCD GAMAQI has established emissions-based thresholds of significance for criteria pollutants (SJVAPCD 2015a), which are depicted in Table 4. As shown in Table 4, the SJVAPCD has established significance thresholds for construction emissions and operational permitted and non-permitted equipment and activities, and it recommends evaluating impact significance for these categories separately. These thresholds of significance are based on a calendar-year basis, although construction emissions are assessed on a rolling 12-month period.

Table 4. SJVAPCD CEQA Significance Thresholds for Criteria Pollutants

Pollutant	Construction Emissions (tons per year)	Operational Emissions (tons per year)	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
ROG	10	10	10
NO _x	10	10	10
CO	100	100	100
SO _x	27	27	27
PM ₁₀	15	15	15
PM _{2.5}	15	15	15

Source: SJVAPCD 2015a.

In addition to the annual emissions mass thresholds described in Table 4, the SJVAPCD has also established screening criteria to determine whether a project would result in a CO hotspot at affected roadway intersections (SJVAPCD 2015a). If neither of the following criteria is met at any of the intersections affected by the project, the project would result in no potential to create a violation of the CO standard:

- A traffic study for the project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the project site will be reduced to LOS E or F.
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project site.

Ambient Air Quality Impacts

Appendix G of the CEQA Guidelines indicates that a project would have a significant air quality impact if it would violate any air quality standard or contribute substantially to an existing or projected air quality violation. The thresholds of significance for ambient air quality are based on the CAAQS and NAAQS, whereby a project would be considered to have a significant impact if its emissions are predicted to cause or contribute to a violation of an ambient air quality standard by exceeding any CAAQS or NAAQS (SJVAPCD 2015a). The SJVAPCD recommends that an Ambient Air Quality Assessment be performed when on-site emissions of any criteria pollutant would equal or exceed any applicable threshold of significance for criteria pollutants or 100 pounds per day of any criteria pollutant (SJVAPCD 2015a). In the Ambient Air Quality Assessment, air pollutant concentrations are determined through air quality dispersion modeling, added to the corresponding background level, and compared to the relevant CAAQS and/or NAAQS. If the air pollutant concentrations plus background levels, however, would exceed a CAAQS or

NAAQS, the SJVAPCD recommends that specified significant impact levels (SILs) be applied to the modeled concentrations to assess whether a project’s emissions would contribute substantially to an existing violation of the CAAQS or NAAQS (SJVAPCD 2014b).

Expose Sensitive Receptors to Substantial Pollutant Concentrations

The SJVAPCD has established thresholds of significance for combined TAC emissions from the operations of both permitted and non-permitted sources (SJVAPCD 2015a). projects that have the potential to expose the public to TACs in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the maximally exposed individual equals or exceeds 20 in 1 million people⁴
- Hazard Index⁵ for acute and chronic non-carcinogenic TACs equals or exceeds 1 for the maximally exposed individual

Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People

As described in the GAMAQI, due to the subjective nature of odor impacts, there are no quantitative thresholds to determine if potential odors would have a significant impact (SJVAPCD 2015a). projects must be assessed for odor impacts on a case-by-case basis for the following two situations:

- Generators: projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate
- Receivers: Residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources

The SJVAPCD has identified some common types of facilities that have been known to produce substantial odors, as well as screening distances between these odor sources and receptors. These are depicted in Table 5.

Table 5. Screening Levels for Potential Odor Sources

Type of Facility	Screening Distance (Miles)
Wastewater Treatment Facility	2
Sanitary Landfill	1
Transfer Station	1
Composting Facility	1
Petroleum Facility	2
Asphalt Batch Plant	1
Chemical Manufacturing	1

⁴ The cancer risk threshold was increased from 10 to 20 in 1 million with approval of APR 1906 (Framework for Performing Health Risk Assessments) on June 30, 2015.

⁵ Non-cancer adverse health impact, both for acute (short-term) and chronic (long-term) health effects, is measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentration from the project to a published reference exposure level that could cause adverse health effects as established by the Office of Environmental Health Hazard Assessment (OEHA). The ratio (referred to as the hazard quotient) of each noncarcinogenic substance that affects a certain organ system is added together to produce an overall hazard index for that organ system.

Table 5. Screening Levels for Potential Odor Sources

Type of Facility	Screening Distance (Miles)
Fiberglass Manufacturing	1
Painting/Coating (i.e., auto body shop)	1
Food Processing Facility	1
Feed Lot/Dairy	1
Rendering Plant	1

Source: SJVAPCD 2015a.

If the project would result in an odor source and sensitive receptors being located within these screening distances, additional analysis would be required. For projects involving new receptors locating near an existing odor source where there is currently no nearby development and for new odor sources locating near existing receptors, the SJVAPCD recommends the analysis be based on a review of odor complaints for similar facilities, with consideration also given to local meteorological conditions, particularly the intensity and direction of prevailing winds. Regarding the complaint record of the odor source facility (or similar facility), the facility would be considered to result in significant odors if there has been:

- More than one confirmed complaint per year averaged over a 3-year period.
- Three unconfirmed complaints⁶ per year averaged over a 3-year period.

Cumulative

A project’s emissions may be individually limited but cumulatively considerable when taken in combination with past, present, and future development within the SJVAB. If a project would result in a significant impact based on the SJVAPCD annual thresholds of significance for criteria pollutants, then the project would also be considered cumulatively significant. However, if the project emissions are below the annual significance thresholds for criteria pollutants, the impact may still be cumulatively significant. For instance, if the project results in criteria pollutant concentrations that exceed any of the federal health-based ambient air concentration standards or causes a worsening of areas already exceeding those standards, the project’s impacts would be considered individually significant, as well as cumulatively significant. In addition, the combined emissions of the project and cumulative development located within the same area could potentially cause or worsen an exceedance of the concentration standards, whereby the project would have a cumulatively significant impact (SJVAPCD 2015a).

In regard to TACs, since impacts are localized and the SJVAPCD thresholds of significance for TACs have been established at an extremely conservative level, risks that equal or exceed the individual thresholds of significance are also considered cumulatively significant (SJVAPCD 2015a). No other cumulative risk thresholds would apply.

The SJVAPCD has not established cumulative significance thresholds regarding odor impacts.

⁶ An unconfirmed complaint means that either the odor/air contaminant release could not be detected or the source/facility cannot be determined (SJVAPCD 2015a).

2.4.2 Approach and Methodology

2.4.2.1 Construction Emissions

Emissions from the construction phase of the project were estimated using CalEEMod Version 2020.4.0. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the project applicant and CalEEMod default values when project specifics were not known.

For purposes of estimating project emissions, and based on information provided by the project applicant, it is assumed that construction of the project would commence in January 2024⁷ and would last approximately 12 months, ending in December 2024. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Perimeter Fence Excavation and Installation – Phase I: 2 months
- Perimeter Fence Excavation and Installation – Phase II: 2 months
- Site and Access Road Grading/Grubbing/Compacting – Phase II: 3 months
- Aboveground and Underground Low-Voltage Cable Installation – Phase III: 5 months
- Site and Access Road Grading/Grubbing/Compacting – Phase I: 3 months
- Battery Energy Storage System – Phase III: 8 months
- Aboveground and Underground Low-Voltage Cable Installation – Phase I: 5 months
- Aboveground and Underground Low-Voltage Cable Installation – Phase II: 5 months
- Steel Pile Installation – Phase II: 6 months
- Steel Pile Installation – Phase I: 6 months
- Gen-Tie Installation – Phase I: 2 months
- Gen-Tie Installation – Phase II: 2 months
- Testing & Commissioning – Phase I: 5 months
- Testing & Commissioning – Phase II: 5 months
- Testing & Commissioning – Phase III: 5 months
- Site Cleanup & Restoration – Phase I: 2 months
- Site Cleanup & Restoration – Phase II: 2 months
- Site Cleanup & Restoration – Phase III: 2 months
- PG&E Switching Station Site Preparation: 2 months
- PG&E Switching Station Construction: 6 months
- PG&E Switching Station Gen-Tie: 6 months
- PG&E Switching Station Cleanup: 3 months

Grading would be balanced onsite. For vendor and haul trucks it was assumed that there would be 0.5 miles of unpaved road travel per trip. Workers were assumed to park in a staging area (compacted soil) and travel from

⁷ The analysis assumes a construction start date of January 2024, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Delano, which is the nearest employment center to the project site. Water trucks are represented in the vendor truck category and were assumed to deliver water from the Buena Vista Water Storage District. All material deliveries are provided in the haul truck category and are assumed to come from the Port of Los Angeles. The one-way distance for haul trucks is to the edge of the SJVAB. The construction equipment mix and vehicle trips used for estimating the project-generated construction emissions are shown in Table 6.

Table 6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Perimeter Fence Excavation and Installation - Phase I	80	10	0	Skid Steer Loaders	1	8
Perimeter Fence Excavation and Installation - Phase II	80	10	0	Skid Steer Loaders	1	8
Site and Access Road Grading/ Grubbing/ Compacting - Phase II	100	30	0	Graders	2	8
				Off-Highway Trucks	4	8
				Rollers	2	8
				Rubber Tired Dozers	2	8
				Rubber Tired Loaders	1	8
				Scrapers	1	8
Aboveground and Underground Low-Voltage Cable Installation - Phase III	80	10	0	Excavators	2	8
				Generator Sets	1	8
				Other Construction Equipment	1	8
				Rollers	1	8
				Rough Terrain Forklifts	1	8
Site and Access Road Grading/ Grubbing/ Compacting - Phase I	100	20	0	Graders	2	8
				Off-Highway Trucks	4	8
				Rollers	2	8
				Rubber Tired Dozers	2	8
				Rubber Tired Loaders	1	8
Scrapers	1	8				

Table 6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Battery Energy Storage System - Phase III	100	20	864	Tractors/Loaders/Backhoes	2	8
				Cranes	1	8
				Graders	1	8
				Rough Terrain Forklifts	1	8
Aboveground and Underground Low-Voltage Cable Installation - Phase I	80	10	0	Excavators	2	8
				Generator Sets	1	8
				Other Construction Equipment	1	8
				Rollers	1	8
				Rough Terrain Forklifts	1	8
Aboveground and Underground Low-Voltage Cable Installation - Phase II	80	10	0	Excavators	2	8
				Generator Sets	1	10
				Other Construction Equipment	1	8
				Rollers	1	8
				Rough Terrain Forklifts	1	8
Steel Pile Installation - Phase II	160	20	1,090	Cranes	1	8
				Generator Sets	2	10
				Off-Highway Trucks	20	8
				Other Construction Equipment	4	8
				Rough Terrain Forklifts	8	8
Steel Pile Installation - Phase I	160	20	1,634	Cranes	1	8
				Generator Sets	2	8
				Off-Highway Trucks	20	8
				Other Construction Equipment	4	8
				Rough Terrain Forklifts	8	8
Gen-Tie Installation - Phase I	80	20	0	Cranes	1	8

Table 6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Gen-Tie Installation - Phase II	80	20	0	Cranes	1	8
Testing & Commissioning - Phase I	8	0	0	NA	NA	NA
Testing & Commissioning - Phase II	8	0	0	NA	NA	NA
Testing & Commissioning - Phase III	8	0	0	NA	NA	NA
Site Cleanup & Restoration - Phase I	10	10	0	Graders	1	8
				Skid Steer Loaders	1	8
Site Cleanup & Restoration - Phase II	4	10	0	Graders	1	8
				Skid Steer Loaders	1	8
Site Cleanup & Restoration - Phase III	4	10	0	Graders	1	8
				Skid Steer Loaders	1	8
PG&E Switching Station Site Preparation	18	20	0	Rollers	1	8
				Rubber Tired Dozers	3	8
				Scrapers	1	8
				Tractors/Loaders/Backhoes	4	8
PG&E Switching Station Construction	20	30	0	Aerial Lifts	2	8
				Cranes	1	7
				Forklifts	3	8
				Tractors/Loaders/Backhoes	3	7
				Welders	1	8
PG&E Switching Station Gen-Tie	20	20	0	Aerial Lifts	2	8
				Cranes	1	7
				Forklifts	3	8
				Tractors/Loaders/Backhoes	3	7
	10	20	0	Graders	1	8

Table 6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
PG&E Switching Station Cleanup				Skid Steer Loaders	1	8

Notes: See Appendix A for details.

Once the project reaches the end of its operational lifetimes (35 years) it will be decommissioned. For purposes of estimating project decommissioning emissions, it is assumed that activity would commence in January 2061 and would last approximately 12 months. However, CalEEMod does not have emission factors beyond 2050. As such, for modeling purposes, year 2050 was assumed for decommissioning⁸. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Perimeter Fence Removal – Phase I: 2 months
- Perimeter Fence Removal – Phase II: 2 months
- Battery Energy Storage System Removal – Phase III: 8 months
- Steel Pile Removal – Phase II: 6 months
- Steel Pile Removal – Phase I: 6 months
- Gen-Tie Removal – Phase I: 2 months
- Gen-Tie Removal – Phase II: 2 months
- Site Cleanup & Restoration – Phase I: 2 months
- Site Cleanup & Restoration – Phase II: 2 months
- Site Cleanup & Restoration – Phase III: 2 months

For vendor and haul trucks it was assumed that there would be 0.5 miles of unpaved road travel per trip. Workers were assumed to park in a staging area (compacted soil). The construction equipment mix and vehicle trips used for estimating the project-generated decommissioning emissions are shown in Table 7.

⁸ The analysis assumes a construction start date of January 2050, which represents the earliest date decommissioning would initiate. Assuming the earliest start date for decommissioning represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

Table 7. Decommissioning Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Perimeter Fence Removal - Phase I	80	10	0	Skid Steer Loaders	1	8
Perimeter Fence Removal - Phase II	80	10	0	Skid Steer Loaders	1	8
Battery Energy Storage System Removal - Phase III	100	20	864	Cranes	1	8
				Graders	1	8
				Rough Terrain Forklifts	1	8
				Rough Terrain Forklifts	1	8
Steel Pile Removal - Phase II	160	20	1,090	Cranes	1	8
				Generator Sets	2	10
				Off-Highway Trucks	20	8
				Other Construction Equipment	4	8
				Rough Terrain Forklifts	8	8
Steel Pile Removal - Phase I	160	20	1,634	Cranes	1	8
				Generator Sets	2	8
				Off-Highway Trucks	20	8
				Other Construction Equipment	4	8
				Rough Terrain Forklifts	8	8
Gen-Tie Removal - Phase I	80	20	0	Cranes	1	8
Gen-Tie Removal - Phase II	80	20	0	Cranes	1	8
Site Cleanup & Restoration - Phase I	10	10	0	Graders	1	8
				Skid Steer Loaders	1	8
Site Cleanup & Restoration - Phase II	4	10	0	Graders	1	8
				Skid Steer Loaders	1	8
	4	10	0	Graders	1	8

Table 7. Decommissioning Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Cleanup & Restoration - Phase III				Skid Steer Loaders	1	8

Notes: See Appendix A for details.

The project would implement dust control strategies in accordance with SJVAPCD Rule 8021. To reflect implementation of proposed dust control strategies, the following was assumed in CalEEMod:

- Water exposed area two times per day (55% reduction in PM₁₀ and PM_{2.5}).
- Limit vehicle travel on unpaved roads to 15 miles per hour.

2.4.2.1.1 Air Quality Impact Assessment

As recommended by the *Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a), an ambient air quality impacts assessment should be performed if any pollutants exceed 100 pounds per day during construction or operation. As discussed in Section 2.5.2, the project would exceed 100 pounds per day for NO_x and CO.

For the initial assessment (Level 1) of the ambient air quality impact analysis, the maximum background concentration for the project site for each pollutant and averaging period combination was added to the corresponding maximum ground level concentration (GLC) from project-related construction (Step 1). The sum of these values was then compared to the corresponding ambient air quality standard. If the incremental increase in concentration from project-related sources did not cause an exceedance of an ambient air quality standard, then the analysis was complete for that source/receptor/pollutant combination. If the incremental increase in concentration from project-related sources caused an exceedance of an ambient air quality standard, then the analysis proceeded to Step 2. Step 2 was similar to Step 1 with one major difference. For this second step, the maximum GLC of each pollutant and averaging period combination were compared to its corresponding Significant Impact Level (SIL). The SIL is used to evaluate whether the project’s construction emissions would *contribute* to a violation of an ambient air quality standard, where the background level is close to or exceeds an ambient air quality standard. If the maximum GLC did not exceed the corresponding SIL, then the analysis was complete for that source/receptor/pollutant combination, and no further analysis was required.

For the Level 1 approach, in accordance with SJVAPCD APR-1925, all required criteria pollutants are modeled together, with a normalized emission rate (1 gram/second) for each source. The dispersion modeling of PM₁₀ and PM_{2.5} was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model SDAPCD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2015). Principal parameters of this Level 1 modeling are presented in Table 8.

Table 8. AERMOD Principal Parameters - PM Dispersion Modeling

Parameter	Details
Meteorological Data	The latest 5-year meteorological data (2007–2011) for the Wasco Station (Station ID 99010) from SJVAPCD were downloaded and then input to AERMOD. For cancer or chronic noncancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. However, based on the SJVAPCD guidelines, the rural dispersion option was selected due to the predominant land use surrounding the project.
Terrain Characteristics	The terrain in the vicinity of the modeled project site is generally flat. The elevation of the modeled site is about 212 feet above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate.
Elevation Data	Digital elevation data were imported into AERMOD, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the United States Geological Survey’s National Elevation Dataset format with a 30-meter resolution.
Emission Sources and Release Parameters	Air dispersion modeling of PM from construction equipment was conducted using emissions estimated using the CalEEMod, assuming emissions would occur 8 hours per day, 5 days per week. The project area was modeled as a series of line-volume sources. Onsite emissions of vehicles were also included, assuming a 0.25-mile travel distance.
Source Release Characterizations	Based on EPA methodology, the modeled line volume sources would result in a release height of 3.4 meters, a plume height of 6.8 meters, and a plume width of 8.6 meters for off-road equipment and diesel trucks (EPA 2015).
Receptors	A telescoping grid of receptors was placed around the project site boundary in the following spacing: 25 meter spacing on the facility boundary; 25 meter spacing from the facility boundary to 100 meters; 50 meter spacing from 100 meters to 250 meters; 100 meter spacing from 250 meters to 500 meters; 250 meter spacing from 500 meters to 1,000 meters; and 500 meter spacing from 1,000 meters to 2,000 meters.

Note: See Appendix B.

2.4.2.1.2 Particulate Matter Dispersion Modeling

In accordance with the *for Preparing an Air Quality Assessment for use in Environmental Impact Reports* (Kern County 2006), the maximum 24-hour average concentration of primary PM₁₀ and PM_{2.5} was modeled at the project boundary. The dispersion modeling of PM₁₀ and PM_{2.5} was performed using the American Meteorological Society/EPA Regulatory Model (AERMOD), which is the model SDAPCD requires for atmospheric dispersion of emissions. AERMOD is a steady-state Gaussian plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources, building downwash, and simple and complex terrain (EPA 2015). Principal parameters of this PM modeling are presented in Table 9.

Table 9. AERMOD Principal Parameters - PM Dispersion Modeling

Parameter	Details
Meteorological Data	The latest 5-year meteorological data (2007–2011) for the Wasco Station (Station ID 99010) from SJVAPCD were downloaded and then input to AERMOD. For cancer or chronic noncancer risk assessments, the average cancer risk of all years modeled was used.
Urban versus Rural Option	Urban areas typically have more surface roughness, as well as structures and low-albedo surfaces that absorb more sunlight—and thus more heat—relative to rural areas. However, based on the SJVAPCD guidelines, the rural dispersion option was selected due to the predominant land use surrounding the project.
Terrain Characteristics	The terrain in the vicinity of the modeled project site is generally flat. The elevation of the modeled site is about 212 feet above sea level. Digital elevation model files were imported into AERMOD so that complex terrain features were evaluated as appropriate.
Elevation Data	Digital elevation data were imported into AERMOD, and elevations were assigned to the emission sources and receptors. Digital elevation data were obtained through AERMOD View in the United States Geological Survey’s National Elevation Dataset format with a 30-meter resolution.
Emission Sources and Release Parameters	Air dispersion modeling of PM from construction equipment was conducted using emissions estimated using the CalEEMod, assuming emissions would occur 8 hours per day, 5 days per week. The project area was modeled as a series of line-volume sources. Onsite emissions of vehicles were also included, assuming a 0.25-mile travel distance.
Source Release Characterizations	Based on EPA methodology, the modeled line volume sources would result in a release height of 3.4 meters, a plume height of 6.8 meters, and a plume width of 8.6 meters for off-road equipment and diesel trucks (EPA 2015).
Receptors	A cartesian plant boundary was established for the project with receptors every 25 meters.

Note: See Appendix B.

2.4.2.2 Operational Emissions

Emissions from the operational phase of the project were estimated using CalEEMod Version 2020.4.0. Operational year 2025 was assumed consistent with completion of project construction.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as described in the following text.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2021). Consumer product ROG emissions are estimated in CalEEMod based on the floor area of nonresidential buildings and on the default factor of pounds of ROG per building square foot per day. For parking lot land uses, CalEEMod estimates

ROG emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of ROG per square foot per day.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth) for the operations and maintenance building. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. The operations and maintenance building is designed as all-electric; as such, no natural gas will be consumed during operation.

CalEEMod default values for energy consumption for each land use were applied for the project analysis. The energy use from nonresidential land uses is calculated in CalEEMod based on the Commercial Appliance Saturation Study (CAPCOA 2021). CalEEMod assumes compliance with the 2019 Title 24 building code standards.

Mobile Sources

The project would generate air quality emissions from mobile sources (vehicular traffic) as a result of the employees of the project. The project is anticipated to have up to five permanent employees in the operations and maintenance building. CalEEMod was used to estimate emissions from proposed vehicular sources (refer to Appendix A). It was also assumed that there would be one delivery truck for water per week. Water trucks for solar panel washing were included as well consistent with the Water Supply Assessment. CalEEMod default data, trip length, trip modes, fleet mix, and emissions factors were used for the model inputs. CalEEMod default vehicle emission factors and vehicle fleet mix for 2025, as based on the CARB EMFAC2017 model, were used to estimate emissions associated with vehicular sources.

Stationary Sources

The project would generate air quality emissions from two, 200-kilowatt diesel emergency generators. They were estimated to operate up to 30 minutes per day and 50 hours per year for maintenance and testing in accordance with CARB's ATCM for Stationary Compression Ignition Engines, 17 CCR § 93115. CalEEMod default emission factors were assumed.

2.5 Impact Analysis

2.5.1 Would the Project Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?

A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable SJVAPCD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase

dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to comply with the applicable air quality plan (SJVAPCD 2015a).

The project would comply with applicable SJVAPCD rules and regulations, such as Regulation VIII (Fugitive PM₁₀ Prohibitions) and IX (Mobile and Indirect Sources) which are discussed in detail in Section 2.2.3.1. The project would not conflict with existing land uses or result in population growth. In addition, the project would not result in a substantial increase in long-term trips or vehicle miles traveled in the area as only 5 employees would work in the operations and maintenance building. Haul truck, vendor truck, and worker vehicle trips would be generated during the proposed construction activities but would cease after construction is completed. Unmitigated NO_x emissions during construction would exceed the SJVAPCD significance threshold; however, as discussed in 2.5.2, mitigated emissions and compliance with SJVAPCD Rule 9510 would reduce emissions to less than significant (model outputs included in Appendix A). During the longer-term operational phase, the project would have routine inspection and maintenance activities that would result in a net increase in emissions although, as discussed in Section 2.5.2, the increase in emissions would not exceed any significance threshold or violate any SJVAPCD rule or regulation.

In summary because the project would offset NO_x emissions during construction (as shown in Section 2.5.2) in compliance with SJVAPCD Rule 9510, the project would result in a **less than significant** impact with mitigation during construction.

2.5.2 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?

Past, present, and future development projects may contribute to adverse air quality impacts in the SJVAB on a cumulative basis. By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SJVAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the applied significance thresholds, it would have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Construction and operation of the project would result in emissions of criteria air pollutants, which may result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the SJVAB is designated as nonattainment under the NAAQS or CAAQS. As discussed in Section 2.3.1, the SJVAB has been designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} under national and/or California standards. The following discussion quantitatively evaluates potential short-term construction and long-term operational impacts that would result from implementation of the project.

Construction Emissions

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and ROG off-gassing) and off-site sources (i.e.,

vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in Section 2.4.2.1, Construction Emissions, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during construction (2024). Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the project applicant and are intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed project information was not available.

Implementation of the project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The project would implement various dust control strategies and would be required to comply with SJVAPCD Regulation VIII to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads three times per day depending on weather conditions and restricting vehicle speed on unpaved roads to 15 miles per hour. Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of ROG, NO_x, CO, PM₁₀, and PM_{2.5}. Pursuant to Regulation VIII, Rule 8021, Section 6.3, the project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts to less than significant for project construction.

Table 10 presents the estimated annual construction emissions generated during construction of the project. Details of the emission calculations are provided in Appendix A.

Table 10. Estimated Annual Construction Criteria Air Pollutant Emissions - Unmitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
2024	1.61	15.56	17.02	0.05	9.43	1.89
2061	0.54	3.54	7.65	0.02	4.54	0.67
Maximum	1.61	15.56	17.02	0.05	9.43	1.89
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	Yes	No	No	No	No
Annual Emissions with ISR Compliance¹	1.61	12.45	17.02	0.05	5.19	1.89
Threshold Exceeded?	No	Yes	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01. See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510. See Appendix A for complete results.

As shown in Table 10, annual construction emissions would not exceed the SJVAPCD significance thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}; however, the project would exceed the threshold for NO_x. The project would also comply with SJVAPCD Rule 9510, Indirect Source Review, which requires large development projects to reduce exhaust emissions from construction equipment by 20% for NO_x and 45% for PM₁₀ compared to the statewide average. When accounting for compliance with Rule 9510, emissions of NO_x would not be reduced below levels of significance; thus, impacts would be **potentially significant** and mitigation is required.

Mitigation Measures

The following mitigation measure is required to reduce emissions of NO_x during construction:

MM-AQ-1 Construction Equipment. Prior to Kern County’s approval of any construction-related permits, the project applicant or its designee shall place the following requirements on all plans, which shall be implemented during each construction phase to minimize diesel particulate matter emissions:

- a. Heavy-duty diesel-powered construction equipment shall be equipped with Tier 4 Final or better diesel engines for engines 50 horsepower or greater. The County shall verify and approve all pieces within the construction fleet that would not meet Tier 4 Final standards.
- b. Vehicles in loading and unloading queues shall not idle for more than 5 minutes and shall turn their engines off when not in use to reduce vehicle emissions.
- c. All construction equipment shall be properly tuned and maintained in accordance with manufacturer’s specifications.
- d. When construction equipment units that are less than 50 horsepower would be employed, that equipment shall be electrical or natural-gas powered, where available.
- e. A Construction Traffic Control Plan shall be developed to ensure construction traffic and equipment use is minimized to the extent practicable. The Construction Traffic Control Plan shall include measures to reduce the amount of large pieces of equipment operating simultaneously during peak construction periods, schedule vendor and haul truck trips to occur during non-peak hours, establish dedicated construction parking areas to encourage carpooling and efficiently accommodate construction vehicles, identify alternative routes to reduce traffic congestion during peak activities, and increase construction employee carpooling.

Table 11 presents the estimated annual construction emissions generated during construction of the project including mitigation measure **MM-AQ-1**. Details of the emission calculations are provided in Appendix A.

Table 11. Estimated Annual Construction Criteria Air Pollutant Emissions - Mitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
2024	0.68	4.69	20.17	0.05	8.95	1.45

Table 11. Estimated Annual Construction Criteria Air Pollutant Emissions - Mitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
2061	0.22	2.26	8.59	0.02	4.53	0.65
Maximum	0.68	4.69	20.17	0.05	8.95	1.45
<i>SJVAPCD Threshold</i>	10	10	100	27	15	15
Threshold Exceeded?	No	No	No	No	No	No
Annual Emissions with ISR Compliance¹	0.68	3.75	20.17	0.05	4.92	1.45
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01. See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510.

See Appendix A for complete results.

Emissions include application of mitigation measure MM-AQ-1.

As shown in Table 11, mitigated annual construction emissions would not exceed the SJVAPCD significance thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}; however, the project would still exceed the threshold for NO_x. The project would also comply with SJVAPCD Rule 9510, Indirect Source Review, which requires large development projects to reduce exhaust emissions from construction equipment by 20% for NO_x and 45% for PM₁₀ compared to the statewide average. When accounting for compliance with Rule 9510, emissions of NO_x would be reduced below levels of significance; thus, impacts would be **less than significant** with mitigation. The maximum daily emissions during construction are shown in Table 12.

Table 12. Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
2024	26.21	239.81	256.75	0.55	30.01	16.85
2061	6.93	30.33	98.57	0.20	1.11	0.57
Maximum	26.21	239.81	256.75	0.55	30.01	16.85
<i>SJVAPCD Threshold</i>	100	100	100	100	100	100
Threshold Exceeded?	No	Yes	Yes	No	No	No
Annual Emissions with ISR Compliance¹	26.21	191.85	256.75	0.55	16.51	16.85
Threshold Exceeded?	No	Yes	Yes	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01. See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510. See Appendix A for complete results.

As shown in Table 12, the project would exceed the 100 pound per day screening threshold for NO_x and CO after assuming compliance with SJVAPCD Rule 9510. Table 13 shows the maximum daily construction emissions including mitigation measure MM-AQ-1.

Table 13. Maximum Daily Construction Criteria Air Pollutant Emissions - Mitigated

Year	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
2024	8.32	36.33	322.68	0.55	24.14	11.49
2061	2.32	10.50	111.98	0.20	0.89	0.35
Maximum	8.32	36.33	322.68	0.55	24.14	11.49
<i>SJVAPCD Threshold</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Threshold Exceeded?	No	No	Yes	No	No	No
Annual Emissions with ISR Compliance¹	8.32	29.06	322.68	0.55	13.28	11.49
Threshold Exceeded?	No	No	Yes	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510. See Appendix A for complete results.

As shown in Table 13, with mitigation, the project would exceed the 100 pound per day screening threshold for NO_x and CO after assuming compliance with SJVAPCD Rule 9510. As such, an ambient air quality assessment is required and provided below.

Construction Ambient Air Quality Impact Assessment

Although the project would not exceed the annual significance threshold established by the SJVAPCD for ROG, SO_x, PM₁₀, or PM_{2.5}, the project would emit more than 100 pounds of NO_x and CO per day during construction. As recommended by the *Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a), an ambient air quality impacts assessment should be performed if any pollutants exceed 100 pounds per day during construction or operation. Maximum daily emissions were used as the basis for determining the project’s potential impact on ambient air quality. Summary tables of annual and daily emissions associated with construction are included in Appendix A.

For the initial assessment (Step 1) of the ambient air quality impact analysis, the maximum background concentration for the project site for each pollutant and averaging period combination was added to the corresponding maximum ground level concentration (GLC) from project-related construction. The sum of these values was then compared to the corresponding ambient air quality standard. If the incremental increase in concentration from project-related sources did not cause an exceedance of an ambient air quality standard, then the analysis was complete for that source/receptor/pollutant combination. If the incremental increase in

concentration from project-related sources caused an exceedance of an ambient air quality standard, then the analysis proceeded to Step 2. Step 2 was similar to Step 1 with one major difference. For this second step, the maximum GLC of each pollutant and averaging period combination were compared to its corresponding Significant Impact Level (SIL). The SIL is used to evaluate whether the project's construction emissions would *contribute* to a violation of an ambient air quality standard, where the background level is close to or exceeds an ambient air quality standard. If the maximum GLC did not exceed the corresponding SIL, then the analysis was complete for that source/receptor/pollutant combination, and no further analysis was required. Table 14 presents a summary of the AQIA undertaken to determine whether construction activities associated with the project would cause or contribute to ambient air quality impacts.

Table 14. Construction AQIA - Unmitigated

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
1-hour CO	State	1.9	2,177	914.53	3,091	22,900	PASS	2000	Step 1
	Federal	1.9	2,177	914.53	3,091	40,100	PASS	2000	Step 1
8-hour CO	State	1.6	1,833	152.42	1,985	10,300	PASS	500	Step 1
	Federal	1.6	1,833	152.42	1,985	10,300	PASS	500	Step 1
1-hour NO ₂	State	0.049	92	546.69	639	339	Step 2	7.5	FAIL
	Federal	0.049	92	546.69	639	188	Step 2	7.5	FAIL
Annual NO ₂	State	0.010	19	4.60	24	57	PASS	1	Step 1
	Federal	0.010	19	4.60	23	100	PASS	1	Step 1
1-hour SO ₂	State	0.016	42	1.96	44	655	PASS	7.5	Step 1
	Federal	0.016	42	1.96	44	196	PASS	7.8	Step 1
24-Hour SO ₂	State	0.002	5	0.12	5	105	PASS	5	Step 1
	Federal	0.002	5	0.12	5	367	PASS	5	Step 1
Annual SO ₂	Federal	0.000	1	0.01	1	79	PASS	1	Step 1
24-hour PM ₁₀ - Exhaust	State	--	197	2.17	199	50	Step 2	5	PASS
	Federal	--	194	2.17	196	150	Step 2	5	PASS
24-hour PM ₁₀ - Fugitive	State	--	197	5.27	202	50	Step 2	10.4	PASS
	Federal	--	194	5.27	199	150	Step 2	10.4	PASS
Annual PM ₁₀ - Exhaust	State	--	39	0.23	39	20	Step 2	1	PASS
Annual PM ₁₀ - Fugitive	State	--	39	0.57	40	20	Step 2	2.08	PASS
24-hour PM _{2.5} - Exhaust	Federal	--	151	2.01	153	35	Step 2	1.2	FAIL
24-hour PM _{2.5} - Fugitive	Federal	--	151	2.44	153	35	Step 2	2.5	PASS
Annual PM _{2.5} - Exhaust	State	--	20	0.22	20	12	Step 2	0.2	FAIL
	Federal	--	20	0.22	20	12	Step 2	0.2	FAIL
Annual PM _{2.5} - Fugitive	State	--	20	0.26	20	12	Step 2	0.63	PASS
	Federal	--	20	0.26	20	12	Step 2	0.63	PASS

Source: See Appendix B.

As shown in Table 14, the unmitigated construction emissions would exceed the SILs for the 1-hour NO₂, 24-hour PM_{2.5} for exhaust emissions, and annual PM_{2.5} for exhaust emissions. Table 15 shows the mitigated construction emissions including application of mitigation measure **MM-AQ-1**.

Table 15. Construction AQIA - Mitigated

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
1-hour CO	State	1.9	2,177	1,149.40	3,326	22,900	PASS	2000	Step 1
	Federal	1.9	2,177	1,149.40	3,326	40,100	PASS	2000	Step 1
8-hour CO	State	1.6	1,833	191.57	2,025	10,300	PASS	500	Step 1
	Federal	1.6	1,833	191.57	2,025	10,300	PASS	500	Step 1
1-hour NO ₂	State	0.049	92	82.82	175	339	PASS	7.5	Step 1
	Federal	0.049	92	82.82	175	188	PASS	7.5	Step 1
Annual NO ₂	State	0.010	19	0.70	20	57	PASS	1	Step 1
	Federal	0.010	19	0.70	20	100	PASS	1	Step 1
1-hour SO ₂	State	0.016	42	1.96	44	655	PASS	7.5	Step 1
	Federal	0.016	42	1.96	44	196	PASS	7.8	Step 1
24-Hour SO ₂	State	0.002	5	0.12	5	105	PASS	5	Step 1
	Federal	0.002	5	0.12	5	367	PASS	5	Step 1
Annual SO ₂	Federal	0.000	1	0.01	1	79	PASS	1	Step 1
24-hour PM ₁₀ - Exhaust	State	--	197	0.20	197	50	Step 2	5	PASS
	Federal	--	194	0.20	194	150	Step 2	5	PASS
24-hour PM ₁₀ - Fugitive	State	--	197	5.27	202	50	Step 2	10.4	PASS
	Federal	--	194	5.27	199	150	Step 2	10.4	PASS
Annual PM ₁₀ - Exhaust	State	--	39	0.02	39	20	Step 2	1	PASS
Annual PM ₁₀ - Fugitive	State	--	39	0.57	40	20	Step 2	2.08	PASS
24-hour PM _{2.5} - Exhaust	Federal	--	151	0.20	151	35	Step 2	1.2	PASS
24-hour PM _{2.5} - Fugitive	Federal	--	151	2.44	153	35	Step 2	2.5	PASS
	State	--	20	0.02	20	12	Step 2	0.2	PASS

Table 15. Construction AQIA - Mitigated

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
Annual PM _{2.5} - Exhaust	Federal	--	20	0.02	20	12	Step 2	0.2	PASS
Annual PM _{2.5} - Fugitive	State	--	20	0.26	20	12	Step 2	0.63	PASS
	Federal	--	20	0.26	20	12	Step 2	0.63	PASS

Source: See Appendix B.

As demonstrated in Table 15, the project would result in construction activities that would generate ambient concentrations of criteria pollutant below the applicable thresholds with application of mitigation measure **MM-AQ-1**. This impact would be less than significant with mitigation.

Construction Emissions Dispersion Modeling

As discussed in Section 2.4.2.1.2, in accordance with Kern County’s CEQA Guidelines, the maximum 24-hour average concentration of PM₁₀ and PM_{2.5} was modeled at the project boundary and compared to the NAAQS or CAAQS, whichever is more stringent. Table 16 shows the results on the dispersion modeling.

Table 16. Construction Emissions Dispersion Modeling Results

	PM ₁₀	PM _{2.5}
	µg/m ³	
Construction Emissions	0.68	0.44
Threshold	50 ¹	35 ²
Threshold Exceeded?	No	No

Notes: PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter.

See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ The CAAQS for PM₁₀ is 50 µg/m³ and the NAAQS is 150 µg/m³ for the 24-hour averaging period.

² The NAAQS for PM_{2.5} is 35 µg/m³ for the 24-hour averaging time. There is no PM_{2.5} CAAQS for the 24-hour averaging period.

See Appendix A for complete results.

As shown in Table 16, the maximum concentrations of PM₁₀ and PM_{2.5} emissions at the project boundary during construction would not exceed the NAAQS or CAAQS. As such, impacts would be **less than significant**.

Operational Emissions

Operation of the project would generate ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from mobile sources, including vehicle trips from passenger vehicles and heavy-duty trucks; and area sources, including the use of consumer products, and landscape maintenance equipment. Table 17 presents the annual area and mobile emissions associated with operation (year 2025) of the project. Details of the emission calculations are provided in Appendix A.

Table 17. Estimated Annual Operational Criteria Air Pollutant Emissions - Unmitigated

Emission Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
Area	0.97	<0.01	<0.01	0.00	<0.01	<0.01
Mobile	0.01	0.10	0.06	<0.01	0.02	0.01
Stationary	0.03	0.07	0.07	<0.01	<0.01	<0.01
Total	1.00	0.17	0.13	<0.01	0.03	0.01
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

Totals may not sum due to rounding.

As shown in Table 17, the combined annual area and mobile source emissions would not exceed the SJVAPCD’s operational thresholds for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. As such, impacts would be **less than significant**.

The SJVAPCD recommends that an Ambient Air Quality Assessment be performed when on-site emissions of any criteria pollutant would equal or exceed any applicable threshold of significance for criteria pollutants or 100 pounds per day of any criteria pollutant (SJVAPCD 2015a). The results of the screening analysis are presented in Table 18.

Table 18. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated

Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds Per Day					
Area	5.32	<0.01	0.02	0.00	<0.01	<0.01
Mobile	0.09	1.17	1.05	<0.01	0.01	<0.01
Stationary	0.53	1.47	1.34	<0.01	0.08	0.08
Total	5.94	2.64	2.41	<0.01	0.09	0.08
<i>SJVAPCD Threshold</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 including watering of the project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

As indicated in Table 18, the project would not exceed 100 pounds per day on site for ROG, NO_x, CO, SO_x, PM₁₀, or PM_{2.5} during operation; therefore, the project would not require an ambient air quality assessment during operation.

Health Effects

Project construction (with mitigation) and operation would not exceed SJVAPCD thresholds for ROG, NO_x, CO, SO_x, PM₁₀, or PM_{2.5}. ROG_s and NO_x are precursors to O₃, for which the SJVAB is designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O₃ are generally associated with reduced lung function. The contribution of ROG_s and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SJVAB due to O₃ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the ROG emissions would occur because exceedances of the O₃ CAAQS/NAAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project’s emissions of O₃ precursors is speculative due to the lack of quantitative methods to assess this impact. Since construction (with mitigation) and operation of the project would not exceed the SJVAPCD threshold for ROG or NO_x, implementation of the project would not contribute to regional O₃ concentrations and the associated health effects.

Operation of the project would not contribute to exceedances of the NAAQS and CAAQS for NO₂. Health effects that result from NO₂ and NO_x include respiratory irritation, which could be experienced by nearby receptors during the

periods of heaviest use of off-road construction equipment, but is unlikely as the nearest receptor is approximately 3.8 miles away. However, project construction would be relatively short term, off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time, and the nearest sensitive receptor is 3.8 miles away. In addition, existing NO₂ concentrations in the area are well below the NAAQS and CAAQS standards. Due to the project not exceeding thresholds of NO_x, the project would not result in potential health effects associated with NO₂ and NO_x.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots was discussed previously and was determined to be a less-than-significant impact. Furthermore, the existing CO concentrations in the area are well below the NAAQS and CAAQS standards. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the project would also not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or obstruct the SJVAB from coming into attainment for these pollutants. The project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Additionally, the project would implement dust control strategies and be required to comply with SJVAPCD Regulation VIII, which limits the amount of fugitive dust generated during construction. Pursuant to Regulation VIII, Rule 8021, Section 6.3, the project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would reduce fugitive dust impacts. Due to the minimal contribution of particulate matter during construction and operation, the project is not anticipated to result in health effects associated with PM₁₀ or PM_{2.5}.

In summary, because construction and operation of the project would not result in exceedances of the SJVAPCD significance thresholds, the potential health effects associated with criteria air pollutants, are considered **less than significant** with mitigation. Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects. A complete discussion of potential health effects as they relate to the project is included in Appendix C.

2.5.3 Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?

Health Impacts of Carbon Monoxide

As described previously, exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. Mobile-source impacts, including those related to CO, occur essentially on two scales of motion. Regionally, project-related construction travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SJVAB. Locally, construction traffic would be added to the roadway system in the vicinity of the project Site. Although the SJVAB is currently an attainment area for CO, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-project traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SJVAB is steadily decreasing.

The SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts states that a quantitative CO hotspots analysis be performed if either of the following two conditions exist: (1) a traffic study for the project indicates that the level of service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F, or (2) a traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at more or more intersections in the project vicinity (SJVAPCD 2015a). The project would cause a temporary increase in traffic during the 12-month construction period. However, the project would only result in 10 additional daily trips (5 personnel) during operation plus one water delivery per week. Therefore, the project would not materially contribute to the local traffic or impact local intersections level of service. As such, impacts to sensitive receptors with regard to potential CO hotspots resulting from the project's contribution to cumulative traffic-related air quality impacts would be **less than significant**.

Health Impacts of Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute (immediate) and/or chronic (cumulative) non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere.

Project construction would result in emissions of diesel particulate from heavy construction equipment and trucks accessing the Site. Diesel particulate is characterized as a TAC by the State of California. The Office of Environmental Health Hazard Assessment has identified carcinogenic and chronic non-carcinogenic effects from long-term exposure but has not identified health effects due to short-term exposure to diesel exhaust. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of the proposed construction activities would only constitute a small percentage of the total 30-year exposure period. Due to this relatively short period of exposure (12 months), distance to the closest sensitive receptors, and minimal particulate emissions on site, TACs generated by the project would not result in concentrations causing significant health risks. During operation, the project would not emit TAC emissions in substantial quantities as the operational emissions would consist of area source emissions from consumer products and from employees commuting, the majority of those emissions are offsite. As such, impacts would be **less than significant**.

Valley Fever

The project Site is located in an area where there is a high risk of Valley Fever, a fungal-borne disease. The disease is caused by inhalation of dust containing the *Coccidioides immitis*, a fungal spore. Most people who are exposed have no or very mild systems; however, in a small percentage of the population, it can generate more serious systems of meningitis, pneumonia, or chronic fatigue. As discussed in Section 2.1.2.2, the average incidence rate of Valley Fever within the County is above the statewide average. Construction of the project would comply with SJVAPCD Regulation VIII (Fugitive PM₁₀ Prohibition), which requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SJVAPCD Regulation VIII is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. The nearest sensitive-receptor land use (existing residence) is located over 3.8 miles from the project site. Pursuant to Regulation VIII, Rule 8021, Section 6.3, the project would be required to develop, prepare, submit, obtain approval of, and implement a dust control plan, which would control the release of the *Coccidioides immitis* fungus during construction activities. Construction workers have increased risk of exposure, since this job results in the disturbance of soils where fungal spores are found. Valley Fever infection rates are highest in California from June to November, and the illness is endemic in Kern County. Therefore, a risk of Valley Fever infection exists for construction personnel working on the project in the peak summer and fall months. Therefore, the project would have a **potentially significant** impact with respect to valley fever exposure for sensitive receptors and mitigation is required.

Mitigation Measures

The following mitigation is provided to reduce the impacts to construction workers and nearby sensitive receptors.

MM-AQ-2 Between June 1 and November 30, when Valley Fever rates of infection are the highest, additional dust suppression measures (such as additional water or the application of additional soil stabilizer) will be implemented prior to and immediately following ground disturbing activities if wind speeds exceed 15 mph or temperatures exceed 95°F for 3 consecutive days. The additional dust suppression will continue until winds are 10 mph or lower and outdoor air temperatures are below 90°F for at least 2 consecutive days. The additional dust suppression measures will be incorporated into the Dust Control Plan.

MM-AQ-3 Prior to any project grading activity, the primary project construction contractor will prepare and implement a worker training program that describes potential health hazards associated with Valley Fever, common symptoms, proper safety procedures to minimize health hazards, and notification procedures if suspected work-related symptoms are identified during construction. The worker training program will identify safety measures to be implemented by construction contractors during construction. Safety measures will include the following:

- Provide HEPA-filtered air-conditioned enclosed cabs on heavy equipment. Train workers on proper use of cabs, such as turning on air conditioning prior to using the equipment.
- Provide communication methods, such as two-way radios, for use by workers in enclosed cabs.
- Provide personal protective equipment (PPE), such as half-mask and/or full-mask respirators equipped with particulate filtration, to workers active in dusty work areas.

- Provide separate, clean eating areas with hand-washing facilities for construction workers.
- Clean equipment, vehicles, and other items before they are moved off site to other work locations.
- Provide training for construction workers so they can recognize the symptoms of Valley Fever and promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- Direct workers that exhibit Valley Fever symptoms to immediately seek a medical evaluation.
- Prior to initiating any grading, the construction contractor will provide the County program manager with copies of all educational training material.

Level of Significance After Mitigation

With implementation of mitigation measures **MM-AQ-2** and **MM-AQ-3**, the risk of workers and nearby sensitive receptors being exposed to Valley Fever spores would be reduced. Impacts would be **less than significant** with mitigation.

2.5.4 Would the Project Result in Other Emissions (Such as those Leading to Odors) Adversely Affecting a Substantial Number of People?

The analysis of the project's potential to result in other emissions is focused on potential odor impacts. The project would not generate any other emissions not already evaluated herein that would adversely affect a substantial number of people. The occurrence and severity of potential odor impacts depend on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints. As shown in Table 5, the minimum distance for facilities known to generate odors is 1 mile. The closest sensitive receptor to the project is 3.8 miles away.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors would disperse rapidly from the project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be **less than significant**.

Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (see Table 5). The project would not include land uses that generate odors as discussed above during operation. Therefore, project operations would result in an odor impact that is **less than significant**.

3 Greenhouse Gas Emissions

3.1 Environmental Setting

3.1.1 Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (i.e., decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (IPCC 2013; EPA 2017a). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further in Section 3.3.2, Potential Effects of Climate Change.

3.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). (See also CEQA Guidelines, Section 15364.5.) Some GHGs, such as CO₂, CH₄, and N₂O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much

greater heat-absorption potential than CO₂, include fluorinated gases, such as HFCs, PFCs, and SF₆, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.⁹

Carbon Dioxide. CO₂ is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO₂ include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO₂ are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH₄ is produced through both natural and human activities. CH₄ is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N₂O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N₂O. Sources of N₂O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N₂O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., CFCs, HCFCs, and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.
- **Sulfur Hexafluoride:** SF₆ is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF₆ is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF₃ is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

⁹ The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Air Pollution Terms" (2016a), and EPA's "Glossary of Climate Change Terms" (2016e).

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O₃.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. DPM emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining DPM from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014a).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O₃, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O₃, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O₂), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O₃, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2016d). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO₂; therefore, GWP-weighted emissions are measured in metric tons of CO₂ equivalent (MT CO₂e).

The current version of CalEEMod (version 2020.4.0) assumes that the GWP for CH₄ is 25 (so emissions of 1 MT of CH₄ are equivalent to emissions of 25 MT of CO₂), and the GWP for N₂O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the project.

3.2 Regulatory Setting

3.2.1 Federal Regulations

West Virginia et al v. U.S. Environmental Protection Agency

On June 30, 2022, the Supreme Court issued its opinion in *West Virginia v. U.S. Environmental Protection Agency*, invalidating the 2015 Obama-era Clean Power Plan (CPP). *The ruling held that Section 111(d) of the Clean Air Act does not authorize EPA to devise emissions caps based on “generation shifting”—the approach EPA took in the CPP wherein power plants would be required to transition from higher-emitting (e.g., coal) to lower-emitting (e.g., natural-gas) to then even lower-emitting (e.g., wind and solar) electricity production.* The Obama administration promulgated the CPP to establish limits on CO₂ emissions from power plants, creating a scheme geared toward shifting the generation of electricity from steam-generating units to natural gas-fired units, and from fossil-fuel fired units to renewable energy sources. The Supreme Court’s ruling will constrain EPA’s ability to regulate carbon emissions from the power sector by agency rulemaking, and the Court’s assertion of the major questions doctrine will have a lasting impact on the administrative state.

Massachusetts v. U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, the U.S. Supreme Court ruled that CO₂ was a pollutant and directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The elevated concentrations of GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the “endangerment finding.”
- The combined emissions of GHGs—CO₂, CH₄, N₂O, and hydrofluorocarbons—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act

On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following to aid in the reduction of national GHG emissions:

1. Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel by 2022.
2. Set a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
3. Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

EPA and National Highway Traffic Safety Administration Joint Final Rule for Vehicle standards

In response to the U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO₂ emissions by approximately 1.1 billion MT and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of one degree Celsius by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. Thus, the timing and consequences of the 2018 federal proposal are speculative at this time.

In 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program (SAFE-1) (84 Fed. Reg. 51310), which revoked California’s authority to set its own GHG emissions standards and set zero-emission vehicle (ZEV) mandates in California. In March 2020, Part Two was issued which set CO₂ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. In March 2022, EPA reinstated California’s authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA’s action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

3.2.2 State Regulations

The State has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized as follows.

EO S-3-05

EO S-3-05 (June 2005) established California’s GHG emissions reduction targets and laid out responsibilities among the State agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

AB 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California’s GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State’s long-range climate objectives.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that Statewide GHG emissions are reduced to 40% below 1990 levels by 2030.

CARB’s Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a “scoping plan” for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code, Section 38561(a)), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The *Climate Change Scoping Plan: A Framework for Change (Scoping Plan)* included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 Statewide GHG emission limit and initiate the transformations needed to achieve the State’s long-range climate objectives.

In 2014, CARB approved the first update to the Scoping Plan. The *First Update to the Climate Change Scoping Plan: Building on the Framework (First Update)* defined the State's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012 (discussed below). The *First Update* concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions (CARB 2014a).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in S-3-05.

In December 2017, CARB adopted the *2017 Climate Change Scoping Plan Update (2030 Scoping Plan)* (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the State's climate change priorities to 2030 and beyond.

The Scoping Plan recommends strategies for implementation at the Statewide level to meet the goals of AB 32, SB 32, and the EOs and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the State's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent, if it will further the objectives and not obstruct their attainment. CARB adopted the 2022 Scoping Plan Update on December 15, 2022, which assesses progress towards achieving the SB 32 2030 target and lays out a path to achieve carbon neutrality by 2050.

EO B-55-18

EO B-55-18 (September 2018) establishes a Statewide policy for California to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net-negative emissions thereafter. The goal is an addition to the existing Statewide targets of reducing the State's GHG emissions. CARB will work with relevant State agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24 standards are the 2019 Title 24 Building Energy Efficiency Standards, which became effective January 1, 2020. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018a). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018a).

On August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards (Energy Code). In December 2021, the 2022 Energy Code was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code. Under the 2022 amendments, California buildings would consume approximately 198,600 GWh of electricity and 6.14 billion therms of fossil fuel natural gas in 2023 compared to approximately 199,500 GWh and 6.17 billion therms of electricity and fossil fuel natural gas, respectively, under the 2019 Energy Code (CEC 2021). On a statewide basis throughout 2023, all measures for newly constructed buildings and altered components of existing buildings collectively would save approximately 33 million therms of fossil fuel natural gas and 1.3 billion kWh of electricity (CEC 2021).

Title 24, Part 11

In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2019 CALGreen standards are the current applicable standards. For nonresidential projects (which the residential portion of the project is subject to), some of the key mandatory CALGreen 2019 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle (EV) charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR Part 11).

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards.

Renewable Energy and Energy Procurement

SB 1078, EO-14-08, SBX1-2, SB 350, and SB 100

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. EO S-14-08 (November 2008) required that all retail suppliers of electricity in California serve

33% of their load with renewable energy by 2020. SB X1.2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. On April 30, 2022, California supplied 100% of its statewide demand with renewables at 2:45 pm (Electrek 2022).

Mobile Sources

State Vehicle Standards (AB1493 and EO B-16-12)

AB 1493 (July 2002) was enacted in a response to the transportation sector accounting for more than half of California's CO₂ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles that are primarily used for noncommercial personal transportation in the State. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that State entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. It ordered CARB, CEC, California Public Utilities Commission, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a Statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. As explained under the "Federal Vehicle Standards" description above, EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. As President Biden issued EO 13990 to review Part One and Part Two of the SAFE Vehicles Rule, this analysis continues to utilize the best available information at this time, as set forth in EMFAC and assumed in CalEEMod.

Heavy Duty Diesel (Title 13, Division 3, Chapter 1, Section 2025)

CARB adopted the final Heavy-Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce particulate matter and NO_x emissions from heavy-duty diesel vehicles. The rule requires particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

ES S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining low carbon fuel standard (LCFS) for GHG emissions measured in CO_{2e} grams per unit of fuel energy sold in California. The initial target of the LCFS was to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). In September 2018, CARB approved amendments for the LCFS that require a 20% reduction in carbon intensity by year 2030.

SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the State's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars (ACC) I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle (LEV) regulation for criteria air pollutant and GHG emissions and a technology forcing regulation for zero-emission vehicles (ZEV) that contributes to both types of emission reductions (CARB 2021b). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold in 2015 (CARB 2021b). The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program is currently in development to establish the next set of LEV and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021b). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, is anticipated to be presented to CARB for consideration in August 2022.

AB 1236

AB 1236 (October 2015) required a city, county, or city and county to approve an application for the installation of EV charging stations, as defined, through the issuance of specified permits, unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as

specified. The bill provided that the implementation of consistent Statewide standards to achieve the timely and cost-effective installation of EV charging stations is a matter of Statewide concern. The bill required EV charging stations to meet specified standards.

EO-79-20

EO N-79-20 (September 2020) requires CARB to develop regulations as follows: (1) Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the State towards the target of 100% of in-State sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the State towards the target of 100% of the fleet transitioning to zero-emission vehicles by 2045 everywhere feasible and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other State agencies, the EPA and local air districts, to achieve 100% zero-emissions from off-road vehicles and equipment operations in the State by 2035. EO N-79-20 called for the development of a Zero-Emissions Vehicle Market Development Strategy, which was released February 2021, to be updated every 3 years, that ensures coordination and implementation of the EO and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions, and investment strategies, to improve clean transportation, sustainable freight, and transit options; and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the State transitions to a carbon-neutral economy.

Advanced Clean Trucks (ACT) Regulation

The purpose of the ACT Regulation (June 2020) is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce emissions NO_x, fine particulate matter, TACs, GHGs, and other criteria pollutants generated from on-road mobile sources (CARB 2021c). Requiring medium- and heavy-duty vehicles to transition to zero-emissions technology will help California meet established near- and long-term air quality and climate mitigation targets.

Water

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a Statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State.

EO B-37-16

Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the State. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The SWRCB and Department of Water Resources will develop new, permanent water use targets that build upon the existing State law requirements that the State achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes;

washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

EO N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15% from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

EO N-7-22

On March 28, 2022, Governor Newsom directed the State Water Board to consider adopting emergency regulations focused on urban water suppliers under EO N-7-22. If adopted, the potential regulations would require the vast majority of urban water suppliers to enact Level 2 of their water shortage contingency plans. Those plans are developed by the suppliers and provide actions they will take if their water supplies are cut to certain levels. Here, Level 2 would represent the suppliers acting as if their water supply had been reduced by 20%. The executive order also directs the State Water Board to consider adopting emergency regulations defining “non-functional turf” by May 25, 2022. Both the executive order and corresponding press release confirm that the definition should only apply to ornamental turf that is not functional, excluding turf such as school fields, sports fields and parks from the definition. If the definition is adopted, the State Water Board must then consider banning irrigation of the non-functional turf in the commercial, industrial and institutional sectors (with limited exceptions). The proposed ban is anticipated to save several hundred thousand acre-feet of water per year.

Solid Waste

AB 939, AB 341, AB 1826, and SB 1383

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000. AB 341 (Chapter 476, Statutes of 2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the State that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50% reduction in the level of the Statewide disposal of organic waste from the 2014 level by 2020 and a 75% reduction by 2025. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20% of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019).

3.2.3 Local Regulations

3.2.3.1 San Joaquin Valley Air Pollution Control District

The SJVAPCD does not regulate GHG emissions directly through its permitting responsibilities for stationary sources. Thus, there are no SJVAPCD rules or regulations related to GHGs. The SJVAPCD, however, effects reductions of GHGs from new and modified stationary sources when acting as a lead agency for CEQA. The SJVAPCD implements its GHG policies and reviews whether new or modified stationary sources will implement best performance standards (BPS).

In 2009, the SJVAPCD developed an internal policy and guidance for local land use agencies to use in evaluating GHG impacts under CEQA. In the *Final Staff Report – Addressing GHG Emissions Impacts under the California Environmental Quality Act* (SJVAPCD 2009b), the SJVAPCD reviewed potential GHG significance thresholds and approaches suggested by or adopted by the following entities, ranging from quantification of a project’s GHG impacts without a recommended significance threshold to a zero threshold to specific significance thresholds for different kinds of projects (e.g., residential, mixed use, industrial, plans).¹⁰ The following discussion summarizes the SJVAPCD’s conclusions about various categories of GHG significance thresholds.

Zero Threshold. The SJVAPCD concluded that “although a zero threshold is appealing in its simplicity; execution of a zero threshold would be difficult or impossible” (SJVAPCD 2009b). Furthermore, the SJVAPCD found that projects that could not reduce their emissions to zero would require preparation of an environmental impact report and adoption of a statement of overriding consideration by the lead agency. Potentially, projects could choose to relocate to a region with a less stringent threshold, so-called “leakage” that would still result in GHG emissions outside the SJVAPCD. Finally, the SJVAPCD noted that CARB concluded that zero thresholds are not mandated because some level of GHG emissions is still consistent with climate stabilization and other regulatory programs will result in GHG reductions. For these reasons, the SJVAPCD did not support a zero threshold. Accordingly, a zero threshold was not selected as an appropriate GHG/climate change threshold for this assessment.

Non-zero Quantitative Thresholds. As indicated previously, the SJVAPCD reviewed numerous quantitative thresholds adopted or proposed by other air districts and organizations, including “mass of GHG emissions generate per unit of activity, GHG emissions per capita per unit basis, and percent reduction compared to Business-as-Usual” (SJVAPCD 2009b). While a tiered approach was evaluated, with the final tier incorporating a quantitative threshold, the SJVAPCD concluded that “without supporting scientific information, establishment of tier trigger levels could be argued to be arbitrary, and District staff does not believe the available science supports establishing a bright-line threshold, above which emissions are significant and below which they are not” (SJVAPCD 2009b).

Best Performance Standards. The SJVAPCD evaluated performance-based standards, which would state “in quantifiable terms the level and extent of the attribute necessary to reach a goal or objective” (SJVAPCD 2009b). The SJVAPCD considered a project achieving the performance-based standard or mitigating GHG emissions to an equivalent emission reduction level would be considered to have a less-than-significant cumulative impact on

¹⁰ These documents encompassed the primary approaches for establishing significance thresholds in the period prior to the March 18, 2010 effective date of revisions of the CEQA Guidelines in accordance with SB 97. Additional guidance regarding assessment of GHG impacts were provided in the revised CEQA Guidelines and accompanying *Final Statement of Reasons for Regulatory Action – Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97* (CNRA 2009a). In addition, the California appellate courts and the Supreme Court have more recently considered CEQA cases and, in some cases, issued published decisions that provide additional direction regarding the appropriateness of certain GHG assessment methodologies and significance thresholds.

climate change. In conclusion, the SJVAPCD found that the state's GHG emission reduction target would be accomplished by achieving a 29% reduction from business-as-usual (BAU) and that this achieving this reduction would be a "de facto" performance-based standard for GHG emission reductions.

On December 17, 2009, the SJVAPCD Governing Board adopted *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* (SJVAPCD 2009c). The guidance recommends the following hierarchy for evaluating a project's impact with respect to its GHG emissions:

- projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less-than-significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- projects implementing BPS would not require quantification of project specific GHG emissions.¹¹ Consistent with the CEQA Guidelines, such projects would be determined to have a less-than-significant individual and cumulative impact for GHG emissions.
- projects not implementing BPS would require quantification of project-specific GHG emissions and demonstration that project-specific GHG emissions would be reduced or mitigated by at least 29%, compared to BAU, including GHG emission reductions achieved since the 2002–2004 baseline period. projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less-than-significant individual and cumulative impact for GHG (SJVAPCD 2009c).
- For development projects, BPS would include project design elements, land use decisions, and technologies that reduce GHG emissions. While the SJVAPCD has adopted BPS for several types of stationary sources (e.g., boilers), it has not developed BPS for land development projects. projects implementing any combination of BPS, and/or demonstrating a total 29% reduction in GHG emissions from BAU, would be determined to have a less-than-significant individual and cumulative impact on global climate change (SJVAPCD 2015a).

3.2.3.2 Kern County

The County's General Plan Energy Element sets targets and strategies to reduce GHG emissions and associated climate change by supporting new renewable energy facilities. In addition, there may be GHG co-benefits of the air quality provisions in the General Plan discussed in Section 2.2.3.3. The County's General Plan Energy Element includes the following:

5.4.2 Wind Energy Development

Goal: To promote the safe and orderly development of wind energy as a clean method of generating electricity while providing for the protection of the environment.

¹¹ The guidance recommends, "projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions" (SJVAPCD 2009c). This assessment for the project does include quantification of the project's construction and operational GHG emissions.

Policies

1. The County should support the construction of additional transmission capacity for wind energy developments where land use and other constraints are minimal.
2. All wind energy development shall be subject to the development standards of Kern County Zoning Ordinance.
3. The County should monitor the activities of other local, State, and federal agencies relating to wind energy projects in Kern County, and present comment and testimony as necessary when the County's interests to avoid unnecessary impediments to energy development.
4. The County shall work with the wind energy industry to maximize electrical potential while assuring that military flight operations, communication facilities and visual conflicts for neighboring property owners are addressed.
5. The County should actively monitor the actions of local, State, and federal agencies relating to wind energy development in Kern County, and lobby and present its position on such matters as needed to protect the County interests and avoid unnecessary impediments to energy development.

Implementation Measures

- A. The WE (Wind Energy) Zone District should be reviewed and amended as necessary to include adequate setbacks, buffer, aesthetic requirements, oak tree provisions, military flight corridors, and removal of nonfunctioning machines.
- B. The County should promote a continuing dialogue with wind energy industry representatives to monitor trends in wind energy development and technology.
- C. The County should conduct an aerial photometric survey of the wind energy development area to determine the effectiveness of existing soil erosion control measures and, if necessary, modify the Kern County Zoning Ordinance as appropriate.

5.4.4 Transformation Development

Goal: To provide for the careful siting of proven transformation technologies which provide for minimum risks to the environment and to public health and safety.

Policies

1. The County should encourage the use of landfill gas recovery and methane recovery projects at existing facilities.
2. The County should encourage the safe and orderly development of biomass conversion facilities as an alternative to burning agricultural wastes.

3. When evaluating proposals for transformation plants, the County should take under consideration whether the projects will produce air pollutant emissions in quantities that could reduce the ability to site other energy projects.
4. New transformation facilities shall be in conformance with the Kern County General Plan and the Kern County and Incorporated Cities Integrated Waste Management Plan.
5. Encourage the utilization of anaerobic digesters from the conversion of waste from Confined Animal Facilities.

Implementation Measure

- A. The County shall continue to maintain provisions in the Kern County Zoning Ordinance to provide for the safe and orderly development of transformation projects.

5.4.5 Solar Energy Development

Goal: Encourage safe and orderly commercial solar development.

Policies

1. The County shall encourage domestic and commercial solar energy uses to conserve fossil fuel and improve air quality.
2. The County should attempt to identify and remove disincentives to domestic and commercial solar energy development.
3. The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards.
4. The County should encourage solar development in the desert and valley regions previously disturbed, and discourage development of energy projects on undisturbed land supporting State or federally protected plant and wildlife species.

Implementation Measures

- A. The County shall continue to maintain, and update as necessary, provisions in the Kern County Zoning Ordinance to provide adequate development standards for commercial solar energy development.
- B. The County should work with affected State and federal agencies and interest groups to establish consistent policies for solar energy development.

3.3 Greenhouse Gas Inventories and Climate Change Conditions

3.3.1 Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide in 2018 (the most recent year for which data is available) totaled approximately 55,600 million metric tons (MMT) of CO₂e, excluding land use change and forestry (PBL 2020). Five countries—China, the United States, the Russian Federation, India, Japan, and the European Union accounted for approximately 62% of the total global emissions, or approximately 34,472 MMT CO₂e (PBL 2020).

Per the EPA’s Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2019 (EPA 2021), total United States GHG emissions were approximately 6,558.3 million metric tons (MMT) CO₂e in 2019 (EPA 2021). The primary GHG emitted by human activities in the United States was CO₂, which represented approximately 80.1% of total GHG emissions (5,255.8 MMT CO₂e). The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.4% of CO₂ emissions in 2019 (4,856.7 MMT CO₂e). Relative to 1990, gross United States GHG emissions in 2019 were 1.8% higher; however, the gross emissions were down from a high of 15.6% above 1990 levels in 2007. GHG emissions decreased from 2018 to 2019 by 1.7% (113.1 MMT CO₂e) and overall, net emissions in 2019 were 13% below 2005 levels (EPA 2021).

According to California’s 2000–2019 GHG emissions inventory (2021 edition), California emitted 418 MMT CO₂e in 2019, including emissions resulting from out-of-state electrical generation (CARB 2021a). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2019 are presented in Table 19, Greenhouse Gas Emissions Sources in California.

Table 19. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO ₂ e)	Percent of Total ^a
Transportation	166.1	39.7%
Industrial	88.2	21.1%
Electric power	58.8	14.1%
Commercial and Residential	43.8	10.5%
Agriculture	31.8	7.6%
High global-warming potential substances	20.6	4.9%
Recycling and waste	8.9	2.1%
Total	418.2	100%

Source: CARB 2021a.

Notes: GHG = greenhouse gas; MMT CO₂e = million metric tons of carbon dioxide equivalent. Emissions reflect the 2018 California GHG inventory.

^a Percentage of total has been rounded, and total may not sum due to rounding.

Between 2000 and 2019, per-capita GHG emissions in California have dropped from a peak of 14.0 MT CO₂e per person in 2001 to 10.5 MT CO₂e per person in 2019, representing an approximate 25% decrease. In addition, total GHG emissions in 2019 were approximately 7 MMT CO₂e lower than 2018 emissions (CARB 2021a).

On May 3, 2011, the Kern County Board of Supervisors signed a memorandum of understanding with the SJVAPCD to develop a communitywide GHG emissions inventory for the County. The Kern County Communitywide GHG Emissions Inventory 2055 Baseline Year – 2020 Forecast was finalized in May 2012. The GHG emission inventories were estimated for nine primary sectors (electricity production and consumption, residential/commercial/industrial combustion, transportation, fossil fuels industry, industrial processes, waste management, agriculture, forestry and land use, and other sources). The 2005 base year and 2020 forecasted GHG emissions inventory is presented below in Table 20, Kern County Greenhouse Gas Emissions.

Table 20. Kern County Greenhouse Gas Emissions by Sectors

Source Category	Annual GHG Emissions (MT CO ₂ e)			
	2005 Base Year	Percent of 2005 Total	2020 Forecasted Emissions	Percent of 2020 Total
Electricity consumption	6,039,114	22	8,572,261	31
Residential/commercial/industrial combustion	1,281,498	5	1,689,414	6
Transportation	4,569,913	17	4,823,756	18
Fossil fuels industry	10,928,153	40	7,002,009	26
Industrial processes	1,852,124	7	2,348,754	9
Waste management	120,494	1	146,788	1
Agriculture	2,024,470	7	2,625,616	10
Forestry and land use	11,028	1	14,669	1
Other sources	218,823	1	22,442	1
Total	27,045,617	100	27,272,709	100

Source: Kern County 2012.

GHG = greenhouse gas; MT CO₂e = metric tons of carbon dioxide equivalent.

Total may not add due to rounding.

3.3.2 Potential Effects of Climate Change

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed, including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed, such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed, including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health, as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (CNRA 2018b) includes reports for nine regions of the state, including the San Joaquin Region, where the project is located. Key projected climate changes for the San Joaquin Region include the following (CNRA 2018b):

- Agriculture is one of the most vulnerable sectors under climate change due in part of more frequent and severe drought, as well as tighter water supply.
- Ecosystems in the San Joaquin Valley are highly vulnerable to climate change given existing anthropogenic stressors and the lack of organization of landscape-scale science, funding, and mitigation of adverse impacts within the region.
- Water resources within the San Joaquin Valley region will be severely impacted by climate change.
- Infrastructure in the San Joaquin Valley, including urban, water, and transportation systems may face increased stress from higher temperatures and extreme precipitation events, including droughts and floods.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought, to destructive storm events; significant shifts in water availability and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; threshold effects (i.e., a change in the ecosystem that results in a “tipping point” beyond which irreversible damage or loss has occurred).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea-level rise.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large-scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea-level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea-level rise, in addition to more frequent and severe coastal storms and erosion, are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities, as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity, and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat-related illness, as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness, such as asthma and allergies.

Transportation. Although the transportation industry is a source of GHG emissions, it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand, which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides, and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt,

which can impact water supply availability, natural ecosystems, and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the wintertime. Increased risk of flooding has a variety of public health concerns, including water quality, public safety, property damage, displacement, and post-disaster mental health problems. Prolonged and intensified droughts can also negatively impact groundwater reserves and result in increased overdraft and subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

3.4 Significance Criteria and Methodology

3.4.1 Thresholds of Significance

The significance criteria used to evaluate the project's GHG emissions impacts is based on the recommendations provided in Appendix G of the CEQA Guidelines. For the purposes of this GHG emissions analysis, the project would have a significant environmental impact if it would (14 CCR 15000 et seq.):

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project-level under CEQA.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled "Discussion Draft CEQA and Climate Change Advisory," states that (OPR 2018):

Neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice." Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting thresholds of significance, a lead agency

may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.”

Notwithstanding the CEQA Guidelines, local land use agencies sought additional technical assistance from expert air quality agencies in how to complete the suggested quantitative analysis of the significance of GHG emissions for land use projects being considered under CEQA. The SJVAPCD adopted *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New projects under CEQA* (SJVAPCD 2009c). The guidance relies on either BPS or 29% reduction compared to BAU to assess significance of project specific GHG emissions on global climate change during the environmental review process. Notably, the project would not be considered a stationary project with applicable BPS. Regarding the BAU threshold, the Supreme Court in its 2015 decision, *Center for Biological Diversity v. Department of Fish and Wildlife*, S217763 (*Newhall*), concluded that substantial evidence is required to support the application of AB 32 statewide GHG reduction goal of 29% to new land use projects. Since neither the BPS nor BAU approach is generally appropriate for this project, the SJVAPCD guidance was not used for this analysis. However, the SJVAPCD guidance does not limit a lead agency’s authority in establishing its own process and guidance for determining significance of project-related impacts on global climate change.

In absence of any applicable numeric threshold, this analysis assesses compliance with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions is the KCOG 2022 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state’s long-term climate goals. This analysis also considers consistency with regulations and requirements adopted pursuant to the Scoping Plan and the County’s General Plan. GHG emissions from project construction and operation are included for disclosure consistent with OPR recommendations and industry practice.

3.4.2 Approach and Methodology

3.4.2.1 Construction

CalEEMod Version 2020.4.0 was used to estimate potential project-generated GHG emissions during construction. Construction of the project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 2.4.2.1, are also applicable for the estimation of construction-related GHG emissions. As such, see Section 2.4.2.1 for a discussion of construction emissions calculation methodology and assumptions. Indirect GHG emissions from water use during construction were estimated in the operational module of CalEEMod under the refrigerated warehouse-no rail land use for outdoor water use. According to the water supply assessment, it is estimated that the project would use 500 acre-feet of water during construction (Dudek 2022).

3.4.2.2 Operation

Emissions from the operational phase of the project were estimated using CalEEMod Version 2020.4.0. Operational year 2025 was assumed consistent with completion of project construction. CalEEMod was used to estimate

potential project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (electricity), mobile, solid waste, water supply and wastewater treatment. Emissions from each category are discussed in the following text with respect to the project. For additional details, see Section 2.4.2.2, Operational Emissions, for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy (electricity), and mobile sources.

Area Sources

During operations and maintenance, one of the main sources of GHG emissions would be fugitive emissions from equipment containing SF₆ gas installed at the proposed collector substation. SF₆ has a GWP of 23,900 using CO₂ at a reference value of 1 (IPCC 2007). The substation would include 138 kilovolt (kV) breakers that would contain SF₆ gas. It is estimated that the project would maintain a total of 240 pounds of SF₆ gas at the substation. Although leakage is unlikely, for the purposes of the project's emissions inventory, it was assumed that the breakers would have a maximum annual leak rate of 0.5% in accordance with the Institute of Electrical and Electronics Engineers (IEEE) PC37.122 - Standard for High Voltage Gas-Insulated Substations Rated Above 52 kV (IEEE 2018). Emissions from SF₆ gas are included as part of area source emissions.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the project's land use. The project would not use natural gas during operation; as such, only GHG emissions from electricity use were estimated herein. The BESS may be charged through either the onsite solar plant or from the grid. In order to estimate a worst-case energy use from the BESS, it was assumed that the BESS would be charged once and discharged once daily by the grid. An auxiliary loss of 3% was assumed based on applicant provided information.

The current version of CalEEMod assumes compliance with the 2019 Title 24 Building Energy Efficiency Standards (CAPCOA 2021); however, the project would be required to comply with the 2022 Title 24 Standards at a minimum. CalEEMod default energy intensity factors (CO₂, CH₄, and N₂O mass emissions per kilowatt-hour) for Pacific Gas and Electric (PG&E) is based on the value for PG&E's energy mix in 2021. As explained in Section 3.2.2, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020, and SB 100 calls for further development of renewable energy, with a target of 60% by 2030.

Mobile Sources

All details for criteria air pollutants discussed in Section 2.4.2.2 are also applicable for the estimation of operational mobile source GHG emissions. Mobile sources for the project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty trucks)¹² traveling to and from the project site. As discussed in Section 2.4.2.2, emissions from the mobile sources during operation of the project were estimated using CalEEMod.

¹² "Heavy-duty trucks" include medium-heavy-duty trucks (3-axle) and heavy-heavy-duty trucks (4+ axle).

Solid Waste

The project would generate solid waste, and therefore, result in CO₂e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Water and Wastewater

The project proposes utilization of a private well or water delivered for water and an on-site septic system for sewage disposal. For GHG estimation purposes, it was assumed that the water would be delivered once per week via truck. Water consumption estimates for indoor water use were estimated using CalEEMod default values. The water supply assessment estimated that the project would use 20 acre-feet per year for panel washing (Dudek 2022). The water use during operation was estimated under the general office building land use category. Electricity use for water supply are based on the electric pump rating, pump flowrate, electricity intensity factors from CalEEMod for the County, and the indoor and outdoor water use default values in CalEEMod.

3.5 Impact Analysis

3.5.1 Would the Project Generate Greenhouse Gas Emissions, Either Directly or Indirectly, that May Have a Significant Impact on the Environment?

Please refer to analysis for Section 3.5.2, below.

3.5.2 Would the Project Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?

Construction Emissions

Construction of the project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 2.4.2.1. Construction of the project is anticipated to commence in January 2024 and would last approximately 12 months, ending in December 2024. On-site sources of GHG emissions include off-road equipment and off-site sources include vendor trucks and worker vehicles. Table 21 presents construction emissions for the project from on-site and off-site emission sources.

Table 21. Estimated Annual Construction Greenhouse Gas Emissions - Unmitigated

Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons Per Year			
Worker Vehicles	900.15	0.02	0.02	906.64

Table 21. Estimated Annual Construction Greenhouse Gas Emissions - Unmitigated

Source	CO2	CH4	N2O	CO2e
	Metric Tons Per Year			
Vendor Trucks	885.77	0.00	0.13	924.62
Haul Trucks	407.09	0.00	0.06	426.19
Offroad Equipment	2,450.79	0.75	0.00	2,469.52
Water Use	52.76	0.01	0.00	53.28
			Total	4,780.25

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; <0.01 = reported value less than 0.01. See Appendix A for complete results.

The values shown are the annual emissions reflect California Emissions Estimator Model “mitigated” output. Totals may not add due to rounding.

As shown in Table 21, the estimated total GHG emissions during construction would be approximately 4,780 MT CO₂e over the construction period. Estimated project-generated construction emissions amortized over 35 years would be approximately 137 MT CO₂e per year. As with project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Table 22 presents decommissioning emissions for the project from on-site and off-site emission sources.

Table 22. Estimated Annual Decommissioning Greenhouse Gas Emissions - Unmitigated

Source	CO2	CH4	N2O	CO2e
	Metric Tons Per Year			
Worker Vehicles	400.51	0.00	0.01	402.80
Vendor Trucks	319.29	0.00	0.05	333.09
Haul Trucks	304.84	0.00	0.05	319.14
Offroad Equipment	1,157.27	0.04	0.00	1,158.19
Water Use	52.76	0.01	0.00	53.28
			Total	2,266.50

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; <0.01 = reported value less than 0.01. See Appendix A for complete results.

The values shown are the annual emissions reflect California Emissions Estimator Model “mitigated” output. Totals may not add due to rounding.

As shown in Table 22, the estimated total GHG emissions during decommissioning would be approximately 2,267 MT CO₂e over the construction period. Estimated project-generated decommissioning emissions amortized over 35 years would be approximately 65 MT CO₂e per year.

Operational Emissions

Operation of the project would generate GHG emissions through passenger vehicle and delivery truck trips to and from the project site; landscape maintenance equipment operation; energy use (generation of electricity consumed by the project); solid waste disposal; water use; and on-site septic system. CalEEMod and a spreadsheet model were used to calculate the annual GHG emissions based on the operational assumptions

described in Section 3.4.2.2, Operation. The estimated operational project-generated GHG emissions are shown in Table 23.

Table 23. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO2	CH4	N2O	CO2e
	Metric Tons Per Year			
Area ¹	<0.01	<0.01	0.00	13.01
Energy	2,029.39	0.33	0.04	2,049.46
Mobile	51.13	<0.01	0.01	53.24
Solid waste	0.68	0.04	0.00	1.68
Stationary	12.19	0.00	0.00	12.23
Water supply and wastewater	0.43	0.15	<0.01	4.21
<i>Amortized 35-Year Construction Emissions</i>				136.58
<i>Amortized 35-Year Decommissioning Emissions</i>				64.76
Operation plus Amortized Construction and Decommissioning Total				2,335.17

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; < 0.01 = reported emissions less than 0.01.

See Appendix A for complete results.

Totals may not add due to rounding.

¹ Includes CO₂e emissions from SF₆ leakage from the substation.

As shown in Table 23, estimated annual project-generated GHG emissions would be approximately 2,335 MT CO₂e per year as a result of project operations and amortized construction.

Avoided GHG Emissions

The project would provide a source of renewable energy to support statewide RPS targets of 60% by 2030 and 100% by 2045 consistent with the renewable energy targets in the Scoping Plan and required by SB 100 and EO B-55-18. The generation of renewable energy, would offset GHG emissions generated by fossil-fuel power plants. As noted above, the Proposed project would generate 2,335 MT CO₂e per year. The Proposed project is expected to produce an estimated 816,783 megawatt-hours of electricity per year (NREL 2019). The default CalEEMod CO₂e emission factor for PG&E was 206.00 pounds of CO₂e per megawatt-hour (CO₂e/MWh) from 2021 (CAPCOA 2021). Assuming that PG&E would meet the EO B-55- 18 carbon neutrality target in 2045, a linear regression of the PG&E GHG emission factor was calculated from 2021 to 2044. This would mean that the Proposed project would avoid less GHG emissions over time. Assuming this, the Proposed project would avoid a total of 667,793 MT CO₂e from 2025 through 2044. Accounting for 35 years of operation, the project would emit 81,731 MT CO₂e. Therefore, the project would avoid a net 586,062 MT CO₂e over its lifetime. The Proposed project is expected to be operational through 2060 and thus it would not be avoiding GHG emissions from 2045 through 2060.

Project Consistency with Applicable GHG-Related Laws and Regulations

The project’s consistency with statewide GHG reduction strategies is summarized in detail in Table 24.

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
Building Components/Facility Operations		
Roofs/Ceilings/ Insulation	CALGreen Code (Title 24, Part 11) California Energy Code (Title 24, Part 6)	<p>The project must comply with efficiency standards regarding roofing, ceilings, and insulation. For example:</p> <p><u>Roofs/Ceilings:</u> New construction must reduce roof heat island effects per CALGreen Code Section 106.11.2, which requires use of roofing materials having a minimum aged solar reflectance, thermal emittance complying with Section A5.106.11.2.2 and A5.106.11.2.3 or a minimum aged Solar Reflectance Index as specified in Tables A5.106.11.2.2, or A5.106.11.2.3. Roofing materials must also meet solar reflectance and thermal emittance standards contained in Title 20 Standards.</p> <p><u>Roof/Ceiling Insulation:</u> There are also requirements for the installation of roofing and ceiling insulation. (See Title 24, Part 6 Compliance Manual at Section 3.2.2.)</p>
Flooring	CALGreen Code	<p>The project must comply with efficiency standards regarding flooring materials. For example, for 80% of floor area must receive “resilient flooring,” the flooring must meet applicable installation and material requirements contained in CALGreen Code Section 5.504.4.6.</p>
Window and Doors (Fenestration)	California Energy Code	<p>The project must comply with fenestration efficiency requirements. For example, the choice of windows, glazed doors, and any skylights for the project must conform to energy consumption requirements affecting size, orientation, and types of fenestration products used. (See Title 24, Part 6 Compliance Manual, Section 3.3.)</p>
Building Walls/ Insulation	CALGreen Code California Energy Code	<p>The project must comply with efficiency requirements for building walls and insulation.</p> <p><u>Exterior Walls:</u> Must meet requirements in current edition of California Energy Code and comply with Sections A5.106.7.1 or A5.106.7.2 of CALGreen Code for wall surfaces, as well as Section 5.407.1, which requires weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2. Construction must also meet requirements contained in Title 24, Part 6, which vary by material of the exterior walls. (See Title 24, Part 6 Compliance Manual, Part 3.2.3.)</p> <p><u>Demising (Interior) Walls:</u> Mandatory insulation requirements for demising walls (which separate conditioned from non-conditions space) differ by the type of wall material used. (<i>Id.</i> at 3.2.4.)</p> <p><u>Door Insulation:</u> There are mandatory requirements for air infiltration rates to improve insulation efficiency; they differ according to the type of door. (<i>Id.</i> at 3.2.5.)</p> <p><u>Flooring Insulation:</u> There are mandatory requirements for insulation that depend on the material and location of the flooring. (<i>Id.</i> at 3.2.6.)</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
Finish Materials	CALGreen Code	The project must comply with pollutant control requirements for finish materials. For example, materials including adhesives, sealants, caulks, paints and coatings, carpet systems, and composite wood products must meet requirements in CALGreen Code to ensure pollutant control. (CALGreen Code Section 5.504.4.)
Wet Appliances (Toilets/Faucets/Urinal, Dishwasher/Clothes Washer, Water Heater)	CALGreen Code California Energy Code Appliance Efficiency Regulations (Title 20 Standards)	<p>Wet appliances associated with the project must meet various efficiency requirements. For example:</p> <p>Toilets/Faucets/Urinals: Use associated with the project is subject to new maximum rates for toilets, urinals, and faucets effective January 1, 2016:</p> <p>Showerheads maximum flow rate 2.5 gpm at 80 psi</p> <p>Wash fountains $2.2 \times (\text{rim space in inches}/20)$ gpm at 60 psi</p> <p>Metering faucets 0.25 gallons/cycle</p> <p>Lavatory faucets and aerators 1.2 gpm at 60 psi</p> <p>Kitchen faucets and aerators 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi</p> <p>Public lavatory faucets 0.5 gpm at 60 psi</p> <p>Trough-type urinals 16 inches length</p> <p>Wall mounted urinals 0.125 gallons per flush</p> <p>Other urinals 0.5 gallons per flush</p> <p>(Title 20 Standards, Sections 1605.1(h),(i) 1065.3(h),(i).)</p> <p>Water Heaters: Use associated with the project is subject to appliance efficiency requirements for water heaters. (Title 20 Standards, Sections 1605.1(f), 1605.3(f).)</p> <p>Dishwasher/Clothes Washer: Use associated with the project is subject to appliance efficiency requirements for dishwashers and clothes washers. (Title 20 Standards, Sections 1605.1(o),(p),(q), 1605.3(o),(p),(q).)</p>
Dry Appliances (Refrigerator/Freezer, Heater/Air Conditioner)	Title 20 Standards CALGreen Code	<p>Dry appliances associated with the project must meet various efficiency requirements. For example:</p> <p><u>Refrigerator/Freezer</u>: Use associated with the project is subject to appliance efficiency requirements for refrigerators and freezers. (Title 20 Standards, Sections 1605.1(a), 1605.3(a).)</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
		<u>Heater/Air Conditioner</u> : Use associated with the project is subject to appliance efficiency requirements for heaters and air conditioners. (Title 20 Standards, Sections 1605.1(b),(c),(d),(e), 1605.3(b),(c),(d),(e) as applicable.)
	CALGreen Code	Installations of HVAC, refrigeration and fire suppression equipment must comply with CALGreen Code Sections 5.508.1.1 and 508.1.2, which prohibits CFCs, halons, and certain HCFCs and HFCs.
Lighting	Title 20 Standards	<p>Lighting associated with the project will be subject to energy efficiency requirements contained in Title 20 Standards.</p> <p><u>General Lighting</u>: Indoor and outdoor lighting associated with the project must comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(j),(k),(n), 1605.3(j),(k),(n).)</p> <p><u>Emergency lighting and self-contained lighting</u>: the project must also comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(l), 1605.3(l).)</p> <p><u>Traffic Signal Lighting</u>: For any necessary project improvements involving traffic lighting, traffic signal modules and traffic signal lamps will need to comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(m), 1605.3(m).)</p>
	California Energy Code	<p>Lighting associated with the project will also be subject to energy efficiency requirements contained in Title 24, Part 6, which contains energy standards for non-residential indoor lighting and outdoor lighting. (See Title 24 Part 6 Compliance Manual, at Sections 5, 6.)</p> <p>Mandatory lighting controls for indoor lighting include, for example, regulations for automatic shut-off, automatic daytime controls, demand responsive controls, and certificates of installation. (Id. at Section 5.) Regulations for outdoor lighting include, for example, creation of lighting zones, lighting power requirements, a hardscape lighting power allowance, requirements for outdoor incandescent and luminaire lighting, and lighting control functionality. (Id. at Section 6.)</p>
	AB 1109	<p>Lighting associated with the project will be subject to energy efficiency requirements adopted pursuant to AB 1109.</p> <p>Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 25% for indoor commercial lighting.</p>
Bicycle and Vehicle Parking	CALGreen Code	The project will be required to provide compliant bicycle parking, fuel-efficient vehicle parking, and electric vehicle charging spaces (CALGreen Code Sections 5.106.4, 5.106.5.1, 5.106.5.3)

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
	California Energy Code	The project is also subject to parking requirements contained in Title 24, Party 6. For example, parking capacity is to meet but not exceed minimum local zoning requirements, and the project should employ approved strategies to reduce parking capacity (Title 24, Part 6, section 106.6)
Refrigerants	CARB Management of High GWP Refrigerants for Stationary Sources	Any refrigerants associated with the project will be subject to CARB standards. CARB’s Regulation for the Management of High GWP Refrigerants for Stationary Sources 1) reduces emissions of high-GWP refrigerants from leaky stationary, non-residential refrigeration equipment; 2) reduces emissions resulting from the installation and servicing of stationary refrigeration and air conditioning appliances using high-GWP refrigerants; and 3) requires verification GHG emission reductions. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5.1, Section 95380 et seq.)
Consumer Products	CARB High GWP GHGs in Consumer Products	All consumer products associated with the project will be subject to CARB standards. CARB’s consumer products regulations set VOC limits for numerous categories of consumer products and limits the reactivity of the ingredients used in numerous categories of aerosol coating products (CCR, Title 17, Division 3, Chapter 1, Subchapter 8.5.)
Construction		
Use of Off-Road Diesel Engines, Vehicles, and Equipment	CARB In-Use Off-Road Diesel Vehicle Regulation	<p>Any relevant vehicle or machine use associated with the project will be subject to CARB standards.</p> <p>The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation: 1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; 2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; 3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and 4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).</p> <p>The requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.</p>
	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in equipment operation would be subject to the Cap-and-Trade Program. (See “Energy Use,” below.)
Greening New Construction	CALGreen Code	All new construction, including the project, must comply with CALGreen Code, as discussed in more detail throughout this table.

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
		Adoption of the mandatory CALGreen Code standards for construction has been essential for improving the overall environmental performance of new buildings; it also sets voluntary targets for builders to exceed the mandatory requirements.
Construction Waste	CALGreen Code	The project will be subject to CALGreen Code requirements for construction waste reduction, disposal, and recycling, such as a requirement to recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.
Worker, vendor and truck vehicle trips (on-road vehicles)	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in worker, vendor and truck vehicle trips would be subject to the Cap-and-Trade Program.
Solid Waste		
Solid Waste Management	Landfill Methane Control Measure	<p>Waste associated with the project will be disposed per state requirements for landfills, material recovery facilities, and transfer stations. Per the statewide GHG emissions inventory, the largest emissions from waste management sectors come from landfills, and are in the form of CH₄.</p> <p>In 2010, CARB adopted a regulation that reduces emissions from methane in landfills, primarily by requiring owners and operators of certain uncontrolled municipal solid waste landfills to install gas collection and control systems, and requires existing and newly installed gas and control systems to operate in an optimal manner. The regulation allows local air districts to voluntarily enter into a memorandum of understanding with CARB to implement and enforce the regulation and to assess fees to cover costs of implementation.</p>
	Mandatory Commercial Recycling (AB 341)	<p>AB 341 will require the project, if it generates four cubic yards or more of commercial solid waste per week, to arrange for recycling services, using one of the following: self-haul; subscribe to a hauler(s); arranging for pickup of recyclable materials; subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation.</p> <p>The project will also be subject to local commercial solid waste recycling program required to be implemented by each jurisdiction under AB 341.</p>
	CALGreen Code	The project will be subject to CALGreen Code requirement to provide areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (CALGreen Code Section 5.410.1)

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
Energy Use		
Renewable Energy	California RPS (SB X1-2, SB 350, and SB 100)	<p>Energy providers associated with the project will be required to comply with RPS set by SB X1 2, SB 350, and SB 100.</p> <p>SB X1 2 requires investor-owned utilities, publicly-owned utilities, and electric service providers to increase purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. In the interim, each entity was required to procure an average of 20% of renewable energy for the period of January 1, 2011 through December 31, 2013; and will be required to procure an average of 25% by December 31, 2016, and 33% by 2020.</p> <p>SB 350 requires retail sellers and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.</p> <p>SB 100 increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California by 2045.</p>
	Million Solar Roofs Program (SB 1)	<p>The project will participate in California’s energy market, which is affected by implementation of the Million Solar Roofs Program.</p> <p>As part of Governor Schwarzenegger's Million Solar Roofs Program, California has set a goal to install 3,000 megawatts of new, solar capacity through 2016. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time.</p>
	California Solar Initiative- Thermal Program	<p>The project will participate in California’s energy market, which is affected by implementation of the California Solar Initiative -Thermal Program. Multifamily and Commercial properties qualify for rebates of up to \$800,000 on solar water heating systems and eligible solar pool heating systems qualify for rebates of up to \$500,000. Funding for the California Solar Initiative-Thermal program comes from ratepayers of Pacific Gas and Electric, SCE, Southern California Gas Company, and San Diego Gas and Electric. The rebate program is overseen by the CPUC as part of the California Solar Initiative.</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
	Waste Heat and Carbon Emissions Reduction Act (AB 1613, AB 2791)	<p>The project will participate in California’s energy market, which is affected by implementation of the Waste Heat and Carbon Emissions Reduction Act.</p> <p>Originally enacted in 2007 and in 2008, this act directed the CEC, CPUC, and CARB to implement a program that would encourage the amended development of new combined heat and power systems in California with a generating capacity of not more than 20 megawatts, to increase combined heat and power use by 30,000 gigawatt-hour. The CPUC publicly owned electric utilities, and CEC duly established policies and procedures for the purchase of electricity from eligible combined heat and power systems.</p> <p>CEC guidelines require combined heat and power systems to be designed to reduce waste energy; have a minimum efficiency of 60%; have NO_x emissions of no more than 0.07 pounds per megawatt-hour; be sized to meet eligible customer generation thermal load; operate continuously in a manner that meets expected thermal load and optimizes efficient use of waste heat; and be cost effective, technologically feasible, and environmentally beneficial.</p>
Vehicular/Mobile Sources		
General	SB 375 and KCOG RTP/SCS	The project complies with, and is subject to, the KCOG adopted RTP/SCS in 2022.
Fuel	Low Carbon Fuel Standard (LCFS)/ EO S-01-07	Auto trips associated with the project will be subject to LCFS (EO S-01-07), which requires a 10% or greater reduction in the average fuel carbon intensity by 2020 with a 2010 baseline for transportation fuels in California regulated by CARB. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG goals.
	Cap-and-Trade Program	<p>Use of gasoline associated with the project will be subject to the Cap-and-Trade Program.</p> <p>The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase.</p> <p>Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, RBOB, distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 MT or more of CO_{2e} annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
Automotive Refrigerants	CARB Regulation for Small Containers of Automotive Refrigerant	<p>Vehicles associated with the project will be subject to CARB’s Regulation for Small Containers of Automotive Refrigerant. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5, Section 95360 et seq.) The regulation applies to the sale, use, and disposal of small containers of automotive refrigerant with a GWP greater than 150. The regulation achieves emission reductions through implementation of four requirements: 1) use of a self-sealing valve on the container, 2) improved labeling instructions, 3) a deposit and recycling program for small containers, and 4) an education program that emphasizes best practices for vehicle recharging. This regulation went into effect on January 1, 2010 with a one-year sell-through period for containers manufactured before January 1, 2010. The target recycle rate is initially set at 90%, and rises to 95% beginning January 1, 2012.</p>
Light-Duty Vehicles	AB 1493 (or the Pavley Standard)	<p>Cars that drive to and from the project will be subject to AB 1493, which directed CARB to adopt a regulation requiring the maximum feasible and cost-effective reduction of GHG emissions from new passenger vehicles.</p> <p>Pursuant to AB 1493, CARB adopted regulations that establish a declining fleet average standard for CO₂, CH₄, N₂O, and HFCs (air conditioner refrigerants) in new passenger vehicles and light-duty trucks beginning with the 2009 model year and phased-in through the 2016 model year. These standards are divided into those applicable to lighter and those applicable to heavier portions of the passenger vehicle fleet.</p> <p>The regulations will reduce “upstream” smog-forming emissions from refining, marketing, and distribution of fuel.</p>
	Advanced Clean Car and ZEV Programs	<p>Cars that drive to and from the project will be subject to the Advanced Clean Car and ZEV Programs.</p> <p>In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions.</p> <p>The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018-2025 model years.</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
	Tire Inflation Regulation	<p>Cars that drive to and from the project will be subject to the CARB Tire Inflation Regulation, which took effect on September 1, 2010, and applies to vehicles with a gross vehicle weight rating of 10,000 pounds or less.</p> <p>Under this regulation, automotive service providers must, inter alia, check and inflate each vehicle’s tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service, and to keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to the CARB, or its authorized representative upon request.</p>
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles. (75 FR 25324–25728 and 77 FR 62624–63200.)
Medium- and Heavy-Duty Vehicles	CARB In-Use On-Road Heavy-Duty Diesel Vehicles Regulation (Truck and Bus Regulation)	<p>Any heavy-duty trucks associated with the project will be subject to CARB standards.</p> <p>The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.</p> <p>The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.</p>
	CARB In-Use Off-Road Diesel Vehicle Regulation	<p>Any relevant vehicle or machine use associated with the project will be subject to CARB standards.</p> <p>The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulations: 1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; 2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; 3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and 4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits).</p> <p>The requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.</p>

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
	Heavy-Duty Vehicle GHG Emission Reduction Regulation	Any relevant vehicle or machine use associated with the project will be subject to CARB standards. The CARB Heavy-Duty Vehicle GHG Emission Reduction Regulation applies to heavy-duty tractors that pull 53-foot or longer box-type trailers. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 1, Section 95300 et seq.) Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for medium- and heavy-duty vehicles. (76 FR 57106–57513.)
Water Use		
Water Use Efficiency	Emergency State Water Board Regulations	Water use associated with the project will be subject to emergency regulations. On May 18, 2016, partially in response to EO B-27-16, the State Water Board adopted emergency water use regulations (CCR, title 23, Section 864.5 and amended and re-adopted Sections 863, 864, 865, and 866). The regulation directs the State Water Board, Department of Water Resources, and CPUC to implement rates and pricing structures to incentivize water conservation, and calls upon water suppliers, homeowners’ associations, California businesses, landlords and tenants, and wholesale water agencies to take stronger conservation measures.
	EO B-37-16	Water use associated with the project will be subject to Emergency EO B-37-16, issued May 9, 2016, which directs the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January, 2017 to reflect differing water supply conditions across the state. The Water Board must also develop a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The Water Board and Department of Water Resources will develop new, permanent water use targets to which the project will be subject. The Water Board will permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.
	EO B-40-17	EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne. It also rescinds EO B-29-15, but expressly states that EO B-37-16 remains in effect

Table 24. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/Regulations	GHG Reduction Measures Required for Project
		and directs the State Water Resources Control Board to continue development of permanent prohibitions on wasteful water use to which the project will be subject.
	SB X7-7	Water provided to the project will be affected by SB X7-7's requirements for water suppliers. SB X7-7, or the Water Conservation Act of 2009, requires all water suppliers to increase water use efficiency. It also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.
	CALGreen Code	The project is subject to CALGreen Code's water efficiency standards, including a required 20% mandatory reduction in indoor water use. (CALGreen Code, Division 4.3.)
	California Water Code, Division 6, Part 2.10, Sections 10910-10915.	Development and approval of the project requires the development of a project-specific Water Supply Assessment.
	Cap-and-Trade Program	The project proposes utilization of a private well for water and an on-site septic system for sewage disposal. Thus, the Cap-and-Trade Program does not apply to the project.
	California RPS (SB X1-2, SB 350, SB 100)	Electricity usage associated with water and wastewater supply, treatment and distribution associated with the project will be required to comply with RPS set by SB X1-2, SB 350, and SB 100.

Notes: AB = Assembly Bill; CARB = California Air Resources Board; CEC = California Energy Commission; CFC = chlorofluorocarbon; CH₄ = methane; CO₂ = carbon dioxide; CO_{2e} = carbon dioxide equivalent; CPUC = California Public Utilities Commission; EO = Executive Order; EPA = Environmental Protection Agency; GHG = greenhouse gas; GWP = global warming potential; HCFC = hydrochlorofluorocarbon; HFC = hydrofluorocarbon; gpm = gallons per minute; MT = metric tons; N₂O = nitrous oxide; NHTSA = National Highway Traffic Safety Administration; PM = particulate matter; RPS = Renewable Portfolio Standard; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; KCOG = Kern Council of Governments; VOC = volatile organic compound; ZEV = zero emission vehicle.

As shown in Table 24, the project would be required to comply with the various GHG-reducing regulations.

Project Consistency with the County’s General Plan

The County’s General Plan includes various goals and policies that promote the use of clean and renewable energy sources, reduce waste, conserve water, and promote the efficient and sustainable use of energy. The Land Use, Open Space, Conservation, Circulation, and Energy Elements include goals and policies that result in benefits with reducing GHG emissions. Table 25 summarizes the project’s consistency with the County’s policies.

Table 25. Consistency with Kern County’s General Plan Policies

General Plan Policies	Project Consistency
<p>G. Discretionary development projects involving the use of tractor-trailer rigs shall incorporate diesel exhaust reduction strategies including, but not limited to: a. Minimizing idling time. b. Electrical overnight plug-ins.</p>	<p><i>Consistent.</i> The project’s heavy-duty diesel vehicles used during construction and operation will minimize idling time onsite in accordance with CARB’s ATCM (13 CCR § 2485). No trucks would be operating overnight or have TRUs to need overnight plug-ins. MM-AQ-1 limits idling to 5 minutes during construction.</p>
<p>H. Discretionary projects may use one or more of the following to reduce air quality effects:</p> <ul style="list-style-type: none"> a. Pave dirt roads within the development. b. Pave outside storage areas. c. Provide additional low Volatile Organic Compounds (VOC) producing trees on landscape plans. d. Use of alternative fuel fleet vehicles or hybrid vehicles. e. Use of emission control devices on diesel equipment. f. Develop residential neighborhoods without fireplaces or with the use of Environmental Protection Agency certified, low emission natural gas fireplaces. g. Provide bicycle lockers and shower facilities on site. h. Increasing the amount of landscaping beyond what is required in the Zoning Ordinance (Chapter 19.86). 	<p><i>Consistent.</i> The project would use alternative fuel fleet vehicles or hybrid vehicles to the extent feasible during operation. The project would not include fireplaces or any natural gas use onsite during operation. Onsite bicycle lockers and shower facilities are not practical for the project due to the rural nature of the area. There are no residences or commercial areas in close proximity to the project site and thus the use of bicycles for the operations and maintenance staff is not feasible. The project will encourage the use of the park and ride facilities for its employees during operation.</p>

Table 25. Consistency with Kern County’s General Plan Policies

General Plan Policies	Project Consistency
<ul style="list-style-type: none"> i. The use and development of park and ride facilities in outlying areas. j. Other strategies that may be recommended by the local Air Pollution Control Districts. 	
<p>Goal: Encourage safe and orderly commercial solar development.</p> <p>Policies</p> <ol style="list-style-type: none"> 1. The County shall encourage domestic and commercial solar energy uses to conserve fossil fuel and improve air quality. 2. The County should attempt to identify and remove disincentives to domestic and commercial solar energy development. 3. The County should permit solar energy development in the desert and valley planning regions that does not pose significant environmental or public health and safety hazards. 4. The County should encourage solar development in the desert and valley regions previously disturbed, and discourage development of energy projects on undisturbed land supporting State or federally protected plant and wildlife species. 	<p><i>Consistent.</i> The project would include up to 500 MW of solar photovoltaics and 2,000 MWh of battery storage onsite. The project is located in the desert and valley regions. The project would not pose significant environmental or public health and safety concerns.</p>

Source: Kern County 2009.
Notes: County = Kern County.

As discussed in Table 25, the project would be consistent with the County’s General Plan Policies.

Project Consistency with CARB’s Scoping Plan

The Scoping Plan, approved by CARB in 2008 and updated in 2014, 2017, and 2022, provides a framework for actions to reduce California’s GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs (CARB 2014, CARB 2017, CARB 2022). As such, the Scoping Plan is not

directly applicable to specific projects, nor is it intended to be used for project-level evaluations.¹³ Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low-Carbon Fuel Standard), among others. The project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 26 highlights measures that have been developed under the Scoping Plan and the project's consistency with those measures. Table 26 also includes measures recommended in the Scoping Plan. To the extent that these regulations are applicable to the project, its inhabitants, or uses, the project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

¹³ The Final Statement of Reasons for the amendments to the State CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009a).

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	<i>Consistent.</i> The project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
Low Carbon Fuel Standard	T-2	<i>Consistent.</i> Motor vehicles driven by the project's employees would use compliant fuels.
Low Carbon Fuel Standard (18% reduction in carbon intensity by 2030)	Recommended	<i>Consistent.</i> Motor vehicles driven by the project's employees would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
Advanced Clean Transit	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Last Mile Delivery	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction in Vehicle Miles Traveled	Recommended	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	<i>Consistent.</i> These standards would be applicable to the light-duty vehicles that would access the project site. Motor vehicles driven by the project's employees would maintain proper tire pressure when their vehicles are serviced. The project's employees would replace tires in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. Motor vehicles driven by the project's employees would use low-friction oils when their vehicles are serviced. The project's employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase. In addition, the project would not prevent CARB from implementing this measure.
Ship Electrification at Ports (Shore Power)	T-5	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
California Sustainable Freight Action Plan	Recommended	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	<i>Consistent.</i> Heavy-duty vehicles would be required to comply with CARB GHG reduction measures. In addition, the project would not prevent CARB from implementing this measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive project	T-8	<i>Consistent.</i> The project medium- and heavy-duty vehicles (e.g., delivery trucks) could take advantage of the vehicle hybridization action, which would reduce GHG emissions through increased fuel efficiency. In addition, the project would not prevent CARB from implementing this measure.
Medium and Heavy-Duty GHG Phase 2	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
High-Speed Rail	T-9	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Transportation Electrification	2022 Appendix D	<i>Consistent.</i> The project would include EV charging infrastructure at the operations and maintenance building that meets the voluntary standard in the CalGreen Code at time of project approval.
VMT Reduction		

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)	2022 Appendix D	<i>Consistent.</i> The Project site is located in the San Joaquin Valley and has historically been used for farming. The nature of the project type and amount of land required does not lend itself to urban infill. However, as discussed, it is located on previous agricultural land and not open green space.
Does not result in the loss or conversion of natural and working lands	2022 Appendix D	<i>Consistent.</i> Based on WSA, the Project site has not been used for irrigated agriculture in the last ten years (2012 through 2022) but is now being used for sheep and cattle grazing.
Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre), or, Is in proximity to existing transit stops (within a half mile), or Satisfies more detailed and stringent criteria specified in the region’s SCS.	2022 Appendix D	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduces parking requirements by: Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or Providing residential parking supply at a ratio of less than one parking space per dwelling unit; or For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	2022 Appendix D	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
At least 20 percent of units included are affordable to lower-income residents	2022 Appendix D	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Results in no net loss of existing affordable units	2022 Appendix D	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Uses all-electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking	2022 Appendix D	<i>Consistent.</i> The operations and maintenance building will be all-electric. There will be no natural gas used onsite.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	<i>Consistent.</i> The project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	<i>Consistent.</i> The project would be all-electric and would not use natural gas during operation.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Combined Heat and Power	E-2	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Portfolios Standard (33% by 2020)	E-3	<i>Consistent.</i> While the project would support this goal, the 2020 goal has passed and would no longer apply.
Renewable Portfolios Standard (50% by 2050)	Recommended	<i>Consistent.</i> The project would support the RPS goal by production of 500 MW of solar electricity.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	<i>Not applicable.</i> The project would not prevent CARB from implementing this measure.
Water Sector		
Water Use Efficiency	W-1	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Water Recycling	W-2	<i>Not applicable.</i> Recycled water is not available to the project site. The project would not prevent CARB from implementing this measure.
Water System Energy Efficiency	W-3	<i>Not applicable.</i> This is applicable for the transmission and treatment of water, but it is not applicable for the project.
Reuse Urban Runoff	W-4	<i>Not applicable.</i> The reuse of urban water on site was determined to not be feasible. The project would not prevent CARB from implementing this measure.
Renewable Energy Production	W-5	<i>Not applicable.</i> Applicable for wastewater treatment systems. Not applicable for the project.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	<i>Consistent.</i> The project’s operations and maintenance building would be built in accordance with Title 11 CalGreen standards in place at the time building permits are obtained.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	<i>Not applicable.</i> The Proposed project would not prevent CARB from implementing this measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduce GHG Emissions by 20% in Oil Refinery Sector	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Refinery Flare Recovery Process Improvements	I-4	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Mandatory Commercial Recycling	RW-3	<i>Consistent.</i> During both construction and operation of the project, the project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-4	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Anaerobic/Aerobic Digestion	RW-5	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Extended Producer Responsibility	RW-6	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Environmentally Preferable Purchasing	RW-7	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Forests Sector		
Sustainable Forest Target	F-1	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
SF ₆ Limits in Non-Utility and Non-Semiconductor Applications	H-2	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 26. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	project Consistency
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Limit High Global Warming Potential Use in Consumer Products	H-4	<i>Consistent.</i> The project’s employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	<i>Consistent.</i> Employees of the project would conduct air conditioning refrigerant leak tests during periodic vehicle smog checks.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	<i>Consistent.</i> The Proposed project would use gas insulated switchgear that would be subject to CARB regulations and meet the leak rate mandates.
40% reduction in methane and hydrofluorocarbon emissions	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
50% reduction in black carbon emissions	Recommended	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	<i>Not applicable.</i> This measure does not apply to the project. The project would not inhibit CARB from implementing this Scoping Plan Measure.

Source: CARB 2008, 2017b, CARB 2022.

Notes: CARB = California Air Resources Board; EV = electric vehicle; GHG = greenhouse gas; project = 14800 W. Schulte Road Logistics Center project; SF₆ = sulfur hexafluoride

Based on the analysis in Table 26, the project would be consistent with the applicable strategies and measures in the Scoping Plan.

Project Consistency with Kern Council of Government's Regional Transportation Plan/Sustainable Communities Strategy

The 2022 Regional Transportation Plan (RTP) incorporates local land use projections and circulation networks in city and County general plans. The 2022 RTP is not directly applicable to the project because the underlying purpose of the 2022 RTP is to provide direction and guidance by making the best transportation and land use choices for future development. Nevertheless, the project would not conflict with the goals and policies of the 2022 RTP. In addition, the project would not impact local transportation or land use during operation.

Project Consistency with Senate Bill 32 and Executive Order S-3-05

The project would not impede the attainment of the GHG reduction goals for 2030 or 2050 identified in EO S-3-05 and SB 32. As discussed in Section 3.2.2, EO S-3-05 establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. SB 32 establishes for a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030. While there are no established protocols or thresholds of significance for that future year analysis, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014a).

CARB has expressed optimism with regard to both the 2030 and 2050 goals. It states in the First Update to the Climate Change Scoping Plan that "California is on track to meet the near-term 2020 GHG emissions limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32" (CARB 2014a). With regard to the 2050 target for reducing GHG emissions to 80% below 1990 levels, the First Update to the Climate Change Scoping Plan states the following (CARB 2014a):

This level of reduction is achievable in California. In fact, if California realizes the expected benefits of existing policy goals (such as 12,000 megawatts of renewable distributed generation by 2020, net zero energy homes after 2020, existing building retrofits under AB 758, and others) it could reduce emissions by 2030 to levels squarely in line with those needed in the developed world and to stay on track to reduce emissions to 80% below 1990 levels by 2050. Additional measures, including locally driven measures and those necessary to meet federal air quality standards in 2032, could lead to even greater emission reductions.

In other words, CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, SB 32, and EO S-3-05. This is confirmed in the 2030 Scoping Plan, which states (CARB 2017b):

The Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

Conclusion

The project is consistent with the Scoping Plan, 2022 RTP/SCS, and County's General Plan, which all promote economic growth while achieving greater energy efficiency. The project would also be consistent with KCOG's 2022 RTP/SCS, SB 32, and EO S-3-05 by being consistent with GHG reduction strategies and policies, increasing the use of alternative fueled vehicles, and implementing energy efficiency strategies. The project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the project's impacts with respect to GHG emissions would be **less than significant**.

Cumulative Impact Analysis

This section provides an analysis of cumulative impacts from construction and operation of the project and other past, present, and reasonably foreseeable future projects, as required by Section 15130 of the State CEQA Guidelines. For purposes of GHG emissions, the geographical area of cumulative impacts is global, as discussed in Section 3.4.1 and further detailed below.

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself).

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

Please see response, below.

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

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. As previously discussed in Section 3.1 and Section 3.3, GHG emissions inherently contribute to cumulative impacts, and thus, any additional GHG emissions would result in a cumulative impact. As shown in Table 22 and discussed thereafter, the project would avoid a net 588,678 MT CO₂e over its lifetime. As such, the project would not make a cumulatively considerable contribution a cumulative impact with regard to generation of GHG emissions and the cumulative impact would be **less than significant**.

The project would be consistent with all applicable GHG reduction plans, including the County's General Plan, the KCOG 2022 RTP/SCS, and CARB's Scoping Plan. Therefore, the project would not make a cumulatively considerable contribution to a cumulative impact, and the cumulative impact would be **less than significant**.

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4 Energy

4.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration, California used approximately 255,224 gigawatt hours of electricity in 2018 (EIA 2020a). By sector in 2017, commercial uses utilized 46% of the state's electricity, followed by 35% for residential uses and 19% for industrial uses (EIA 2020a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2020b).

Pacific Gas & Electric Company (PG&E) provides electrical and natural gas service to the region. Incorporated in California in 1905, PG&E is one of the largest combination natural gas and electric utilities in the United States. It currently provides service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The service area includes 106,681 circuit miles of electric distribution lines, 18,466 circuit miles of interconnected transmission lines, 42,141 miles of natural gas distribution pipelines, and 6,438 miles of transportation pipelines. PG&E and other utilities in the state are regulated by the California Public Utilities Commission (CPUC) (PG&E 2020). According to the California Energy Commission (CEC), approximately 78 billion kilowatt-hours of electricity were used in PG&E's service area in 2019 (CEC 2020a).

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,154,030 million cubic feet of natural gas in 2019 (EIA 2020c). Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. The majority of California's natural gas customers are residential and small commercial customers (core customers), which accounted for approximately 35% of the natural gas delivered by California utilities in 2018 (CPUC 2020). Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 65% of the natural gas delivered by California utilities (CPUC 2020). The CPUC regulates California natural gas rates and natural gas services, including in-state transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. Biogas (e.g., from wastewater treatment facilities or dairy farms) is just beginning to be delivered into the gas utility pipeline systems, and the state has been encouraging its development (CPUC 2020). In 2019, PG&E delivered approximately 4.9 billion therms of natural gas to the region, with 3 billion therms for non-residential use and 1.9 billion therms for residential use (CEC 2020b, 2020c).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 681 million barrels of petroleum in 2018, with the majority (584 million barrels) used for the transportation sector (EIA 2020d). This total annual consumption equates to a daily use of approximately 1.9 million barrels of petroleum. There are 42

U.S. gallons in a barrel, so California consumes approximately 78.4 million gallons of petroleum per day, adding up to an annual consumption of 28.7 billion gallons of petroleum. By sector, transportation uses utilize approximately 85.5% of the state's petroleum, followed by 11.1% from industrial, 2.5% from commercial, 0.9% from residential, and 0.01% from electric power uses (EIA 2018). Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 4.2, below. As such, the CEC anticipates an overall decrease of gasoline demand in the state over the next decade (CEC 2018a).

4.2 Regulatory Setting

4.2.1 Federal Regulations

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased corporate average fuel economy (CAFE) standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable fuel standard (RFS) (Section 202)
- Appliance and lighting efficiency standards (Sections 301–325)
- Building energy efficiency (Sections 411–441)

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2017c). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of greenhouse gas (GHG) emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program ("RFS2") includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

4.2.2 State Regulations

CEQA

In accordance with the CEQA Guidelines and Appendix F, Energy Conservation, of the CEQA Guidelines, in order to ensure that energy implications are considered in project decisions, EIRs must include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines provides a list of energy-related topics that should be analyzed in an EIR. In addition, while not described as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics that the lead agency may consider in the energy analysis in an EIR, where topics are applicable or relevant to the project:

- The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project’s life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and,
- The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

Warren-Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974, which created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation’s first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan (CPUC 2008). This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

AB 32 and SB 32

In 2006, the State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted Senate Bill (SB) 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, the California Air Resources Board (CARB) prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The current Title 24, Part 6 standards, referred to as the 2022 Title 24 Building Energy Efficiency Standards, will become effective January 1, 2023. The 2019 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2020. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018a). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018a).

Title 24 also includes Part 11, the California Green Building Standards (CALGreen). CALGreen establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2019 CALGreen standards are the current applicable standards. For

nonresidential projects (which the residential portion of the project is subject to), some of the key mandatory CALGreen 2019 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, electric vehicle (EV) charging stations, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR Part 11).

Senate Bill 1368

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation (minimum level of demand on an electrical grid over a span of time) by the state's utilities to those power plants that meet an emissions performance standard jointly established by the CEC and the CPUC.

The CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds carbon dioxide (CO₂) per megawatt-hour. This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs;
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long-term while meeting the state's standards for environmental impact; and
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (EPS) (Perata, Chapter 598, Statutes of 2006).

AB 1493

Adopted in 2002 by the state legislature, AB 1493 ("Pavley" regulations) required that the CARB develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions."

The EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles on June 30, 2009. On September 24, 2009, CARB adopted amendments to the Pavley regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB's September 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles.

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency and reducing motorists' costs.

EO S-1-07

Issued on January 18, 2007, Executive Order (EO) S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂-equivalent (CO₂e) grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. In addition, the Low Carbon Fuel Standard would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles. The Low Carbon Fuel Standard was anticipated to lead to the replacement of 20% of the fuel used in motor vehicles with alternative fuels by 2020. In 2018, this goal was revised to reduce the carbon intensity of fuels by 20% compared to 2011 by 2030. In 2020, the LCFS met 7.42% of the 7.5% target reduction for the year (CARB 2021c).

SB 375

In August 2008, the legislature passed, and on September 30, 2008, Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see EO S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for “transit priority projects,” as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or alternative planning strategy.

In September 2010, CARB adopted the SB 375 targets for the regional metropolitan planning organizations. The targets for the SCAG are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a SCS is the responsibility of the metropolitan planning organizations. SCAG prepared its RTP/SCS, which was adopted by the SCAG Regional Council on April 4, 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035. On June 4, 2012, the CARB executive officer issued an executive order accepting SCAG’s quantification of GHG reductions and the determination that the SCS would achieve the GHG emission reduction targets established by CARB. On April 7, 2016, SCAG adopted the 2016–2040 RTP/SCS which looks to build on the success of the 2012–2035 RTP/SCS. Targets for SCAG region in the updated plan includes an 8% per capita reduction in GHG emissions from automobiles and light trucks by 2020, an 19% reduction by 2035, and a 21% reduction by 2040 compared with 2005 levels (SCAG 2020).

SCAG has developed Connect SoCal, the 2020–2045 RTP/SCS, which is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region’s future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG 2020–2045 RTP/SCS was adopted on September 3, 2020.

Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-use) Regulation

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM, and NO_x emissions from existing diesel vehicles operating in California. Amendments to this regulation were approved by CARB on April 25, 2014.

The regulation applies to nearly all diesel fueled, dual-fueled, or alternative diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned and for privately and publicly owned school buses. The purpose of this regulation is to reduce emissions of diesel PM, NO_x, and other criteria pollutants from in-use diesel-fueled vehicles.

Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Starting January 1, 2012, heavier trucks were required to meet the engine model year schedule. Fleets that comply with the schedule must install the best available PM filter on 1996 model year and newer engines and replace the vehicle 8 years later. Trucks with 1995 model year and older engines must be replaced starting in 2015. Replacements with a 2010 model year or newer engines meet the final requirements, but owners can also replace with used trucks that have a future compliance date on the schedule. For example, a replacement with a 2007 model year engine complies until 2023. By 2023, all trucks and buses must have 2010 model year engines with few exceptions. No reporting is required if complying with this schedule (CARB 2014b).

Advanced Clean Car Program

The Advanced Clean Cars (ACC) I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle (LEV) regulation for criteria air pollutant and GHG emissions and a technology forcing regulation for zero-emission vehicles (ZEV) that contributes to both types of emission reductions (CARB 2021a). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program is currently in development to establish the next set of LEV and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California’s carbon neutrality standards (CARB 2021a). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, is anticipated to be presented to CARB for consideration in summer 2022. However, as detailed previously, EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which revokes California's authority to set its own GHG emissions standards and set ZEV mandates in California. Since California and 22 other states, as well as the District of Columbia and four cities, filed suit against the EPA and a petition for reconsideration of the SAFE Rule, the ACC II rulemaking's course may vary depending on the results of this ongoing litigation.

Advanced Clean Trucks Program

The purpose of the ACT Regulation (June 2020) is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce emissions NO_x, fine particulate matter, TACs, GHGs, and other criteria pollutants generated from on-road mobile sources (CARB 2021b). Requiring medium- and heavy-duty vehicles to transition to zero-emissions technology will reduce health risks to people living in and visiting California and is needed to help California meet established near- and long-term air quality and climate mitigation targets. The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

1. Zero-emission truck sales: Manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b – 3 truck sales, 75% of Class 4 – 8 straight truck sales, and 40% of truck tractor sales.
2. Company and fleet reporting: Large employers including retailers, manufacturers, brokers and others will be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

EO B-16-12

Governor Brown issued EO B-16-12 on March 23, 2012. The EO requires that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It orders CARB, the CEC, CPUC, and other relevant agencies work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve the following by 2015:

- The state's major metropolitan areas will be able to accommodate ZEVs, each with infrastructure plans and streamlined permitting
- The state's manufacturing sector will be expanding ZEV and component manufacturing
- The private sector's investment in ZEV infrastructure will be growing
- The state's academic and research institutions will be contributing to ZEV research, innovation and education.

CARB, the CEC, and CPUC, are also directed to establish benchmarks to help achieve the following goals by 2020:

- The state's ZEV infrastructure will be able to support up to one million vehicles
- The costs of ZEV will be competitive with conventional combustion vehicles
- ZEVs will be accessible to mainstream consumers
- There will be widespread use of ZEVs for public transportation and freight transport
- Transportation sector GHG emissions will be falling as a result of the switch to ZEVs
- Electric vehicle charging will be integrated into the electricity grid
- The private sector's role in the supply chain for ZEV component development and manufacturing will be expanding.

Benchmarks are also to be established to help achieve the following goals by 2025:

- Over 1.5 million ZEVs will be on California roads and their market share will be expanding
- Californians will have easy access to ZEV infrastructure
- The ZEV industry will be a strong and sustainable part of California's economy
- California's clean, efficient vehicles will annually displace at least 1.5 billion gallons of petroleum fuels.

On a statewide basis, the EO establishes a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050.

CAP-and-Trade Program

To achieve the goals of AB 32, the *Climate Change Scoping Plan: A Framework for Change* included an early action to develop a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system. The cap-and-trade regulation, which is a key element of California's climate plan, took effect in January 2012 and compliance obligation began in January 2013. The cap-and-trade program sets a statewide limit on sources responsible for 85% of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest-cost options to reduce emissions. The first phase of the cap-and-trade regulation included electricity generated in and imported into California, large combustion sources (i.e., generally those emitting more than 25,000 MT CO_{2e} per year), and certain industrial sectors. The second phase added providers of transportation fuels and other combustion fuels (e.g., natural gas, propane) to the cap-and-trade program. The regulation requires that emissions generated by these facilities and combustion of fuels be reduced over time under a declining "cap."

Renewable Energy Sources

SB 1078 established the California Renewables Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

SB 350 (2015) expanded the RPS because it requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030 be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on non-renewable energy sources would also be reduced.

AB 1007

AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the CARB and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

4.2.3 Local Regulations

The County's General Plan Energy Element sets targets and strategies to reduce GHG emissions and associated climate change by supporting new renewable energy facilities. These are discussed in Section 3.2.3.2.

4.3 Significance Criteria and Methodology

4.3.1 Thresholds of Significance

The significance criteria used to evaluate project impacts to energy are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to energy would occur if a project would:

- A. Result in 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.
- C. Result in cumulatively considerable energy impacts.

4.3.2 Approach and Methodology

Petroleum

Potential impacts were assessed through projected traffic trip generation during construction and operation, as detailed in the CalEEMod outputs that was prepared for the project (Appendix A). Trip generation was provided by the applicant. Fuel consumption from construction equipment was estimated by converting the total CO₂ emissions from each construction phase to gallons using conversion factors for CO₂ to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO₂ per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO₂ per gallon (The Climate Registry 2021). Heavy-duty construction equipment associated with construction activities and haul trucks involved in importing or exporting material to and from the site such as export of demolition material are assumed to use diesel fuel. It is assumed that construction workers would travel in the project area in gasoline-powered vehicles. Fuel consumption from worker and vendor trips was estimated by converting the total CO₂ emissions from the construction phase to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled. The fuel consumption resulting from the project's operational phase would be attributable to vehicle travel within the project area as well as use of the emergency generators. Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO₂ emissions from the project to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Per CEQA Guidelines Appendix F, this analysis considers these factors and provides the estimated maximum construction energy consumption for the purposes of evaluating the associated impacts on energy resources and requirements.

Electricity and Natural Gas

The estimation of operational electricity consumption was based on the CalEEMod land use defaults and units or total area (i.e., square footage) of the project's land uses. The operations and maintenance building is all-electric; as such, no natural gas would be used during operation. The electricity use from nonresidential buildings were based on the California Commercial End-Use Survey database. The NREL PVWatts estimator was used to estimate the energy produced by the solar component of the project. The applicant provided the estimated energy loss from charging and discharging of the BESS. Per CEQA Guidelines Appendix F, this analysis quantifies the project's energy consumption from operations and evaluates the associated impacts on energy resources and requirements, peak and based period demand, effects on the local and regional energy supplies, and analyses the project's compliance with existing energy standards.

4.4 Impact Analysis

4.4.1 Would the Project Result in Potentially Significant Environmental impact due to Wasteful, inefficient, or

Unnecessary Consumption of Energy Resources, during Project Construction or Operation?

Implementation of the project would increase the demand for electricity, natural gas, gasoline, and diesel consumption in the project area during construction and operation, which are evaluated below.

Construction Use

Electricity

Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by PG&E. The electricity used for such activities would be temporary, would be substantially less than that required for project operation, and would therefore have a negligible contribution to the project's overall energy consumption.

Natural Gas

Natural gas is not anticipated to be required during project construction because construction of new buildings and facilities typically do not consume natural gas. Peak energy demand specifically applies to electricity; because natural gas (and petroleum) are liquid, these energy resources do not have the same constraints as electricity supply. Nonetheless, any use of natural gas is anticipated to be sufficiently served by existing supply from SoCalGas and would not require additional local or regional capacity. Any minor amounts of natural gas that may be consumed because of construction would be temporary and negligible and would not have an adverse effect.¹⁴

Petroleum

Heavy-duty equipment associated with construction during development allowed for by the project would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the individual parcels within the project area and haul trucks exporting demolition material or other materials off site or importing material. Construction workers would travel to and from each of the parcels within the project area throughout the duration of construction. Appendix A lists the assumed equipment usage and vehicle trips.

Fuel consumption from construction equipment was estimated by converting the total CO₂ emissions from each construction phase to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Construction is estimated to occur in the years 2024 and 2061 based on the construction phasing schedule. The conversion factor for gasoline is 8.78 kilograms per metric ton CO₂ per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO₂ per gallon (The Climate Registry 2021). The estimated diesel fuel usage from construction equipment, haul trucks, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles, is shown in Table 27, Total project Construction Petroleum Demand. Of note, grading at the project site would be balanced; and therefore, no haul trucks are required for import or export of soils. The movement of soils onsite would be accomplished with off-road equipment.

¹⁴ While no natural gas is anticipated to be used during construction as construction equipment is typically diesel-fueled, the possibility of natural gas use is acknowledged in the event a natural gas-fueled piece of equipment is used. However, as noted previously, all equipment was assumed to be diesel-fueled in CalEEMod.

Table 27. Total Project Construction Petroleum Demand

Year	Off-Road Equipment (diesel)	Haul Trucks (diesel)	Vendor Trucks (diesel)	Worker Vehicles (gasoline)
	Gallons			
2024	240,038	39,872	86,755	102,523
2061	113,347	29,857	31,272	45,616
Total	353,385	69,729	118,027	148,139

Source: See Appendix A for outputs.

In summary, construction associated with the potential future development facilitated by the project over the construction period is conservatively anticipated to consume 148,139 gallons of gasoline from worker vehicles and 541,140 gallons of diesel for off-road equipment, haul trucks, and vendor trucks. In Kern County, it is estimated that approximately 14 million gallons of petroleum would be consumed in 2024 from offroad equipment and 678 million gallons from on-road vehicles (CARB 2022).

The project would be subject to CARB’s In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements. Overall, the project would not be unusual when compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Although not required to reduce energy impacts to less than significant, the project would include mitigation measure MM-AQ-1, Construction Equipment that would reduce petroleum use through use of electric equipment, use of cleaner fueled equipment, and minimizing idling, during construction activities.

Additionally, any future development facilitated by the project would be required to adhere to all federal, State, and local requirements for energy efficiency, including the latest Title 24 standards. Considering these requirements, the project would not result in the inefficient, wasteful, or unnecessary consumption of construction energy. Therefore, impacts would be less than significant, and no mitigation is required.

Operational Use

Electricity

Project operation would require electricity for multiple purposes including, but not limited to, building heating and cooling, water heating, lighting, appliances, and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. CalEEMod was used to estimate project emissions from electricity uses (see Appendix A for calculations). Default electricity generation rates in CalEEMod were used based on the proposed land use and climate zone. The increase in electricity demand for the future potential

buildout of the project’s operations and maintenance building and from the BESS is presented in Table 28, project Annual Operational Electricity Demand Summary - Unmitigated.

Table 28. Project Annual Operational Electricity Demand Summary - Unmitigated

Source	Electricity Demand (kWh/year)
Operations and Maintenance Building	34,416
BESS	21,899,300
Water/wastewater	12,083
Total project Electricity Demand	21,945,799

Notes: Appendix A.
kWh = kilowatt hours.

As shown in Table 28, the increase in potential development is estimated to have a total electrical demand of approximately 21,945,799 kWh per year. According to PVWatts, the project is estimated to produce 816,783,040 kWh per year of renewable energy from the 500 MW solar system. In 2020, the non-residential electricity demand was 12,327,802,256 kWh (12,328 GWh) for Kern County (CEC 2022a). Title 24 of the California Code of Regulations serves to enhance and regulate California’s building standards. The most recent amendments to Title 24, Part 6, referred to as the 2019 standards, became effective on January 1, 2020. The 2022 Title 24 standards will become effective on January 1, 2023, and will apply to the project. The applicable Title 24 standards would further ensure that the energy demands would not be inefficient, wasteful, or otherwise unnecessary.

For the 2020 fiscal year, PG&E had an annual electric sale to customers of approximately 78,518,835 MWh (CEC 2022a). The project represents approximately 0.03% of the PG&E network sales for 2020. In addition, the CEC forecasts that PG&E’s peak demand in the project buildout year of 2025, would be approximately 98,000 GWh (CEC 2018b). Under peak conditions, the project would consume a net increase of 21,946 MWh on an annual basis which is equivalent to a peak of 2.5 MW. In comparison to the PG&E power grid base peak load of 22,000 MW for 2025, the project would represent approximately 0.01% of the PG&E base peak load conditions. Thus, as per CEQA Guidelines Appendix F, the impacts related to electrical supply and infrastructure capacity and the project’s effect on peak and base period demands would be less than significant.

Natural Gas

The project is designed to be all-electric. As such, there would be no natural gas consumption during operation.

Petroleum

During operations, the majority of fuel consumption resulting from the project would involve the use of motor vehicles traveling to and from the project site, as well as fuels used for alternative modes of transportation that may be used by residents.

Petroleum fuel consumption associated with motor vehicles traveling to and from the project site is a function of the vehicle miles traveled (VMT) as a result of project operation. As shown in Appendix A (CalEEMod outputs are

discussed in Section 2.5, Air Quality, and Section 3.5, Greenhouse Gas Emissions), the annual VMT attributable to the project is expected to be 58,469 VMT. Countywide, the annual VMT is estimated to be 11,941,304,764 per year in 2025 (CARB 2022). Similar to construction worker and vendor trips, fuel consumption from worker and vendor trips are estimated by converting the total CO₂ emissions from operation of the project to gallons using the conversion factors for CO₂ to gallons of gasoline or diesel. Based on the annual fleet mix provided in CalEEMod, 93.3% of the fleet range from light-duty to medium-duty vehicles and motorcycles are assumed to be fueled by gasoline. The remaining 6.6% of vehicles represent medium-heavy duty to heavy-duty vehicles and buses and are assumed to run on diesel. The water trucks for the operations and maintenance building are assumed to be diesel. The gasoline consumption also includes fuel used for landscaping equipment. Calculations for annual mobile source fuel consumption are provided in Table 29, Annual Petroleum Demand – Unmitigated.

Table 29. Annual Petroleum Demand - Unmitigated

Fuel	Vehicle MT CO ₂	kg/CO ₂ /Gallon	Gallons
Gasoline	41.09	8.78	4,679.98
Diesel	22.22	10.21	2,176.52
Total			6,856.93

Source: Trips and vehicle CO₂ (Appendix A); kg/CO₂/Gallon (The Climate Registry 2021).

Note: MT = metric ton; CO₂ = carbon dioxide; kg = kilogram

As shown in Table 29, the annual petroleum consumption for the project is estimated to be approximately 6,857 gallons per year. By comparison, California as a whole consumes approximately 28.7 billion gallons of petroleum per year (EIA 2020d). Countywide total petroleum use by vehicles is expected to be 670 million gallons per year by 2025 (CARB 2022).

With respect to operational transportation-related fuel usage and in relation to CEQA Guidelines Appendix F, enhanced fuel economies realized pursuant to federal and State regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. The project would comply with Corporate Average Fuel Economy standards, which would result in more efficient use of transportation fuels (lower consumption). Project-related vehicle trips would also comply with Pavley Standards, which are designed to reduce vehicle GHG emissions by mandating increasingly stringent emissions standards on new vehicles, but would also result in fuel savings from more efficient engines in addition to compliance with Corporate Average Fuel Economy standards.

Renewable Energy Potential

As part of the project’s planning process, the County considered how the project could potentially increase its reliance on renewable energy sources to meet the project’s anticipated energy demand. Consistent with the CEC’s definition of eligible renewables, energy sources that were considered for their potential to power the project include biomass, geothermal, solar, wind, and small hydroelectric facilities.

Given the project’s location and the nature of the project, there are anticipated considerable site constraints at a parcel level including incompatibility with onsite and surrounding land uses for large scale power generation facilities, unknown interconnection feasibility, compatibility with utility provider systems, and no known water or geothermal resources to harness, that would eliminate the potential for biomass, geothermal, and hydroelectric

renewable energy to be installed within the project area. Regarding wind power, due to the nature of the project area parcels and surrounding land uses, wind turbines are generally anticipated to not be feasible as it represents an incompatible use due to the height of the wind turbine blades and the need to avoid nearby obstacles.¹⁵

Regarding solar power, the project is designed as a 500 MW solar system. According to PVWatts, the project is estimated to produce 816,783,040 kWh per year of renewable energy. Furthermore, the project includes a 2,000 MWh BESS system capable of storing renewable energy onsite and discharging it to the grid on an as-needed basis. Furthermore, as PG&E moves towards decarbonizing its power sources in accordance with SB 100, the renewable content of the grid sourced electricity will increase over time.

As explained above, the project would use renewable energy onsite as determined to be feasible and would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during project construction or operation, and impacts would be **less than significant**.

4.4.2 Would the Project Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency?

Construction

The project would utilize construction contractors who must demonstrate compliance with applicable regulations. Construction equipment would be required to comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, USEPA and NHTSA have adopted fuel-efficiency standards for medium- and heavy-duty trucks that will be phased in over time. Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA 2011). USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA 2016). The energy modeling for trucks does not consider specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of 5 minutes per occurrence. Off-road emissions standards would increase equipment efficiencies as they are phased-in over time and less-efficient equipment is phased out of construction fleets. These limitations would result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these requirements are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy. Thus, based on the information above, construction and operation of the project would comply with state or local plans for renewable energy or energy efficiency.

¹⁵ A general rule of thumb is to install a wind turbine on a tower with the bottom of the rotor blades at least 30 feet above anything within a 500-foot horizontal radius and to be sited upwind of buildings and trees (APA 2011, NREL 2015).

Per CEQA Guidelines Appendix F, the project's construction equipment used would be consistent with the energy standards applicable to construction equipment including limiting idling fuel consumption and using contractors that comply with applicable CARB regulatory standards that affect energy efficiency. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency regarding during project construction, and impacts would be **less than significant**.

Operation

The County's General Plan Energy Element sets targets and strategies to reduce GHG emissions and associated climate change by supporting new renewable energy facilities. Specifically, section 5.4.5 Solar Energy Development encourages safe and orderly commercial solar development. The project would directly support this goal and the County's General Plan. The project's BESS would also support the storage of offsite renewable energy as PG&E increases its portfolio of renewable energy sources in support of SB 100's goal of carbon free electricity by 2045.

Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and consumption. The project would comply with Title 24, Part 6, per state regulations. In accordance with Title 24 Part 6, the project would have: (a) sensor-based lighting controls—for fixtures located near windows, the lighting would be adjusted by taking advantage of available natural light; and (b) efficient process equipment—improved technology offers significant savings through more efficient processing equipment. Title 24, Part 11, contains voluntary and mandatory energy measures that are applicable to the project under the CALGreen Code. As discussed under Threshold 1, the project would result in an increased demand for electricity and petroleum. In accordance with Title 24, Part 11, mandatory compliance, the applicant would have: (a) 50% of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards; and (d) a 20% reduction in indoor water use. Compliance with all of these mandatory measures would decrease the consumption of electricity, natural gas, and petroleum.

Because the project would comply with Title 24, Part 6 and Part 11, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be **less than significant**.

4.4.3 Would the Project Result in a Cumulatively Considerable Energy Impact?

This section provides an analysis of cumulative impacts from construction and operation of the project and other past, present, and reasonably foreseeable future projects, as required by Section 15130 of the State CEQA Guidelines. Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself).

Cumulative projects that could exacerbate the project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. However, cumulative projects would be required by the County, as applicable, to conform to current federal, state, and local energy conservation standards, including the California

Energy Code Building Energy Efficiency Standards (24 CCR Part 6), the CALGreen Code (24 CCR Part 11), and SB 743.

As a result, the project, in combination with other reasonably foreseeable projects, would not cause a wasteful use of energy or other non-renewable natural resources. Therefore, the energy demand and use associated with the project and cumulative projects would not substantially contribute to a cumulative impact on existing or proposed energy supplies or resources and would not cause a significant cumulative impact on energy resources.

Future development would be subject to the Title 24 standards in place at the time of construction. It is speculative whether other projects would conflict with a state or local plan for renewable energy. However, future projects would be subject to CEQA and evaluate whether they would conflict with applicable plans.

The project would not conflict with applicable plans for renewable energy as it would be required to include solar pursuant to Title 24. As such, the project in combination with other reasonably foreseeable projects, would not conflict with a state or local plan for renewable energy or energy efficiency. Cumulative energy impacts would be considered **less than significant**.

5 References Cited

- 13 CCR 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.
- 13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets. 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- 17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.
- 24 CCR Part 6. California Energy Code. Sacramento, California: California Building Standards Commission. March 2010. ISBN 978-1-58001-976-7. Effective January 1, 2011. Accessed August 2016.
http://www.documents.dgs.ca.gov/bsc/Title_24/documents/2010/Part%206/2010-CA-Energy.pdf.
- APA (American Planning Association). 2011. Planning for Wind Energy. https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/wind/pdf/pas566.pdf.
- California Gas and Electric Utilities (Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, Southwest Gas Corporation, City of Long Beach Gas & Oil Department, and Southern California Edison Company). 2020a. 2020 California Gas Report. Accessed November 2020. <https://www.socalgas.com/regulatory/cgr.shtml>.
- California Gas and Electric Utilities. 2020b. California Gas Report. Accessed June 23, 2022.
https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.
- California Public Resources Code Sections 40000–40511. Part 1. Integrated Waste Management.
- CalRecycle (California Department of Resources Recycling and Recovery). 2012. *AB 341 Final Statement of Reasons: Mandatory Commercial Recycling Regulations*. Accessed August 2016. <http://www.calrecycle.ca.gov/laws/rulemaking/archive/2012/MCR/RuleDocs/FSOR.pdf>.
- CAPCOA (California Air Pollution Control Officers Association). 2008. *CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from projects Subject to the California Environmental Quality Act*. January 2008.
- CAPCOA. 2021. *California Emissions Estimator Model (CalEEMod) User's Guide Version 2020.4.0*. Prepared by BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts. Accessed May 2022.
<http://www.aqmd.gov/caleemod/user-s-guide>.

- CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. Accessed August 2016. <http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf>.
- CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Accessed August 2016. <http://www.arb.ca.gov/ch/landuse.htm>.
- CARB. 2008. *Climate Change Scoping Plan: A Framework for Change*. December 2008. Accessed December 2019. <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>.
- CARB (California Air Resources Board). 2011. "Facts About The Advanced Clean Cars Program." November 9, 2011. Accessed April 19, 2017. http://www.arb.ca.gov/msprog/zevprog/factsheets/advanced_clean_cars_eng.pdf.
- CARB. 2012. California Air Resources Board Approves Advanced Clean Car Rules. January 27. <https://www.arb.ca.gov/newsrel/newsrelease.php?id=282>.
- CARB. 2014a. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. May 2014. Accessed August 2014. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.
- CARB. 2014b. "Truck and Bus Regulation, On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation." August 29, 2014. Accessed April 19, 2017. <http://www.arb.ca.gov/msprog/onrdiesel/documents/FSRegSum.pdf>.
- CARB. 2016a. "Glossary of Air Pollution Terms." CARB website. Accessed June 2016. <http://www.arb.ca.gov/html/gloss.htm>.
- CARB. 2016b. "Overview: Diesel Exhaust and Health." April 12, 2016. Accessed December 2016. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>.
- CARB. 2016c. "Ambient Air Quality Standards." May 4, 2016. Accessed August 2016. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
- CARB. 2017a. Inhalable Particulate Matter and Health (PM2.5 and PM10). <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>.
- CARB. 2017b. The 2017 Climate Change Scoping Plan Update. January 20. Accessed January 2017. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.
- CARB. 2018. 2018 Progress Report California's Sustainable Communities and Climate Protection Act. November. Accessed December 2019. https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.
- CARB. 2019a. "Ozone & Health." <https://ww2.arb.ca.gov/resources/ozone-and-health>
- CARB. 2019b. "Nitrogen Dioxide & Health." <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>

- CARB. 2019c. “Carbon Monoxide & Health.” <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>
- CARB. 2019d. “Sulfur Dioxide & Health.” <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>
- CARB. 2019e. “Area Designation Maps/State and National.” Last updated August 2019. <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>.
- CARB. 2020a. “iADAM: Air Quality Data Statistics.” Accessed August 2017. <http://www.arb.ca.gov/adam/topfour/topfour1.php>.
- CARB. 2020b. “California Greenhouse Gas Emission Inventory—2020 Edition.” October 15, 2020. Accessed November 2020. https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_sum_2000-18.pdf.
- CARB. 2021a. Advanced Clean Cars Program. Accessed December 2021 at <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>.
- CARB. 2021b. Advanced Clean Trucks Fact Sheet. August 20, 2021. Accessed at https://ww2.arb.ca.gov/sites/default/files/2021-08/200625factsheet_ADA.pdf
- CARB. 2021c. Low Carbon Fuel Standard Data Dashboard. August 30. <https://www.arb.ca.gov/fuels/lcfs/dashboard/dashboard.htm>.
- CARB. 2022. Final 2022 Scoping Plan Update. December 15. Accessed December 2022. <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>.
- CAT (California Climate Action Team). 2016. Climate Action Team Reports. Accessed December 2016. http://climatechange.ca.gov/climate_action_team/reports/index.html.
- CDPH (California Department of Public Health). 2019. Epidemiologic Summary of Coccidioidomycosis in California, 2019. <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2019.pdf>.
- CEC (California Energy Commission). 2018a. 2019 Building Energy Efficiency Standards Fact Sheet. March 2018. https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf
- CEC. 2018b. The California Energy Demand 2018-2030 Revised Forecast. January 2018. Accessed June 23, 2022. http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-03/TN222287_20180120T141708_The_California_Energy_Demand_20182030_Revised_Forecast.pdf.
- CEC. 2022a. Electricity Consumption By County. Accessed June 2022. <http://www.ecdms.energy.ca.gov/elecbycounty.aspx>.
- CEC. 2022b. Gas Consumption By County. Accessed June 2022. <http://www.ecdms.energy.ca.gov/gasbycounty.aspx>.
- CNRA (California Natural Resources Agency). 2009. *Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97*. December 2009.

- CNRA. 2014. *Safeguarding California: Reducing Climate Risk—An Update to the 2009 California Climate Adaptation Strategy*. July 2014. http://resources.ca.gov/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf.
- CRNA. 2016. *Safeguarding California: Implementing Action Plans*. March 2016. <http://resources.ca.gov/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf>.
- CNRA. 2018a. *Safeguarding California Plan: 2018 Update, California's Climate Adaptation Strategy*. January 2018. <http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>.
- CNRA. 2018b. *California's Fourth Climate Change Assessment – San Joaquin Valley Region Report*. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-003_SanJoaquinValley_Preview_ADA.pdf.
- CPUC (California Public Utilities Commission). 2008. 2008 Update Energy Action Plan. February. https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/2008-energy-action-plan-update.pdf.
- CPUC. 2013. *California's Zero Net Energy Policies and Initiatives*. September 18, 2013. <http://annualmeeting.naseo.org/Data/Sites/2/presentations/Fogel-Getting-to-ZNE-CA-Experience.pdf>.
- EPA (U.S. Environmental Protection Agency). 2004. *Air Quality Criteria for Particulate Matter, Vol. 1 and 2*. EPA/600/P-99/002aF. National Center For Environmental Assessment, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, NC. October 2004.
- EPA. 2007. *Energy Independence and Security Act of 2007*. Accessed December 2016. <https://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf>.
- CPUC. 2019. 2019 California Renewables Portfolio Standard Annual Report. November 2019. Accessed October 2020. https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2019%20RPS%20Annual%20Report.pdf
- CPUC. 2020. 2020 California Renewables Portfolio Standard *Annual Report*. November 2020. Accessed March 2021. https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2020%20RPS%20Annual%20Report.pdf.
- CPUC. 2021. "Natural Gas and California." [Online] Accessed March 2021. http://www.cpuc.ca.gov/natural_gas/.
- Dudek. 2022. *Water Supply Assessment for the Pelicans Jaw Hybrid Solar Project*. June.
- EIA (U.S. Energy Information Administration). 2021. "State Energy Data System (SEDS): 2020—Table F20: Electricity Consumption Estimates, 2020". December 17, 2021. Accessed June 22, 2022. https://www.eia.gov/state/seds/sep_fuel/html/pdf/fuel_use_es.pdf.

- EIA. 2022a. "Profile Overview–California." Last updated March 17, 2022. Accessed June 22, 2022.. <https://www.eia.gov/state/?sid=CA#tabs-4>.
- EIA. 2022b. "Natural Gas Consumption by End Use." May 31, 2022. Accessed June 22, 2022. https://www.eia.gov/dnav/ng/ng_cons_sum_a_EPGO_VCO_mmcf_a.htm.
- EIA. 2022c. "Total Petroleum Consumption Estimates, 2020." [Online] 2021. Accessed March 2021. https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA.
- EPA. 2008. *Reducing Urban Heat Islands: Compendium of Strategies – Urban Heat Island Basics*. Accessed January 2021. <https://nepis.epa.gov/Exe/ZyNET.exe/P100RPJ6.txt?ZyActionD=ZyDocument&Client=EPA&Index=2006%20Thru%202010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTXT%5C00000037%5CP100RPJ6.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=5>.
- EPA. 2009. *Integrated Science Assessment for Particulate Matter*. U.S. EPA, EPA/600/R-08/139F, 2009.
- EPA. 2013. *Integrated Science Assessment of Ozone and Related Photochemical Oxidants*. U.S. EPA, EPA/600R-10/076F, 2013.
- EPA. 2015. "Transportation Conformity Guidance for Quantitative Hotspot Analyses of PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas."
- EPA. 2016a. "Criteria Air Pollutants." July 21, 2016. Accessed August 2016. <https://www.epa.gov/criteria-air-pollutants>.
- EPA. 2016d. "Glossary of Climate Change Terms." August 9, 2016. Accessed August 2016. <https://www3.epa.gov/climatechange/glossary.html>.
- EPA. 2017a. "Climate Change." Last updated January 19, 2017. Accessed January 2017. <https://www.epa.gov/climatechange>.
- EPA. 2017b. *Carbon Pollution Standards for Cars and Light Trucks to Remain Unchanged Through 2025*. January 13. Accessed February 2017. <https://www.epa.gov/newsreleases/carbon-pollution-standards-cars-and-light-trucks-remain-unchanged-through-2025>.
- EPA. 2017c. "Overview for Renewable Fuel Standard." Last updated June 7, 2017. Accessed February 2019. <https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard>
- EPA. 2018. *Residential Air Cleaners: A Technical Summary*. July. https://www.epa.gov/sites/production/files/2018-07/documents/residential_air_cleaners_-_a_technical_summary_3rd_edition.pdf.

- EPA. 2020a. "AirData: Access to Air Pollution Data." Last updated July 31, 2018. Accessed December 2020. http://www.epa.gov/airdata/ad_rep_mon.html.
- EPA. 2020b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2018*. EPA 430-R-20-002. April 2020. <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf>.
- EPA. 2021. "Notice of Reconsideration of a Previous Withdrawal of a Waiver for California's Advanced Clean Car Program (Light-Duty Vehicle Greenhouse Gas Emission Standards and Zero Emission Vehicle Requirements)." Accessed May 2021. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/notice-reconsideration-previous-withdrawal-waiver>.
- EPA and NHTSA (National Highway Traffic Safety Administration). 2016. Regulations and Standards: Heavy-Duty. EPA and DOT Finalize Greenhouse Gas and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles. Last updated August 2016. <https://www.epa.gov/newsreleases/epa-and-dot-finalize-greenhouse-gas-and-fuel-efficiency-standards-heavy-duty-trucks-0>.
- EPA and NHTSA. 2018. EPA and NHTSA MYs 2021-2026 CAFE Proposal – By the Numbers. August 2018. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100V26H.pdf>.
- IEEE (Institute of Electrical and Electronics Engineers). 2018. PC37.122 – Standard for High Voltage Gas-Insulated Substations Rated Above 52 kV. March 8, 2018. https://standards.ieee.org/project/C37_122.html.
- IPCC (Intergovernmental Panel on Climate Change). 2007. *IPCC Fourth Assessment Synthesis of Scientific-Technical Information Relevant to Interpreting Article 2 of the U.N. Framework Convention on Climate Change*.
- IPCC. 2013. *Climate Change 2013: The Physical Science Basis—Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P.M. Midgley. Cambridge, United Kingdom and New York, New York: Cambridge University Press.
- IPCC. 2014. *Climate Change 2014 Synthesis Report: A Report of the Intergovernmental Panel on Climate Change*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Accessed August 2016. <http://www.ipcc.ch/report/ar5/syr/>.
- IPCC. 2018. "Summary for Policymakers." In *Global Warming of 1.5 °C. An IPCC Special Report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Accessed July 2019. https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf
- Kern Council of Governments. 2022. Final 2022 Regional Transportation Plan. July 21. Accessed July 27. <https://www.kerncog.org/category/docs/rtp/>.

- Kern County. 2006. Guidelines for Preparing and Air Quality Assessment for use in Environmental Impact Reports. December 1. Accessed August 2022. <http://www.kernair.org/Documents/CEQA/AirQualityAssessmentPreparationGuidelines.pdf>.
- Kern County. 2009. Kern County General Plan. September 22. Accessed August 2022. https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf.
- Kern County. 2012. Communitywide Greenhouse Gas Emissions Inventory 2005 Baseline Year – 2020 Forecast. May. Accessed August 2022. https://www.kerncog.org/wp-content/uploads/2011/09/kc_ghg_final_report_052012.pdf.
- NRC (National Research Council). 2005. *Interim Report of the Committee on Changes in New Source Review Programs for Stationary Sources of Air Pollutants*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/11208>.
- NREL (National Renewable Energy Laboratory). 2015. Small Wind Site Assessment Guidelines. <https://www.nrel.gov/docs/fy15osti/63696.pdf>.
- OEHHA (Office of Environmental Health Hazard Assessment). 2018. *Indicators of Climate Change in California*. May 9, 2018. <https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorreportmay2018.pdf>.
- OPR (Governor’s Office of Planning and Research). 2018. *Discussion Draft CEQA and Climate Change Advisory*. Accessed March 2019. http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Advisory.pdf.
- PG&E (Pacific Gas & Electric Company). 2020. “Company Profile.” Accessed June 2020. https://www.pge.com/en_US/about-pge/company-information/profile/profile.page.
- PBL (PBL Netherlands Environmental Assessment Agency). 2020. *Trends in Global CO₂ and Total Greenhouse Gas Emissions, 2019 Report*. Accessed May 2022. https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report_4068.pdf
- SCAQMD (South Coast Air Quality Management District). 2017. 2016 Air Quality Management Plan Appendix I, Health Effects. March 2017. <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-i.pdf?sfvrsn=14>
- SJVAPCD (San Joaquin Valley Air Pollution Control District). 2000. *Environmental Review Guidelines Procedures for Implementing the California Environmental Quality Act*. August 2000. Accessed August 2020. http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000_.pdf.
- SJVAPCD. 2004. *Extreme Ozone Attainment Demonstration Plan*. October 2004. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/AQ_Final_Adopted_Ozone2004.htm.
- SJVAPCD. 2006. *Guidance for Air Dispersion Modeling*. Accessed July 2018. http://www.valleyair.org/busind/pto/tox_resources/Modeling%20Guidance.pdf.

- SJVAPCD. 2007a. *2007 PM₁₀ Maintenance Plan and Request for Redesignation*. September 2007. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/Maintenance%20Plan10-25-07.pdf.
- SJVAPCD. 2007b. *2007 Ozone Plan*. April 2007. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/2007_8HourOzone_CompletePlan.pdf.
- SJVAPCD. 2008. *2008 PM_{2.5} Plan*. April 2008. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/AQ_Final_Adopted_PM25_2008.htm.
- SJVAPCD. 2009a. *Reasonably Available Control Technology (RACT) Demonstration for Ozone State Implementation Plans (SIP)*. April 2009. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/RACTSIP-2009.pdf.
- SJVAPCD. 2009b. *Final Staff Report – Addressing GHG Emissions Impacts under the California Environmental Quality Act*. December 2009.
- SJVAPCD. 2009c. *Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New projects under CEQA*. December 2009.
- SJVAPCD. 2012. *2012 PM_{2.5} Plan*. December 2012. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/PM25Plan2012/CompletedPlanbookmarked.pdf.
- SJVAPCD. 2013. *2013 Plan for the Revoked 1-Hour Ozone Standard*. September 2013. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/AdoptedPlan.pdf.
- SJVAPCD. 2014a. *2014 Reasonably Available Control Technology (RACT) Demonstration for the 8-Hour Ozone State Implementation Plan (SIP)*. June 2014. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/2014-RACT-SIP.PDF.
- SJVAPCD. 2014b. *APR 1925 (Policy for District Rule 2201 AAQA Modeling)*. April 2014.
- SJVAPCD. 2015a. *Guidance for Assessing and Mitigating Air Quality Impacts*. Accessed August 2017. http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf.
- SJVAPCD. 2015b. *2015 Plan for the 1997 PM_{2.5} Standard*. April 2015. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/PM25-2015/2015-PM2.5-Plan_Bookmarked.pdf.
- SJVAPCD. 2015c. *2015 Annual Demonstration Report SIP Credit for Emission Reductions Generated Through Incentive Programs*. August 2015. Accessed August 2017. http://www.valleyair.org/MOP/docs/AnnualDemonstrationReport_081315.pdf.
- SJVAPCD. 2015d. *APR 1906 (Framework for Performing Health Risk Assessment)*. June 2015.
- SJVAPCD. 2016a. *2016 Plan for the 2008 8-Hour Ozone Standard*. Adopted June 16, 2016. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016/Adopted-Plan.pdf.

SJVAPCD. 2016b. *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard*. September 2016. Accessed August 2017. http://www.valleyair.org/Air_Quality_Plans/docs/PM25-2016/2016-Plan.pdf.

SJVAPCD. 2016c. Storage Tank Diesel Fugitives. Last Updated: March 11, 2016. Accessed January 2021. https://www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Oilfield/Tanks%20Diesel%20and%20Gasoline%20Fugitives.xls.

SJVAPCD. 2018. Air Quality Modeling: Permitting & CEQA. Accessed October 2020. http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm#met_data.

SJVAPCD. 2020a. *2020 Reasonably Available Control Technology Demonstration for the 2015 8-hour Ozone Standard*. June 18, 2020. Accessed August 2020. http://valleyair.org/Air_Quality_Plans/docs/2020-RACT-Demonstration.pdf.

SJVAPCD. 2020b. *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standard*. June 30, 2020. Accessed August 2020. <https://www.regulations.gov/document?D=EPA-R09-OAR-2019-0318-0201>.

SJVAPCD. 2020c. Ambient Air Quality Standards & Valley Attainment Status. Accessed December 2020. <http://www.valleyair.org/aqinfo/attainment.htm>.

The Climate Registry. 2021. Default Emission Factors. May. Accessed March 2021. <https://www.theclimateregistry.org/wp-content/uploads/2021/05/2021-Default-Emission-Factor-Document.pdf>.

6 List of Preparers

Adam Poll, Senior Air Quality Specialist

Appendix D-2

Optical Ground Wire Desktop Environmental Analysis

Modeling Attachments Included Electronically in the Attached USB

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MEMORANDUM

To: Terrance Smalls and Alexis Brito, Kern County Planning and Natural Resources Department
From: Pelicans Jaw Solar, LLC
Subject: Pelicans Jaw Hybrid Solar Project – Optical Ground Wire Desktop Environmental Analysis
Date: June 8, 2023
Attachments: Figures 1 through 5
A Helicopter Emissions Calculations
B OPGW Line Cultural Resources Record Search Results (*Confidential*)
C OPGW Line Paleontological Resources Record Search Results
D Helicopter Noise Calculations

This memorandum has been prepared to provide an overview of the potential environmental impacts associated with the construction and operation of the Pacific Gas and Electric (PG&E) optical ground wire (OPGW) line for the Pelicans Jaw Hybrid Solar Project (Project) located in Kern County, California. This memorandum provides a desktop-level environmental review based on publicly available data obtained from federal, state, and local electronic repositories to identify on-site environmental resources and potential constraints.

This OPGW line review includes the environmental topic areas that are typically the focus for comparable projects involving the use of existing transmission corridors: 1) air quality and greenhouse gas emissions, 2) biological resources, 3) cultural resources, 4) noise, 5) geology and soils, 6) paleontological resources, 7) hazards and hazardous materials, and 8) hydrology and water quality. The remaining eleven California Environmental Quality Act environmental issues are sufficiently addressed in the submitted technical reports and do not warrant supplemental characterization of the baseline conditions or potential related constraints to development: aesthetics, agriculture and forestry resources, energy, land use and planning, mineral resources, population/housing, public services, recreation transportation, tribal cultural resources, utilities/service systems, and wildfire. As a renewable energy project, a net beneficial impact would be expected in relation to net increase in renewable energy consistent with the State of California Renewable Portfolio Standards and corresponding reduction in per capita greenhouse gas emissions through decreased reliance on carbon-based fuels.

1 Introduction

The purpose of this memorandum is to characterize the affected environment and related environmental effects resulting from the construction and operation construction and operation of the PG&E OPGW line within existing, developed regional transmission corridors to support the operation of the Project proposed by Pelicans Jaw Solar LLC (Applicant). Because PG&E is an investor-owned electric utility, the proposed PG&E improvements are regulated by the California Public Utilities Commission (CPUC). CPUC General Order (GO) 131-D governs what approvals, if any, are necessary from CPUC to construct or modify public utility infrastructure.

GO 131-D Sec. III.A and III.B.1.e provide that “the placing of new or additional conductors, insulators, or their accessories on supporting structures already built” is exempt from requiring a Certificate of Public Convenience and Necessity or a Permit to Construct (PTC). GO 131-D Sec III.B.1.b further states that “the replacement of existing power line facilities or supporting structures with equivalent facilities or structures” do not require a PTC. Similarly, GO 131-D, Sec. III.B. provides that “new or upgraded substations with a high side voltage exceeding 50 kV” require a PTC from CPUC. However, GO 131-D, Sec. III.B.1.f provides that substation upgrades do not require a PTC if they have “have undergone environmental review pursuant to CEQA as part of a larger project, and the final CEQA document . . . finds no significant unavoidable environmental impacts caused by the proposed line or substation.” In this situation, only a Notice to Construct (NOC) is required. Because the PG&E improvements for this Project would be located in an existing PG&E transmission corridor, it is anticipated, in the absence of an unforeseen circumstance, that the proposed PG&E improvements would not result in significant and unavoidable impacts.

As described in a previous memo to Kern County, Pelicans Jaw Solar, LLC recommends, in addition to drafting the Project environmental impact report (EIR) to analyze the environmental impacts of the whole Project (defined to include the PG&E Improvements), that the document also briefly analyze the environmental impacts of the PG&E improvements separately from the rest of the Project at the end of each category of environmental impact analysis (e.g., aesthetics, air quality, biological resources, land use and planning, noise, etc.). Doing so would allow PG&E to use the exemption under General Order 131-D and file an NOC rather than obtain a PTC for the PG&E improvements. Filing an NOC with the CPUC is a streamlined process compared to filing a PTC. The NOC process typically takes about 60-90 days whereas the PTC process can take upwards of two years. Filing an NOC will allow PG&E to complete its improvements in time to meet the Project’s scheduled commercial operation date.

2 OPGW Project Description

For a full description of the Project including more details regarding the OPGW, please refer to the April 2023 Project Description submitted to Kern County by the Applicant. The following is an excerpt from the larger Project Description to frame the analysis specific to the OPGW line provided in this memorandum.

The Project includes a photovoltaic (PV) solar facility and associated infrastructure that would enable the generation of up to 500 megawatts (MW) of renewable electrical energy and a 500 MW Battery Energy Storage System (BESS) capable of storing up to approximately 4,000 megawatt-hours (MWh) of energy storage on approximately 3,371 acres of privately owned land. Other permanent structures and facilities that would be built or constructed as part of the Project include but are not limited to, service roads, a power collection system, inverter stations, transformer systems, transmission lines, project substation, and an operations and maintenance facility.

The Project would also include a PG&E switching station that would interconnect with the existing PG&E 230 kilovolt (kV) overhead transmission line that traverses the western limits of the Project site. The precise location of the PG&E switching station (which will be named the Dry Lake Switching Station) is pending detailed engineering design but is anticipated to be located along the west side of the Project site near the existing 230 kV transmission line. Approximately 13.3 miles of OPGW line would be installed to provide communication between the proposed PG&E switching station (Dry Lake Switching Station) located within the Project area, and the existing PG&E Arco Substation, which is located approximately 8.5 miles west of the Project site. The OPGW line would be collocated within an existing PG&E overhead transmission line corridor. Approximately 4.4 miles of the OPGW line would be located within Kern County and approximately 8.9 miles would be located in Kings County (see Figure 1, OPGW Alignment).

2.1 OPGW Line Characteristics

Installation of the OPGW would occur under one, or a combination, of the three following scenarios:

1. Install the OPGW line on existing transmission structures using the existing infrastructure in place today. No improvements other than addition of the OPGW line would be necessary under this scenario.
2. Install the OPGW line on existing transmission structures but extend the vertical height of the structures to accommodate the OPGW line. Under this scenario, the height of the structures would be increased but would be no taller than 200 feet.
3. Replace the existing transmission structures with new structures that can support existing infrastructure plus the OPGW line. The number of the structures subject to replacement would be finalized during detailed design. However, any new structures would be replaced in the same location previously disturbed by the existing transmission structure, and no taller than 200 feet.

Where the OPGW line terminates at the proposed PG&E switching station and at the existing PG&E Arco Substation, the OPGW line is anticipated to transition from overhead to underground. The underground termination segments at the PG&E switching station and the existing PG&E Arco Substation would be routed underground for up to 500 feet.

2.2 OPGW Line Construction Details

While PG&E proposes to install the OPGW on the existing 230-kV structures, the following description of the construction process concludes with a description of additional installation activities that would occur if PG&E also had to replace some of the existing structures to accommodate the OPGW line.

The OPGW line comes on reels that hold approximately 23,000 linear feet of cable. It is estimated that up to 10 temporary pull/reel and splice sites would be established along the existing approximately 13.3-mile transmission line corridor. Each splice and pull/reel site would require an approximate 75-foot by 75-foot work area between the structure sites within the existing PG&E transmission corridor right-of-way.

The OPGW line installation would be completed in approximately 12 to 16 weeks; at any one location the construction would take between 2 and 3 weeks. Existing roads and access along the existing PG&E transmission line would be used to install the OPGW line, and PG&E would use the same methods when maintaining the electrical system.

The locations of the pull/reel sites will be finalized during detailed design. The criteria used in selecting the final pull/reel sites will be as follows:

- Accessibility for vehicles.
- Presence of flat or nearly flat land next to existing transmission line route for equipment set-up.
- Existing land use.
- Absence of or minimal habitat for sensitive species.
- Absence of resources that would restrict work.

Preparation of the temporary pull/splice sites would require minor ground disturbance in the form of drive and crush, but not grading. Minor structural modifications would also be made to each of the transmission structures to allow splice boxes to be mounted where the sections of OPGW would be spliced (every three to five miles). The pull/reel sites and transmission structures would be accessed generally along existing unimproved roads or improved unsurfaced or surfaced roads that lead to many of the structures; no new roads would be constructed. Helicopters would be used to place materials at the point of installation for structures inaccessible by existing roads.

At each of the 55 existing structures along the approximately 13.3-mile 230-kV transmission line route, minor upgrades to the steel attachments would be required to accommodate installation of the OPGW. These upgrades would include only overhead work on the existing tower, such as replacing the gode peaks with a pulley to accommodate the OPGW line. The existing static wire would then be used to pull the new OPGW through each structure's pulley. Existing roads or helicopters would be used to provide access to the sites to fashion the attachments needed on each structure.

Construction would be completed using a combination of helicopter and ground crews. Helicopters would be used to transport electrical workers to the towers, to deliver materials, and to assist in pulling the OPGW from structure to structure. Approximately four 150-foot by 100-foot landing zones would be situated approximately every five miles using minimal surface disturbance, similar to the pull sites.

Establishing these landing zones would involve minimal temporary ground disturbance, and the zones would facilitate the use of helicopters to reduce overall impacts associated with the work. Landing zones would primarily be used for staging materials, picking up and transporting electrical personnel and equipment, and refueling helicopters.

Temporary guard structures. Overhead crossings of public roadways or existing transmission or distribution lines would require the use of approximately ten temporary guard structures at eight crossings. The structures would be designed to prevent tools or materials from falling into the roadway or utility.

Guard structures typically consist of two to four wooden structures and cross beams attached between the structures. They are generally installed in pairs with a net strung between them, but in some cases a net would not be required. A PG&E line truck would be used to auger and set the wooden structures. For roadway crossings, the temporary structures would be placed in or next to the disturbed road shoulder in an approximately 75-foot by 75-foot area. No grading or vegetation removal is anticipated during installation of the guard structures. Guard structures would be removed following OPGW line installation, and the holes would be backfilled.

Crossing of 500 kV lines. The existing 230- kV transmission line crosses under one existing 500- kV transmission line, about 0.45-mile northeast of the Interstate 5 crossing. At this crossing under the 500-kV line, PG&E would splice OPGW from the 230-kV towers to the east and west sides of the 500- kV transmission line corridor and then attach to structures. Up to 12 structures would be needed. These structures would be within the PG&E right-of-way. Each of the 12 structures would require a 30-foot by 40-foot work area to accommodate one crew truck and a trailer truck to bring each structure to the site and a line truck to auger a hole about eight feet deep and two feet wide. The work area would be minimally disturbed by drive and crush rather than grading.

In the event that existing structures need to be replaced to support existing infrastructure plus the OPGW line, the new structure will be placed in the same location previously disturbed by the existing transmission structure. A work area measuring approximately 100 feet by 100 feet will be required for each structure location. Structure

replacement will entail minor ground disturbance in the form of drive and crush, but not grading. Although the number of new structures subject to replacement is unknown at this time, it is assumed that up to 11 structures or 20 percent of the existing 55 structures will need to be replaced.

Table 1, OPGW Site Disturbance summarizes the total ground disturbance associated with OPGW installation.

Table 1. OPGW Line Site Disturbance

Work Area Description	Total Impact (Acres)
Temporary pull/splice sites (10, each 75-feet x 75-feet)	1.29
Temporary landing zones (4, each 150-feet x 100-feet)	1.38
Temporary guard structures (10, each 75-feet x 75-feet)	1.29
Crossing structure temporary work areas (12, each 30-feet x 40-feet)	0.33
Replacement structure temporary work areas (11, each 100-feet x 100-feet)	2.53
Underground temporary work areas (2, each 500-feet x 150-feet)	3.44
Total	10.26

Construction is anticipated to occur within the same 12-month period as construction of the PG&E switching station and would use some of the construction equipment used during construction of the PG&E switching station. The only additional change to the previously assumed construction equipment for the Project would be the use of up to one helicopter, which was not assumed in the Project's previously prepared technical studies.

2.3 OPGW Line Operation Details

Since the OPGW line will be collocated with an existing PG&E transmission line, it is assumed that inspections and maintenance of the OPGW line would occur simultaneous with existing transmission line inspections and maintenance that already occur.

3 Desktop Environmental Review

This OPGW line review includes the environmental topic areas that are typically the focus for comparable projects involving the use of existing transmission corridors: 1) air quality and greenhouse gas emissions, 2) biological resources, 3) cultural resources, 4) noise, 5) geology and soils 6) paleontological resources, 7) hazards and hazardous materials, and 8) hydrology and water quality.

To frame the effects of the OPGW line, Pelicans Jaw Solar, LLC completed the following tasks:

- Modeled additional equipment necessary for the installation and operation of the OGPW line, using the same methodologies as the previously provided Air Quality, Greenhouse Gas Emissions, and Energy Technical Report and Noise Technical Report.
- Identified potential sensitive receptors along the OPGW line alignment as it relates to air quality and noise.

- Completed a desktop review of United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and USFWS National Wetland Inventory (NWI) records within the OPGW line alignment area.
- Completed cultural and paleontological resource records searches of the OPGW line alignment area.
- Completed a review of geology and soils constraints within the OPGW line alignment area.
- Completed a Cortese list review of hazardous materials within the OPGW line alignment area.

3.1 Air Quality and Greenhouse Gas Emissions

3.1.1 Air Quality

OPGW Line Baseline Conditions Statement

An Air Quality, Greenhouse Gas Emissions, and Energy Technical Report was prepared for the Project and submitted to Kern County on February 22, 2023 (Dudek 2023a). The baseline environmental setting conditions discussed in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report apply to the OPGW line with the exception of potential sensitive receptors. For the OPGW line alignment between the Arco Substation and I-5, there is only one apparent residence within 3 miles. This residence is located immediately east of the Wonderful Pistachios & Almonds King Facility (10429 King Road) at a distance of approximately 6,540 linear feet from the closest point of the OPGW line alignment. For the OPGW line alignment that parallels the east side of I-5, there is also only one apparent residence within 3 miles. This is a group of four residences on the south side of Twisselman Road (18727 Twisselman Road) approximately 19,280 linear feet from the closest point of the OPGW line alignment.

Significance Threshold 1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan.

The Air Quality, Greenhouse Gas Emissions, and Energy Technical Report concluded the Project would result in potentially significant impacts regarding conflicts with or obstruct implementation of the applicable air quality plan, which are expected to be mitigated to a less than significant level through implementation of MM-AQ-1 (construction equipment parameters to control emissions). It is anticipated Kern County expects to draw the same significance conclusion for conflicts with or obstruct implementation of the applicable air quality plan after having reviewed the Technical Report with implementation of MM-AQ-1 (labeled as MM 4.3-4 in the County's mitigation measure list) plus additional mitigation measures MM 4.3-1 through 4.3-3, 4.3-5, and 4.3-6 (i.e., compliance with San Joaquin Valley Air Pollution Control District regulations, preparation and implementation of a dust control plan, completion and approval of an Indirect Source Review by the San Joaquin Valley Air Pollution Control District (SJVAPCD), and implementation of a coordination effort to notify the public of construction activities and establish a complaint response protocol).

OPGW Line

To assess the additional air quality and greenhouse gas (GHG) emissions that may result from installation of the OPGW line, Dudek relied upon the emission estimates from the Final Supplemental Impact Report (FSEIR) for the Panoche Valley Solar Project (US Army Corps of Engineers 2015), which addressed impacts associated with construction and operation of a similar, but longer OPGW. The construction equipment, vehicle use, and helicopter use would be similar for the OPGW line as modeled within the FSEIR for the Panoche Valley Solar Project. The

duration of construction was assumed to be 16-months for the 17-mile transmission line in the Panoche Valley Solar Project . As the OPGW alignment for the Project is approximately 13.3-miles, it was assumed construction of the OPGW line would occur within the 12-month timeline of the Project. However, the annual emissions presented in the FSEIR for the Panoche Valley Solar Project would still apply to the OPGW line as they would occur within a similar duration (12 months).

As shown in the Threshold 2 discussion in the OPGW Line row in Table 1, construction of the OPGW line would entail a minimal amount of additional ROG, NO_x, CO, So_x, PM₁₀, and PM_{2.5} emissions. The OPGW line would comply with applicable SJVAPCD rules and regulations, such as Regulation VIII (Fugitive PM₁₀ Prohibitions) and IX (Mobile and Indirect Sources). The OPGW line would not conflict with existing land uses or result in population growth that would result in impacts outside the assumptions of applicable air quality management plans. In addition, the OPGW line would not result in a substantial increase in long-term trips or vehicle miles traveled in the area as there would be no additional employees needed to maintain or operate the OPGW line, above the employees that currently maintain and operate the existing transmission line. Therefore, no OPGW line specific operation analysis is included herein and similarly no operational OPGW line plus Project analysis is included below. Haul truck, vendor truck, and worker vehicle trips would be generated during the proposed construction activities but would cease after construction is completed. Unmitigated ROG, NO_x, CO, So_x, PM₁₀, and PM_{2.5} emissions during construction of the OPGW line alone would not exceed the SJVAPCD significance thresholds.

OPGW Line Plus Project

Table 1 presents the previously calculated estimated annual construction emissions generated during construction of the Project (as calculated in the Project Air Quality, Greenhouse Gas Emissions, and Energy Technical Report, that was submitted to the County on February 22, 2023 Dudek (2023a)), but this time with the addition of the OPGW line. Table 2 also presents the estimated combined annual emissions generated during construction of the Project with the OPGW line, but this time generated during construction of the Project including after applying mitigation measure MM-AQ-1 (construction equipment). Details of the combined emission calculations are provided in Attachment A.

As can be seen from Tables 1 and 2, incorporation of the OPGW line would result in an incremental addition of annual construction criteria air pollutant emissions compared to the previous Project analysis. In summary because the Project with the incorporation of the OPGW line would offset NO_x emissions during construction in compliance with SJVAPCD Rule 9510, the Project would result in a less than significant impact with mitigation during construction. This is consistent with the significance conclusion contained in the previously prepared and submitted Project Air Quality, Greenhouse Gas Emissions, and Energy Technical Report.

Significance Threshold 2: 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 Air Quality, Greenhouse Gas Emissions, and Energy Technical Report concluded the Project would result in a potentially significant impact regarding resulting 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 which are expected to be mitigated to a less than significant level through implementation of MM-AQ-1 (construction equipment parameters to control emissions).

OPGW Line

As shown in the OPGW Line row in Tables 1 and 3, construction of the OPGW line would entail a minimal amount of additional ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions. Unmitigated ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions during construction of the OPGW line alone would not exceed the SJVAPCD significance threshold. As shown in the OPGW Line row in Table 3, the OPGW alone would not exceed the 100 pound per day screening threshold for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}.

OPGW Line Plus Project

The potential for the OPGW line plus Project to result in a cumulatively considerable impact, per the SJVAPCD guidance and thresholds, is based on the OPGW line plus Project impact compared to the SJVAPCD significance criteria. The annual construction emissions from the OPGW line plus Project would not exceed the SJVAPCD significance thresholds for ROG, CO, SO_x, PM₁₀, or PM_{2.5}; however, emissions without mitigation would exceed thresholds for NO_x even without the OPGW line added to the Project. Mitigation measure MM-AQ-1 will require the Project to utilize equipment with Tier 4 Interim or better engines during construction to reduce emissions of NO_x. As indicated in Table 2, with mitigation and compliance with SJVAPCD Rule 9510 (Indirect Source Review, which requires large development projects to reduce exhaust emissions from construction equipment by 20% for NO_x and 45% for PM₁₀ compared to the statewide average), Project emissions of NO_x would be reduced below the significance threshold, both with and without the OPGW line added to the Project. Therefore, with mitigation, the OPGW line plus Project construction and operational impacts would not be cumulatively considerable and would be less than significant. Details of the emission calculations are provided in Attachment A.

Table 1. Estimated Annual Construction Criteria Air Pollutant Emissions - Unmitigated OPGW Line Plus Project

Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
Project	1.61	15.56	17.02	0.05	9.43	1.89
OPGW Line	0.21	0.83	0.52	0.00	0.81	0.19
Total	1.82	16.39	17.54	0.05	10.24	2.08
<i>SJVAPCD Threshold</i>	10	10	100	27	15	15
Threshold Exceeded?	No	Yes	No	No	No	No
<i>Annual Emissions with ISR Compliance¹</i>	1.82	13.11	17.54	0.05	5.63	2.08
Threshold Exceeded?	No	Yes	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SJVAPCD's Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510.

See Appendix A for complete results.

Table 2. Estimated Annual Construction Criteria Air Pollutant Emissions - Mitigated OPGW Line Plus Project

Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Tons Per Year					
Project	0.68	4.69	20.17	0.05	8.95	1.45
OPGW Line	0.21	0.83	0.52	0.00	0.81	0.19
Total	0.89	5.52	20.69	0.05	9.76	1.64
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Threshold Exceeded?	No	No	No	No	No	No
<i>Annual Emissions with ISR Compliance¹</i>	<i>0.89</i>	<i>4.42</i>	<i>20.69</i>	<i>0.05</i>	<i>5.37</i>	<i>1.64</i>
Threshold Exceeded?	No	No	No	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510.

See Appendix A for complete results.

Emissions include application of mitigation measure MM-AQ-1.

The maximum daily OPGW line plus Project emissions during construction are shown in Table 3.

Table 3. Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated OPGW Line Plus Project

Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
Project	26.21	239.81	256.75	0.55	30.01	16.85
OPGW Line	1.58	6.41	3.99	0.01	6.19	1.47
Total	27.79	246.22	260.74	0.56	36.20	18.32
<i>SJVAPCD Threshold</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Screening Threshold Exceeded?	No	Yes	Yes	No	No	No
<i>Emissions with ISR Compliance¹</i>	<i>27.79</i>	<i>196.98</i>	<i>260.74</i>	<i>0.56</i>	<i>19.91</i>	<i>18.32</i>
Screening Threshold Exceeded?	No	Yes	Yes	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510.

See Appendix A for complete results.

The maximum daily OPGW line plus Project emissions during construction are shown in Table 3. As shown in Table 3, the OPGW line plus Project would exceed the 100 pound per day screening threshold for NO_x and CO after assuming compliance with SJVAPCD Rule 9510, with or without the addition of the OPGW line. Table 4 shows the maximum daily construction emissions after applying mitigation measure MM-AQ-1.

Table 4. Maximum Daily Construction Criteria Air Pollutant Emissions - Mitigated OPGW Line Plus Project

Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
Project	8.32	36.33	322.68	0.55	24.14	11.49
OPGW Line	1.58	6.41	3.99	0.01	6.19	1.47
Total	9.90	42.74	326.67	0.56	30.33	12.96
<i>SJVAPCD Threshold</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
Screening Threshold Exceeded?	No	No	Yes	No	No	No
<i>Emissions with ISR Compliance¹</i>	<i>9.90</i>	<i>34.19</i>	<i>326.67</i>	<i>0.56</i>	<i>16.68</i>	<i>12.96</i>
Screening Threshold Exceeded?	No	No	Yes	No	No	No

Notes: ROG = reactive organic gas; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SJVAPCD = San Joaquin Valley Air Pollution Control District; <0.01 = reported value less than 0.01.

See Appendix A for complete results.

These emissions reflect CalEEMod “mitigated” output, which accounts for compliance with SJVAPCD’s Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ This row reflects minimum required emissions reductions in NO_x and PM₁₀ to comply with Rule 9510.

See Appendix A for complete results.

As shown in Table 4, with mitigation, the OPGW line plus Project would exceed the 100 pound per day screening threshold for CO after assuming compliance with SJVAPCD Rule 9510 both with and without addition of the OPGW line to the Project. As such, an ambient air quality assessment is required and provided below.

Construction Ambient Air Quality Impact Assessment

Although the OPGW line plus Project would not exceed the annual significance threshold established by the SJVAPCD for ROG, SO_x, PM₁₀, or PM_{2.5}, the OPGW line plus Project would emit more than 100 pounds of NO_x and CO per day during construction, regardless of whether the OPGW line were added to the Project. As recommended by the *Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a), an ambient air quality impacts assessment should be performed if any pollutants exceed 100 pounds per day during construction or operation. Maximum daily emissions were used as the basis for determining the OPGW line plus Project potential impact on ambient air quality. Summary tables of annual and daily emissions associated with construction are included in Attachment A. Table 5 presents a summary of the AQIA undertaken to determine whether construction activities associated with the OPGW line would cause or contribute to ambient air quality impacts.

Table 5. Construction AQIA - Unmitigated OPGW Line

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
1-hour CO	State	1.9	2,177	1.68	2,178	22,900	PASS	2000	Step 1
	Federal	1.9	2,177	1.68	2,178	40,100	PASS	2000	Step 1
8-hour CO	State	1.6	1,833	0.62	1,834	10,300	PASS	500	Step 1
	Federal	1.6	1,833	0.62	1,834	10,300	PASS	500	Step 1
1-hour NO ₂	State	0.049	92	2.16	94	339	PASS	7.5	Step 1
	Federal	0.049	92	2.16	94	188	PASS	7.5	Step 1
Annual NO ₂	State	0.010	19	0.20	19	57	PASS	1	Step 1
	Federal	0.010	19	0.20	19	100	PASS	1	Step 1
1-hour SO ₂	State	0.016	42	0.00	42	655	PASS	7.5	Step 1
	Federal	0.016	42	0.00	42	196	PASS	7.8	Step 1
24-Hour SO ₂	State	0.002	5	0.00	5	105	PASS	5	Step 1
	Federal	0.002	5	0.00	5	367	PASS	5	Step 1
Annual SO ₂	Federal	0.000	1	0.00	1	79	PASS	1	Step 1
24-hour PM ₁₀ - Exhaust	State	–	197	0.18	197	50	Step 2	5	PASS
	Federal	–	194	0.18	194	150	Step 2	5	PASS
24-hour PM ₁₀ - Fugitive	State	–	197	0.42	197	50	Step 2	10.4	PASS
	Federal	–	194	0.42	194	150	Step 2	10.4	PASS
Annual PM ₁₀ - Exhaust	State	–	39	0.06	39	20	Step 2	1	PASS
Annual PM ₁₀ - Fugitive	State	–	39	0.14	39	20	Step 2	2.08	PASS

Table 5. Construction AQIA - Unmitigated OPGW Line

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
24-hour PM _{2.5} - Exhaust	Federal	—	151	0.04	151	35	Step 2	1.2	PASS
24-hour PM _{2.5} - Fugitive	Federal	—	151	0.10	151	35	Step 2	2.5	PASS
Annual PM _{2.5} - Exhaust	State	—	20	0.01	20	12	Step 2	0.2	PASS
	Federal	—	20	0.01	20	12	Step 2	0.2	PASS
Annual PM _{2.5} - Fugitive	State	—	20	0.03	20	12	Step 2	0.63	PASS
	Federal	—	20	0.03	20	12	Step 2	0.63	PASS

Source: See Appendix B.

As shown in Table 5, the construction emissions of the OPGW line would not exceed any AAQS threshold or SIL. Impacts would be considered less than significant. Table 6 presents the unmitigated results of the OPGW line Plus the Project.

Table 6. Construction AQIA - Unmitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
1-hour CO	State	1.9	2,177	109.75	2,286	22,900	PASS	2000	Step 1

Table 6. Construction AQIA - Unmitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
8-hour CO	Federal	1.9	2,177	109.75	2,286	40,100	PASS	2000	Step 1
	State	1.6	1,833	40.65	1,874	10,300	PASS	500	Step 1
1-hour NO ₂	Federal	1.6	1,833	40.65	1,874	10,300	PASS	500	Step 1
	State	0.049	92	82.91	175	339	PASS	7.5	Step 1
Annual NO ₂	Federal	0.049	92	82.91	175	188	PASS	7.5	Step 1
	State	0.010	19	7.86	27	57	PASS	1	Step 1
1-hour SO ₂	Federal	0.010	19	7.86	27	100	PASS	1	Step 1
	State	0.016	42	0.24	43	655	PASS	7.5	Step 1
24-Hour SO ₂	Federal	0.016	42	0.24	43	196	PASS	7.8	Step 1
	State	0.002	5	0.05	5	105	PASS	5	Step 1
Annual SO ₂	Federal	0.002	5	0.05	5	367	PASS	5	Step 1
	State	0.000	1	0.02	1	79	PASS	1	Step 1
24-hour PM ₁₀ - Exhaust	Federal	—	197	1.04	198	50	Step 2	5	PASS
	State	—	194	1.04	195	150	Step 2	5	PASS
24-hour PM ₁₀ - Fugitive	Federal	—	197	2.47	199	50	Step 2	10.4	PASS
	State	—	194	2.47	196	150	Step 2	10.4	PASS
Annual PM ₁₀ - Exhaust	State	—	39	0.34	39	20	Step 2	1	PASS
Annual PM ₁₀ - Fugitive	State	—	39	0.81	40	20	Step 2	2.08	PASS

Table 6. Construction AQIA - Unmitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
24-hour PM _{2.5} - Exhaust	Federal	—	151	0.53	151	35	Step 2	1.2	PASS
24-hour PM _{2.5} - Fugitive	Federal	—	151	1.25	152	35	Step 2	2.5	PASS
Annual PM _{2.5} - Exhaust	State	—	20	0.17	20	12	Step 2	0.2	PASS
	Federal	—	20	0.17	20	12	Step 2	0.2	PASS
Annual PM _{2.5} - Fugitive	State	—	20	0.41	20	12	Step 2	0.63	PASS
	Federal	—	20	0.41	20	12	Step 2	0.63	PASS

Source: See Appendix B.

As shown in Table 6, the unmitigated construction emissions for the OPGW line plus Project would not exceed the SILs. Table 7 shows the mitigated construction emissions including application of mitigation measure MM-AQ-1 for the OPGW line plus Project.

Table 7. Construction AQIA - Mitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
1-hour CO	State	1.9	2,177	137.50	2,314	22,900	PASS	2000	Step 1

Table 7. Construction AQIA - Mitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
8-hour CO	Federal	1.9	2,177	137.50	2,314	40,100	PASS	2000	Step 1
	State	1.6	1,833	50.93	1,884	10,300	PASS	500	Step 1
	Federal	1.6	1,833	50.93	1,884	10,300	PASS	500	Step 1
1-hour NO ₂	State	0.049	92	14.41	107	339	PASS	7.5	Step 1
	Federal	0.049	92	14.41	107	188	PASS	7.5	Step 1
Annual NO ₂	State	0.010	19	1.37	20	57	PASS	1	Step 1
	Federal	0.010	19	1.37	20	100	PASS	1	Step 1
1-hour SO ₂	State	0.016	42	0.24	43	655	PASS	7.5	Step 1
	Federal	0.016	42	0.24	43	196	PASS	7.8	Step 1
24-Hour SO ₂	State	0.002	5	0.05	5	105	PASS	5	Step 1
	Federal	0.002	5	0.05	5	367	PASS	5	Step 1
Annual SO ₂	Federal	0.000	1	0.02	1	79	PASS	1	Step 1
24-hour PM ₁₀ - Exhaust	State	–	197	0.13	197	50	Step 2	5	PASS
	Federal	–	194	0.13	194	150	Step 2	5	PASS
24-hour PM ₁₀ - Fugitive	State	–	197	2.81	200	50	Step 2	10.4	PASS
	Federal	–	194	2.81	197	150	Step 2	10.4	PASS
Annual PM ₁₀ - Exhaust	State	–	39	0.04	39	20	Step 2	1	PASS
Annual PM ₁₀ - Fugitive	State	–	39	0.92	40	20	Step 2	2.08	PASS

Table 7. Construction AQIA - Mitigated OPGW Line Plus Project

Impact Parameter	Applicable Standard	Project Area Maximum Background Concentration (Years 2018-2020)		Project Contribution (ug/m3)	Cumulative Concentration (ug/m3)	AAQS Threshold (ug/m3)	Step 1 Significance	SIL (ug/m3)	Step 2 Significance
		ppmv	ug/m ³						
24-hour PM _{2.5} - Exhaust	Federal	—	151	0.06	151	35	Step 2	1.2	PASS
24-hour PM _{2.5} - Fugitive	Federal	—	151	1.20	152	35	Step 2	2.5	PASS
Annual PM _{2.5} - Exhaust	State	—	20	0.02	20	12	Step 2	0.2	PASS
	Federal	—	20	0.02	20	12	Step 2	0.2	PASS
Annual PM _{2.5} - Fugitive	State	—	20	0.39	20	12	Step 2	0.63	PASS
	Federal	—	20	0.39	20	12	Step 2	0.63	PASS

Source: See Appendix B.

As demonstrated in Table 7, the OPGW line plus Project would result in construction activities that would generate ambient concentrations of criteria pollutant below the applicable thresholds with application of mitigation measure MM-AQ-1 regardless of whether the OPGW line were added to the Project. This impact would be less than significant with mitigation.

In accordance with Kern County's CEQA Guidelines, the maximum 24-hour average concentration of onsite PM₁₀ and PM_{2.5} was modeled at the Project boundary and compared to the NAAQS or CAAQS, whichever is more stringent. Table 8 shows the results on the dispersion modeling.

Table 8. Construction Emissions Dispersion Modeling Results Project

	PM ₁₀	PM _{2.5}
	µg/m ³	
Construction Emissions	0.68	0.44
<i>Threshold</i>	50 ¹	35 ²
Threshold Exceeded?	No	No

Notes: PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter.

See Appendix A for complete results.

These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SJVAPCD's Rule 8021 fugitive dust control strategies, including watering of the project site and unpaved roads twice times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

¹ The CAAQS for PM₁₀ is 50 µg/m³ and the NAAQS is 150 µg/m³ for the 24-hour averaging period.

² The NAAQS for PM_{2.5} is 35 µg/m³ for the 24-hour averaging time. There is no PM_{2.5} CAAQS for the 24-hour averaging period.

See Appendix A for complete results.

As shown in Table 8, the maximum concentrations of PM₁₀ and PM_{2.5} emissions at the Project boundary during construction would not exceed the NAAQS or CAAQS. As such, impacts would be less than significant. The Panoche FSEIR did not provide onsite only emission results from the OPGW, just total emissions. When the total emissions (onsite and offsite) from the FSEIR for the OPGW line are added to the Project, combined emissions would be approximately 168% higher than that of the Project alone. This is conservative as it includes offsite emissions from OPGW. However, even if we conservatively assumed onsite concentrations of PM₁₀ and PM_{2.5} emissions would increase by 5 times the Project (or even 50), the concentrations would still be well below the CAAQS and NAAQS. As such, the addition of the OPGW line would not cause an exceedance of a particulate matter ambient air quality exceedance at the fence line.

Incorporation of the OPGW line would result in an incremental addition of criteria air pollutant emissions compared to the previous Project analysis. The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Air Quality, Greenhouse Gas Emissions, and Energy Technical Report.

Threshold 3: Expose Sensitive Receptors to Substantial Pollutant Concentrations.

The Air Quality, Greenhouse Gas Emissions, and Energy Technical Report concluded the Project would result in less than significant impacts regarding exposing sensitive receptors to substantial pollutant concentrations (for carbon monoxide hotspot and toxic air contaminant). The Air Quality, Greenhouse Gas Emissions, and Energy Technical Report also concluded the Project would result in potentially significant impacts regarding exposing sensitive receptors to substantial pollutant concentration (for valley fever), which is expected to be mitigated to a less than significant level through implementation of MM-AQ-2 and MM-AQ-3 (dust control strategies and valley fever awareness and training for construction employees; labeled as MM 4.3-7 through 4.3-10 in the County's mitigation measure list). It is anticipated Kern County would draw the same significance conclusions.

OPGW Line

The OPGW line would not expose sensitive receptors to localized high concentrations of CO or contribute traffic volumes to intersections that would cause a CO hotspot. As neither the 1-hour nor the 8-hour CO California Ambient Air Quality Standards (CAAQS) would be equaled or exceeded at any of the studied intersections, potential CO hotspot impacts would be less than significant.

Coccidioidomycosis, more commonly known as Valley Fever, is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The OPGW line (same as the Project) would be required to comply with Rule 8021, Section 6.3, which would require the Project to develop, prepare, submit, obtain approval of, and implement a dust control plan. Compliance with the required dust control plan would reduce fugitive dust impacts to less than significant for construction, which would also minimize the release of the *Coccidioides immitis* fungus from construction activities. In addition, construction and operation activities would implement PG&E's standard best management practices and avoidance and minimization measures for the OPGW line to further reduce fugitive dust impacts to less than significant. The nearest sensitive-receptor land use (existing residence) is located approximately 6,540 linear feet from the OPGW line alignment where work would only occur at that closest proximity for a short period of time. Because of the distance to the nearest sensitive-receptor and limited ground disturbance only being required if new poles are installed, the OPGW line would have a less than significant impact with respect to valley fever exposure for sensitive receptors.

OPGW line construction activities would produce diesel particulate matter (DPM) due to combustion equipment such as loaders and backhoes, and haul truck trips. Due to this relatively short period of exposure during construction of the OPGW line and minimal particulate emissions on site, TACs generated are not anticipated to result in concentrations causing significant health risks. In addition, diesel equipment would also be subject to the California Air Resources Board's (CARB) Airborne Toxic Control Measures for in-use off-road diesel fleets, which would minimize DPM emissions. Operation of the OPGW line would not result in TAC emissions. Thus, sensitive receptor exposure to TACs associated with the OPGW line would be less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line would result in an incremental addition of pollutant concentrations during construction compared to the previous Project analysis. Impacts associated with pollutant concentrations would remain less than significant.

The impacts discussed in Threshold 3 (OPGW Plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Air Quality, Greenhouse Gas Emissions, and Energy Technical Report.

Threshold 4: Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People.

The Air Quality, Greenhouse Gas Emissions, and Energy Technical Report concluded the Project would result in less than significant impacts regarding resulting in other emissions (such as those leading to odors) adversely affecting a substantial number of people. It is anticipated Kern County expects to draw the same significance conclusion.

OPGW Line

The analysis of the OPGW line's potential to result in other emissions is focused on potential odor impacts. Potential odors produced during OPGW line construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, which would disperse rapidly and generally occur at magnitudes that would not affect substantial numbers of people. Impacts associated with odors during construction of the OPGW line would be less than significant. The OPGW line would not generate odors during operation above existing conditions related to operation of the existing transmission line. Therefore, OPGW construction and operations would result in odor impacts that are less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line would result in an incremental addition of potential odors during construction compared to the previous Project analysis. Same as the Project, odors from the OPGW line plus Project would disperse rapidly and generally occur at magnitudes that would not affect substantial numbers of people. Impacts associated with odors during construction would be less than significant. The OPGW line plus Project would not generate odors during operation. Therefore, OPGW Plus Project construction and operations would result in odor impacts that are less than significant.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Air Quality, Greenhouse Gas Emissions, and Energy Technical Report.

3.1.2 Greenhouse Gas Emissions

OPGW Line Baseline Conditions Statement

An Air Quality, Greenhouse Gas Emissions, and Energy Technical Report was prepared and submitted to the County on February 22, 2023 (Dudek 2023a). The baseline environmental setting conditions discussed in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report apply to the OPGW line because baseline setting for GHGs are regional.

Threshold 1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment.

The Air Quality, Greenhouse Gas Emissions, and Energy Technical Report concluded the Project would result in less than significant impacts with respect to generating greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, and no mitigation is warranted. It is anticipated Kern County expects to draw the same significance conclusion.

OPGW Line

Construction of the OPGW line would result in GHG emissions primarily associated with use of a helicopter, off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The FSEIR for the Panoche Valley Solar Project did not directly estimate GHG emissions for the PG&E telecommunication upgrades. It was conservatively assumed in the FSEIR that the level of GHGs during construction of the PG&E

telecommunication upgrades would be less than for construction of the solar facility. So too here, the construction emissions of the OPGW line are conservatively assumed to be less than or equal to that of the Project (4,780 MT CO₂e). Operation of the OPGW line would not generate additional GHG emissions because there would be no additional maintenance or operation requirements above existing conditions to operate and maintain the existing transmission line. Decommissioning of the OPGW line would not generate additional GHG emissions because the OPGW line would be constructed, owned, and maintained by PG&E and is therefore not anticipated to be decommissioned should the Project be decommissioned in the future. Impacts would be less than significant.

OPGW Line Plus Project

As shown in Table 9, The estimated total GHG emissions during construction of the OPGW line plus Project would be approximately 9,561 MT CO₂e (compared to 4,780 MT CO₂e described in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report).

Table 9 presents construction emissions for the OPGW line plus Project from on-site and off-site emission sources.

Table 9. Estimated Annual Construction Greenhouse Gas Emissions - Unmitigated OPGW Line Plus Project

Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons Per Year			
Worker Vehicles	900.15	0.02	0.02	906.64
Vendor Trucks	885.77	0.00	0.13	924.62
Haul Trucks	407.09	0.00	0.06	426.19
Offroad Equipment	2,450.79	0.75	0.00	2,469.52
Water Use	52.76	0.01	0.00	53.28
OPGW Line	4,696.56	0.78	0.21	4,780.25
			Total	9,560.50

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; <0.01 = reported value less than 0.01. See Appendix A for complete results.

The values shown are the annual emissions reflect California Emissions Estimator Model “mitigated” output.

Totals may not add due to rounding.

As shown in Table 9, estimated OPGW Line plus Project-generated construction emissions amortized over 35 years would be approximately 273 MT CO₂e per year (compared to 137 MT CO₂e per year described in the Technical Report without the OPGW line). Estimated OPGW Line plus Project-generated operational emissions would remain the same as described in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report (2,134 MT CO₂e per year). Estimated OPGW Line plus Project-generated decommissioning emissions amortized over 35 years would remain the same as described in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report (65 MT CO₂e per year). Estimated annual OPGW line plus Project-generated operational emissions plus amortized Project construction and decommissioning emissions would be approximately 2,472 MT CO₂e per year (compared to 2,335 MT CO₂e per year as described in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report without the OPGW line). Incorporation of the OPGW line would result in an incremental addition of GHG emission during construction compared to the previous Project analysis contained in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report.

As with OPGW line plus Project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

The estimated operational project-generated GHG emissions are shown in Table 10. Please note there is no operational and decommissioning incremental effects from inclusion of the OPGW line because there would be no additional maintenance or operation requirements above existing conditions to operate and maintain the existing transmission line, and decommissioning of the OPGW line would not occur.

Table 10. Estimated Annual Operational Greenhouse Gas Emissions OPGW Line Plus Project

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons Per Year			
Area ¹	<0.01	<0.01	0.00	13.01
Energy	2,029.39	0.33	0.04	2,049.46
Mobile	51.13	<0.01	0.01	53.24
Solid waste	0.68	0.04	0.00	1.68
Stationary	12.19	0.00	0.00	12.23
Water supply and wastewater	0.43	0.15	<0.01	4.21
<i>Amortized 35-Year Construction Emissions</i>				<i>273.16</i>
<i>Amortized 35-Year Decommissioning Emissions</i>				<i>64.76</i>
Operation plus Amortized Construction and Decommissioning Total				2,471.75

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent; < 0.01 = reported emissions less than 0.01.

See Appendix A for complete results.

Totals may not add due to rounding.

¹ Includes CO₂e emissions from SF₆ leakage from the substation.

Threshold 2: Conflict With an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.

Please refer to Threshold 1 above. The OPGW line would provide communication between the proposed Dry Lake Switching Station and the existing Arco Substation to support increased energy efficiency in the region. Therefore, development of the OPGW line plus Project would be consistent with the County's General Plan, support the Kern Council of Governments (KCOG) 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and demonstrate consistency with the Scoping Plan, which all promote economic growth while achieving greater energy efficiency. The OPGW line plus Project would be consistent with KCOG's 2022 RTP/SCS, Senate Bill 32, and Executive Order S-3-05. The OPGW line plus Project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the OPGW line plus Project's impacts with respect to GHG plans, policies, and regulations would be less than significant.

Avoided GHG Emissions

The Project with incorporation of the OPGW would provide a source of renewable energy to support statewide RPS targets of 60% by 2030 and 100% by 2045 consistent with the renewable energy targets in the Scoping Plan and required by SB 100 and EO B-55-18. The generation of renewable energy, would offset GHG emissions generated

by fossil-fuel power plants. As noted above, the proposed Project with incorporation of the OPGW line would generate 2,472 MT CO₂e per year (compared to 2,335 MT CO₂e per year without the OPGW line). The proposed Project is expected to produce an estimated 816,783 megawatt-hours of electricity per year (NREL 2019). The default CalEEMod CO₂e emission factor for PG&E was 206.00 pounds of CO₂e per megawatt-hour (CO₂e/MWh) from 2021 (CAPCOA 2021). Assuming that PG&E would meet the EO B-55- 18 carbon neutrality target in 2045, a linear regression of the PG&E GHG emission factor was calculated from 2021 to 2044. This would mean that the Proposed project would avoid less GHG emissions over time. Assuming this, the proposed Project would avoid a total of 667,793 MT CO₂e from 2025 through 2044 (no change with incorporation of the OPGW line). Accounting for 35 years of operation, the Project would emit 86,520 MT CO₂e (compared to 81,713 MT CO₂e without the OPGW line). Therefore, the Project would avoid a net 581,273 MT CO₂e over its lifetime (compared to 586,062 MT CO₂e without the OPGW line). The Proposed project is expected to be operational through 2060 and thus it would not be generating or avoiding GHG emissions from 2045 through 2060. Incorporation of the OPGW line represents an incremental effect that would not alter the previous significance conclusion contained in the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report

3.2 Biological Resources

OPGW Line Baseline Conditions Statement

A Biological Resources Technical Report was prepared for the Project and submitted to Kern County on February 22, 2023 (Dudek 2023b). The baseline environmental setting conditions discussed in the Biological Resource Technical Report apply to the OPGW line; additional baseline environmental setting conditions are provided below for consideration of the OPGW line. Dudek reviewed the CDFW records (including the California Natural Diversity Database (CNDDDB)), USFWS NWI data, and federal designated critical habitat from the USFWS within a 0.25-mile radius of the OPGW line to determine the potential for special-status wildlife and plant species to occur in the area. See Figures 2 through 5.

Significance Threshold 1: 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.

The Biological Resources Technical Report concluded the Project would result in potentially significant impacts to special status plant species Kern mallow and Lost Hills crownscale which are expected to be mitigated to a less than significant level with implementation of MM-BIO-1 through BIO-4 (pre-construction surveys, salvage and compensatory mitigation, invasive species, and best management practices to avoid indirect impacts to special-status plant species). The Biological Resources Technical Report concluded the Project would result in potentially significant impacts to special status wildlife species: blunt-nosed leopard lizard, western spadefoot, San Joaquin coachwhip, burrowing owl, Swainson's hawk, Le Conte's thrasher, San Joaquin antelope squirrel, giant kangaroo rat, short-nosed kangaroo rat, Tipton kangaroo rat, Tulare grasshopper mouse, American badger, and San Joaquin kit fox, which are expected to be mitigated to a less than significant level with implementation of MM-BIO-5 through BIO-13 (buffering of burrows for burrowing owl, American badger, and San Joaquin kit fox, standard avoidance and minimization, preconstruction surveys for nesting birds, preconstruction surveys for Swainson's hawk nests and avoidance, preconstruction clearance survey, San Joaquin coachwhip avoidance and minimization, worker environmental awareness training, biological monitoring, and bird flight diversion). It is anticipated Kern County would draw the same significance

conclusion after having reviewed the Biological Resources Technical Report with implementation of mitigation measures (labeled as MM 4.4-1 through 4.4-19 in the County's mitigation measure list).

OPGW Line

Suitable Habitat – The OPGW line alignment itself provides suitable habitat for the following species: Kings gold, (*Tropidocarpum californicum*), Lost Hills crownscale, (*Atriplex coronata* var. *vallicola*), blunt-nosed leopard lizard (*Gambelia sila*), burrowing owl (*Athene cunicularia*), Nelson's (San Joaquin) antelope squirrel (*Ammospermophilus nelsoni*), and San Joaquin kit fox (*Vulpes macrotis mutica*). All aforementioned plant and wildlife have been observed or detected within 0.25 mile or less of the OPGW line alignment.

- **Listed Plant Species** – A historical occurrence of Lost Hills crownscale has been recorded within the OPGW alignment, as shown in Figure 2, CNDDDB Occurrences. It is anticipated the occurrence can be avoided by siting the temporary OPGW work areas outside of the occurrence.
- **Listed Wildlife Species** – Historical occurrences of blunt-nosed leopard lizard and San Joaquin kit fox have been recorded within the OPGW line alignment, as shown in Figure 2, CNDDDB Occurrences.
- **Critical Habitat** – No critical habitat is designated within the OPGW line alignment.
- **USFWS Migratory Birds** – There is potential for migratory birds to occur on site and standard protections for nesting species would need to be incorporated into the OPGW line alignment.
- **Golden Eagle** – Golden eagle (*Aquila chrysaetos*) occurrences have been noted within a 10-mile radius of the Project area (see Figure 3, Golden Eagle Occurrences) and suitable foraging habitat exists within the OPGW line alignment and within the 10-mile radius of the Project boundary. Golden eagles have been known to occur within Kern/Kings County.

The OPGW line impacts to special-status plant and wildlife species would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures. In particular, given that the proposed OPGW improvements will occur within an existing utility corridor with minor ground disturbance, it is anticipated that special-status plant and wildlife species would be avoided, consistent with PG&E's standard practices, and no mitigation would be required.

OPGW Line Plus Project

Incorporation of the OPGW line would result in an incremental addition of impacts to special-status plant and wildlife species, compared to the previous Project analysis. The species that have suitable habitat within the OPGW line alignment and 0.25-mile buffer of the OPGW alignment are the same as the species considered in the previous Project analysis except for special-status plant species Kings gold. Kings gold is located in two locations outside the OPGW line alignment but within a 0.25-mile buffer and will be avoided by siting work areas outside of these areas. Likewise, the ground disturbing activities associated with installing the OPGW line would be just over 10 acres, almost all of which would be drive and crush except for auguring to install any replacement transmission structures and to underground the OPGW line before it enters the Arco Substation and proposed Dry Lake Switching Station. Therefore, OPGW line plus Project construction and operations would result in special-status species impacts that are less than significant with MM 4.4-1 through 4.4-19 for the Project and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

Significance Threshold 2: Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

The Biological Resources Technical Report concluded the Project would result in potentially significant impacts to CDFW-designated sensitive communities, which are expected to be mitigated to a less than significant level with implementation of MM-BIO-15 (restoration of impacted CDFW-designated sensitive plant communities). It is anticipated Kern County would draw the same significance conclusion after having reviewed the Biological Resources Technical Report with implementation of mitigation measures (labeled as MM 4.4-5 through 4.4-8, and 4.10-1 in the County's mitigation measure list).

OPGW Line

The OPGW line alignment contains land that is developed with an existing 230-kV transmission line. The areas adjacent to OPGW line alignment have a history of agricultural uses. The OPGW line alignment is flat and does not contain any significant landform features that create a complex terrain or variable landscape. The OPGW line alignment contains a mix of native and non-native vegetative cover including grasses and shrubs.

Vegetation communities within the OPGW line alignment are as follows: irrigated row and field crops, annual grassland, cropland, barren, evergreen orchard, deciduous orchard, and alkali desert scrub (see Figure 5, Vegetation Communities and Land Cover Types). Most of the OPGW line alignment consists of irrigated row and field crops and annual grassland. While sensitive vegetation community Valley Saltbush Scrub has mapped occurrences within the OPGW line alignment and 0.25-mile buffer (see Figure 2), this area is entirely mapped as annual grassland as shown in Figure 5. As noted above, the proposed OPGW improvements will occur within an existing utility corridor with minor ground disturbance. As a result, it is expected that sensitive vegetation communities can be avoided by siting the temporary OPGW line work areas outside of these areas; in the event resources cannot be avoided impacts to sensitive vegetation communities would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures, and no mitigation would be required.

OPGW Line Plus Project

Incorporation of the OPGW line would result in an incremental addition of impacts to vegetation communities, compared to the previous Project analysis because of the drive and crush and minor ground disturbance associated with installing the OPGW line. The vegetation communities within the OPGW line alignment and 0.25-mile buffer of the OPGW line alignment are the same as those considered in the previous Project analysis, and the ground disturbing activities associated with installing the OPGW line are similar to, though much less extensive than, the activities considered in the previous Project analysis.

Therefore, OPGW line plus Project would result in special-status species impacts that are less than significant with implementation of MM 4.4-5 through 4.4-8, and 4.10-1 for the Project and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

Significance Threshold 3: 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.

The Biological Resources Technical Report concluded the Project would result in potentially significant impacts to jurisdictional aquatic resources, which are expected to be mitigated to a less than significant level with implementation of MM-BIO-16 (wetland and waters delineation and protection). It is anticipated Kern County would draw the same significance conclusion after having reviewed the Biological Resources Technical Report with implementation of mitigation measures (labeled as MM 4.4-13 and 4.4-14 in the County's mitigation measure list).

OPGW Line

Freshwater emergent wetlands and riverine wetlands/habitat have been mapped within the OPGW line alignment as part of the USFWS National Wetland Inventory (see Figure 4, National Wetland Inventory). Federal or State-protected water-based resources such as streams and washes could be present within the OPGW line alignment. Existing mapped irrigation canals, streams, and freshwater emergent wetlands cross the OPGW line alignment, but are not anticipated to be impacted. It is expected that all potentially jurisdictional aquatic resources can be avoided by siting the temporary OPGW line work areas outside of potentially jurisdictional aquatic resources. However, in the event jurisdictional resources cannot be avoided, permits from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and/or California Department of Fish and Wildlife would be required; these permits would require any impacts to aquatic resources to be mitigated to a less than significant level. Additionally, indirect impacts to jurisdictional aquatic resources would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures (which require that all hazardous materials be located away from jurisdictional aquatic waters, which would also be protected from storm-water runoff), and no mitigation would be required.

OPGW Line Plus Project

The aquatic resources within the OPGW line alignment and 0.25-mile buffer of the OPGW line alignment are similar to those considered in the previous Project analysis, and the ground disturbing activities associated with installing the OPGW line are similar to, though much less extensive than, the activities considered in the previous Project analysis. Incorporation of the OPGW line may therefore result in an incremental addition of impacts to jurisdictional aquatic resources in the event temporary work areas and access routes cannot avoid jurisdictional aquatic resources, compared to the previous Project analysis. However, as described in the previous Project analysis, permits required for unavoidable impacts to such resources would ensure impacts are properly mitigated to a less than significant level,

Therefore, the OPGW line plus Project would result in jurisdictional aquatic resources impacts that are less than significant with implementation of MM 4.4-5 through 4.4-8, and 4.10-1 for the Project and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 3 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

Significance Threshold 4: Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.

The Biological Resources Technical Report concluded the Project would result in potentially significant impacts to a mapped wildlife movement corridor or linkage, which are expected to be mitigated to a less than significant level with implementation of MM-BIO-5, BIO-6, and BIO-12, as well as MM-BIO-17 (fence design and site permeability). It is anticipated Kern County would draw the same significance conclusion after having reviewed the Biological Resources Technical Report with implementation of mitigation measures (labeled as MM 4.4-1 through 4.4-13 in the County's mitigation measure list).

OPGW Line

In the San Joaquin Valley, a regional wildlife movement corridor is defined as major rivers that provide connection between the mountains and the San Joaquin and Kern Rivers (Tulare Basin Wildlife Partners 2022). The OPGW line alignment is not considered a wildlife movement corridor because it is an existing utility corridor, and it does not contain major rivers that connect the mountains and the San Joaquin and Kern Rivers.

The OPGW line alignment is situated within the Pacific Flyway, which is a significant avian migration route that covers a wide swath of land along the western Americas from Patagonia to Alaska. Although the OPGW line is located within the Pacific Flyway, like the rest of the previously considered Project, it is very small in comparison to the overall Pacific Flyway. The OPGW line would be added to an existing transmission line and therefore is not expected to impact avian migratory movements within the Pacific Flyway above existing conditions.

Local irrigation ditches may also be used by wildlife to travel through the vicinity. These irrigation ditches are not expected to be impacted by installation of the OGPW line. San Joaquin kit fox and local wildlife could occur as a transient forager within the OGPW line alignment area, however, the OPGW line would be installed within an existing transmission corridor with no new permanent fencing or other infrastructure that could be a barrier to movement. All temporary work areas and/or temporary construction fence would be removed upon the completion of construction. Impacts to wildlife movement corridors or linkages would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures, and no mitigation would be required.

OPGW Line Plus Project

Wildlife movement conditions within the OPGW line alignment and 0.25-mile buffer of the OPGW line alignment are similar to those considered in the previous Project analysis, but because the OPGW line will be added to existing infrastructure within an already disturbed corridor, its impacts on wildlife movement will be much lesser than the activities considered in the previous Project analysis. Incorporation of the OPGW line may therefore result in an incremental addition of impacts to wildlife movement during construction, compared to the previous Project analysis.

Therefore, the OPGW line plus Project would result in wildlife movement impacts that are less than significant with implementation of MM 4.4-1 through 4.4-13 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

Significance Threshold 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The Biological Resources Technical Report concluded the Project would result in no impacts with respect to local policies and ordinance and no mitigation measures are warranted. It is anticipated Kern County would draw the same significance conclusion after having reviewed the Biological Resources Technical Report.

OPGW Line

There are no mapped oak woodlands located within the OPGW line alignment and the OPGW line alignment does not conflict with General Provision 1.10.10 of the Kern County General Plan regarding oak tree conservation. As currently designed, the OPGW line alignment is considered to be consistent with the Land Use, Open Space, and Conservation Element of the Kings and Kern County General Plans because it would be collocated with an existing transmission line subject to the exclusive land use authority of the CPUC. No impacts would occur.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impact with respect to local policies and ordinances protecting biological resources, compared to the previous Project analysis.

Therefore, the OPGW line plus Project would result in no impact with respect to local policies and ordinances protecting biological resources.

The impacts discussed in Threshold 5 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

Significance Threshold 6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

The Biological Resources Technical Report concluded the Project would result in no impacts with respect to any approved local, regional, or State Habitat Conservation Plan or Natural Conservation Community Plan and no mitigation measures are warranted. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Biological Resources Technical Report.

OPGW Line

The OPGW line alignment would be installed, operated, and maintained by PG&E and therefore would be subject to PG&E's San Joaquin Valley Operations and Maintenance Habitat Conservation Plan. No impact would occur as the OPGW line would adhere to the requirements set forth and would not conflict with the provisions of the adopted habitat conservation plan. Implementation of PG&E's standard best management practices and avoidance and minimization measures would ensure consistency with their adopted habitat conservation plan.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impact with respect to approved local, regional, or State Habitat Conservation Plan or Natural Conservation Community Plan, compared to the previous Project analysis.

Therefore, the OPGW line plus Project would result in no impact with respect to approved local, regional, or State Habitat Conservation Plan or Natural Conservation Community Plan.

The impacts discussed in Threshold 6 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Biological Resources Technical Report.

3.3 Cultural Resources

OPGW Line Baseline Conditions Statement

An Archaeological Resources Inventory Report was prepared for the Project and submitted to Kern County on February 22, 2023 (Dudek 2023c). The baseline environmental setting conditions discussed in the Archaeological Resources Inventory Report apply to the OPGW line; additional baseline environmental setting conditions are provided below for consideration of the OPGW line including a review of California Historical Resources Information Center (CHRIS) records of the Southern San Joaquin Valley Information Center (SSJVIC) for the OPGW line component of the Project.

A records search was completed for the OPGW line alignment and a 1-mile buffer by staff at the SSJVIC at California State University, Bakersfield on May 1, 2023. The records search identified 27 previous studies performed within the records search area. Of these, four studies have covered a portion of the OPGW line alignment (Table 10 and Confidential Attachment B).

Table 10. Previous Cultural Resource Studies Within 1 Mile of the OPGW

Report ID	Year	Author	Title
Reports Intersecting the OPGW			
KE-02873	2001	Unknown	Los Banos-Gates 500 kV Transmission Project: Draft Supplemental Environmental Impact Report [Cultural Resources Section]
KI-00003	1989	Unknown	Technical Report of Cultural Resources Studies for the Proposed WTG-West, Inc. Los Angeles to San Francisco and Sacramento, California Fiber Optic Cable Project
KI-00141	2001	Unknown	Los Banos-Gates 500 kV Transmission Project Draft Supplemental Environmental Impact Report (Cultural Resources Section)
KI-00271	1987	Peak & Associates	Report on the Cultural Resources Assessment of the Proposed San Joaquin Valley Pipeline
Reports Within 1 Mile of the OPGW			
KE-00136	1994	Osborne, Richard and Comeyne, Dominique	Negative Archaeological Survey Report: KER-5-87.2 37630K County Line Rd. OC Brg.H 50-0320 Seismic Retrofit

Table 10. Previous Cultural Resource Studies Within 1 Mile of the OPGW

Report ID	Year	Author	Title
KE-00172	1989	BioSystems Analysis, Inc.	Technical report of cultural resources studies for the proposed WTG-West, Inc. Los Angeles to San Francisco and Sacramento, California Fiber Optic Cable Project
KE-00632	1994	Alison Macdougall	Cultural Resource Investigation of PG&E's Proposed 70 kV Transmission Line to the Department of Water Resources, Devil's Den, Bluestone and Polonio Pass Pumping Plants and PG&E's Proposed 12 kV Distribution Line to the Department of Water Resources Tank 1 Water Treatment Plant
KE-02504	2001	Nettles, Wendy M.	Results of Phase I Archaeological Survey for the Lost Hills Reservoir Expansion Project
KE-03606	2009	Romani, John F.	Archaeological Survey Report: Improvements to King Road to County Line (approximately 4.5 miles), Unincorporated Area, Kern County, California
KE-04883	2017	Roper, C. Kristina	Historic Resources Compliance Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kern, Kings, and Fresno Counties, California
KE-04883A	2017	Roper, C. Kristina	Archaeological Survey Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kern, Kings, and Fresno Counties, California
KE-04883B	2017	Young, Craig D	Geoarchaeological Investigation for Interstate 5 VDS in Kern, Kings, and Fresno Counties
KE-04907	2016	Baloian, Randy, Asselin, Katie, and Lloyd, Jay B	Cultural Resources Investigations for the Dudley Ridge Pipeline Project, Kings and Kern Counties, California
KE-05073	2018	Rhoades, Ruth M.	Historic Property Survey Report for the Lost Hills Rubber Rehab II Project on Interstate 5 between Kettleman City and Lost Hills, Northwestern Kern County, California
KE-05073A	2018	Rhoades, Ruth M.	Historic Property Survey Report for the Lost Hills Rubber Rehab II Project on Interstate 5 between Kettleman City and Lost Hills, Northwestern Kern County, California
KE-05136	2017	Whitley, David S. and Carey, Peter A.	Phase I Survey/Class III Inventory, Alamo Springs Solar Project, Kings and Kern Counties, California
KE-05136A	2017	Whitley, David S.	Addendum to Phase I Survey/Class III Inventory, Alamo Springs Solar Project, Kings and Kern Counties, California: PG&E Arco Substation
KE-05356	2019	Letter, Rachael J. and Kristine, Val K.	Chevron Lost Hills Solar Project, Lost Hills, Kern County, California
KI-00058	1979	Dudley M. Varner and Kathleen L. Cursi	An Archaeological Reconnaissance for the Tulare Lake Drainage District, Kings County, California
KI-00104	1994	Osborne, Richard and Comeyne, Dominique	Negative Archaeological Survey Report: KER-5-87.2 37630K County Line Rd. OC Brg.H 50-0320 Seismic Retrofit
KI-00293	2017	Roper, C. Kristina	Historic Resources Compliance Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kings and Fresno Counties, California

Table 10. Previous Cultural Resource Studies Within 1 Mile of the OPGW

Report ID	Year	Author	Title
KI-00293A	2017	Roper, C. Kristina	Archaeological Survey Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kings and Fresno Counties, California
KI-00293B	2017	Young, Craig D.	Geoarchaeological Investigations for Interstate 5 VDS in Kings and Fresno Counties, California
KI-00294	2017	Roper, C. Kristina	Historic Resources Compliance Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kern, Kings, and Fresno Counties, California
KI-00294A	2017	Roper, C. Kristina	Archaeological Survey Report Interstate 5 Vehicle Detection Systems at 18 Locations in Kern, Kings, and Fresno Counties, California
KI-00294B	2017	Young, Craig	Geoarchaeological Investigations for Interstate 5 VDS in Kern, Kings, and Fresno Counties
KI-00299	2016	Baloian, Randy, Asselin, Katie, and Lloyd, Jay B.	Cultural Resources Investigations for the Dudley Ridge Pipeline Project, Kings and Kern Counties, California
KI-00306	2017	Wills, Carrie	Cultural Resources Records Search and Site Visit Results for Cellco Partnership and their Controlled Affiliates Doing Business as Verizon Wireless Candidate S. King & Interstate (I)-5 South, Interstate 5 South, Lost Hills, Kings County, California

The records search identified two previously recorded cultural resources as intersecting the OPGW line alignment and zero cultural resources within one mile of the OPGW line alignment (Table 11 and Confidential Attachment B). These sites are summarized below.

Table 11. Previously Recorded Cultural Resources Within 1 Mile of the OPGW

Primary Number	Trinomial	Name	Type	Age	Attributes
Previously Recorded Sites Intersecting the OPGW Line Alignment					
P-15-015820 / P-16-000266	CA-KER-008698H / CA-KIN-000108H	California Aqueduct	Structure	Historic	Aqueduct
P-15-020558 / P-16-000481	—	Interstate 5	Site	Historic	Roads; Highway
Previously Recorded Sites Within One Mile of the OPGW Line Alignment					
None					

Significance Threshold 1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5

The Archaeological Resources Inventory Report concluded the Project would result in less than significant impacts to historical resources and no mitigation measures are warranted. It is anticipated Kern County would draw the same significance conclusion after having reviewed the Archaeological Resources Inventory Report.

OPGW Line

As shown above in Table 11, the records search identified two previously recorded cultural resources as intersecting the OPGW line alignment.

P-15-015820 / P-16-000266

Resource P-15-015820 / P-16-000266, also referred to as the California Aqueduct, is a historically significant resource considered eligible for listing on both the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHP) (BERD 2023). The construction of the main canal of the California Aqueduct began in the 1960s and was completed in 1973. The aqueduct is a critical component of the State Water Project. This resource intersects the OPGW line alignment site within Kings County, at the southwest corner of the USGS 7.5" Series West Camp, CA Quadrangle.

P-15-020558 / P-16-000481

Resource P-15-020558 / P-16-020558, also referred to as Interstate 5 or the Golden State Freeway, is a major eight-lane paved freeway spanning a total of 1,381 miles from the Mexican border in San Diego County, California, to the Canadian border in Washington State, with 800 miles located within the State of California (Urbana Preservation and Planning 2019). The route has its origins as early as 1910 and the section through the San Joaquin Valley from Sacramento to Los Angeles (Route 4) was paved circa 1930 and became US-99 in 1926. Following the passage of the Federal Aid Highway Act of 1956, the path of Interstate 5 followed the general route of US-99 and replaced portions of the original highway. The segment of Interstate 5 near Bakersfield was completed circa 1972 and was delineated on the 1974 Grapevine USGS Topographic Quadrangle Map as a four-lane highway in either direction (Urbana Preservation and Planning 2020). The resource intersects the OPGW line alignment within Kings County, near the point where the alignment shifts from northwesterly to southwesterly. Interstate 5 appears ineligible under NRHP/CRHP Criterion A, B, C and D.

The OPGW line would be installed within an existing transmission line that crosses over Resource P-15-015820 / P-16-000266 and Resource P-15-020558 / P-16-020558. OPGW line installation activities (minor ground disturbance/temporary work areas) would occur outside of the resource and there would be no impacts to the resources themselves. No impacts to Resource P-15-015820 / P-16-000266 or Resource P-15-020558 / P-16-020558 are anticipated from installation of the OPGW line.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impact with respect to historic resources, compared to the previous Project analysis. Therefore, the OPGW line plus Project would result in no impact with respect to historic resources.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Archaeological Resources Inventory Report.

Significance Threshold 2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

The Archaeological Resources Inventory Report concluded the Project would result in potentially significant impacts to archaeological resources, which are expected to be mitigated to a less than significant level with implementation of MM-CUL-1 through CUL-5 (worker environmental awareness program, preparation of a Cultural Resources Management Plan to address the proper handling and recovery of cultural resources identified, requiring data recovery of significant cultural resources discovered during construction of the Project that cannot be avoided, specifying the proper treatment of any human remains discovered during construction, requiring monitoring of initial ground-disturbing activities by cultural resources specialists to ensure detection of cultural resources encountered during construction). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Archaeological Resources Inventory Report with implementation of mitigation measures (labeled as MM 4.5-1 through 4.5-5 in the County's mitigation measure list).

OPGW Line

There are no recorded archaeological resource sites within the OPGW line alignment or a 1-mile buffer of the OPGW line alignment. While the majority of the OPGW line alignment is flat and would require minimal to no ground disturbance, it is understood that some ground disturbance will be required establishing temporary pull/splice sites, temporary landing zones, temporary guard structures, crossing structure temporary work areas, and replacement structure temporary work areas, and underground temporary work areas (where the OPGW line will transition to underground to terminate at the proposed Dry Lake Switching Station and the existing Arco Substation). Therefore, there is the potential for ground disturbance to impact previously unknown archaeological resources, which would represent a potentially significant impact. Implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts to previously unknown archaeological resources.

OPGW Line Plus Project

Because the OPGW line will be added to existing infrastructure within an already disturbed corridor, its impacts on such resources are expected to be much less than the activities considered in the previous Project analysis. Thus, although incorporation of the OPGW line may result in an incremental addition of impacts to archaeological resources, compared to the previous Project analysis, the OPGW line plus Project would reduce potentially significant impacts to archaeological resources with implementation of MM 4.5-1 through 4.5-5 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Archaeological Resources Inventory Report.

Significance Threshold 3: Disturb any human remains, including those interred outside of dedicated cemeteries.

The Archaeological Resources Inventory Report concluded the Project would result in potentially significant impacts to possible human remains, which are expected to be mitigated to a less than significant level with implementation of MM-CUL-1 through CUL-5. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Archaeological Resources Inventory Report with implementation of mitigation measures (labeled as MM 4.5-1 through 4.5-5 in the County's mitigation measure list).

OPGW Line

As discussed above in Threshold 2, no archaeological sites (including those with presence of documented prehistoric burials) are documented within the OPGW line alignment or a 1-mile buffer of the OPGW line alignment. As described under Threshold 2, while the majority of the OPGW line alignment is flat and would require minimal to no ground disturbance, it is understood that some ground disturbance will be required establishing temporary pull/splice sites, temporary landing zones, temporary guard structures, crossing structure temporary work areas, and replacement structure temporary work areas, and underground temporary work areas. Therefore, there is potential for ground disturbance to impact previously unknown human remains, which would represent a potentially significant impact. Implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts to previously unknown human remains.

OPGW Line Plus Project

Because the OPGW line will be added to existing infrastructure within an already disturbed corridor, its impacts on such resources are expected to be much less than the activities considered in the previous Project analysis. Thus, although incorporation of the OPGW line may result in an incremental addition of impacts to human remains compared to the previous Project analysis, the OPGW line plus Project would reduce potentially significant impacts to human remains with implementation of MM 4.5-1 through 4.5-5 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 3 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Archaeological Resources Inventory Report.

Significance Threshold 4: 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
- 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The Archaeological Resources Inventory Report concluded the Project would result in potentially significant impacts to tribal cultural resources, which are expected to be mitigated to a less than significant level with implementation of MM-CUL-1 through CUL-5. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Archaeological Resources Inventory Report with implementation of mitigation measures (labeled as MM 4.5-1 through 4.5-5 in the County's mitigation measure list).

OPGW Line

There is potential for OPGW line-related ground disturbance to impact tribal cultural resources, which would represent a potentially significant impact. Implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts to previously unknown human remains. In addition, details regarding the OPGW line would be included as part of the Project's Assembly 52 and Senate Bill 18 processes, which require consultation with California Native American Tribal representatives requesting consultation in response to notifications sent by local governments as well as the proper treatment of any tribal cultural resources potentially affected by activities triggering such consultation.

OPGW Line Plus Project

Because the OPGW line will be added to existing infrastructure within an already disturbed corridor, its impacts on such resources are expected to be much less than the activities considered in the previous Project analysis. Thus, although incorporation of the OPGW line may result in an incremental addition of impacts to tribal cultural resources compared to the previous Project analysis, the OPGW line plus Project would reduce potentially significant impacts to tribal cultural resources with implementation of MM 4.5-1 through 4.5-5 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Archaeological Resources Inventory Report.

3.4 Noise

OPGW Line Baseline Conditions Statement

A Noise Technical Report was prepared for the Project and submitted to Kern County on February 22, 2023 (Dudek 2023d). The baseline environmental setting conditions discussed in the Noise Technical Report apply to the OPGW line with the exception of potential sensitive receptors. Dudek reviewed current aerial imagery (Google Earth Pro, Imagery Date April 3, 2023) of the OPGW line alignment to identify the locations of noise-sensitive receivers (i.e., residences) in the vicinity of the OPGW line alignment. For the OPGW line alignment between the Arco Substation and I-5, there is only one apparent residence within 3 miles. This residence is located immediately east of the Wonderful Pistachios & Almonds King Facility (10429 King Road), at a distance of approximately 6,540 linear feet from the closest point of the OPGW line alignment. For the OPGW line alignment that parallels the east side of I-5, there is also only one apparent residence within 3 miles. This is a group of four residences on the south side of Twisselman Road (18727 Twisselman Road) approximately 19,280 linear feet from the closest point of the OPGW line alignment. These residences were identified as ST1 in the Noise Technical Report (Dudek 2023d).

Significance Threshold 1: 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 Noise Technical Report concluded the Project would result in less than significant noise impacts, and no mitigation is warranted.

OPGW Line

From available average daily trip volume data for Twisselman Road, Dudek modeled daytime noise levels adjacent to ST1 to be approximately 56 dBA ($L_{eq \text{ Hour}}$). Kings Road is a 2-lane roadway that extends from Twisselman Road (which has a full interchange at I-5 immediately south of Pelican Jaw solar and the OPGW line alignment) north to Utica Road (which has a full interchange at I-5 north of the OPGW alignment). Because it provides access between these two I-5 interchanges on the west side of I-5, Kings Road should be carrying similar traffic volumes as Twisselman Road west of I-5, and the daytime traffic noise levels adjacent to the residence on Kings Road should be approximately equivalent to ST1, or 56 dBA ($L_{eq \text{ Hour}}$).

Installation of the OPGW line would involve use of a Hughes 500 helicopter for the stringing of the wire as well as for the ferrying of workers and materials to support structure locations within the OPGW line alignment. The Hughes 500 is reported to have a noise level of 76 dBA L_{eq} at a distance of 500 feet for hovering operations (DOT 1977) and up to 76 dBA L_{eq} at a distance of 400 feet for fly-over operations (DOT 1977). Fly-over noise levels would apply to the ferrying of employees or materials, the hovering noise level would apply to stringing operations.

Based on standard equations for outdoor sound attenuation with distance, Dudek calculated the noise levels from operation of a Hughes 500 helicopter for OPGW line construction activities, at the closest point of the OPGW alignment to each of the two identified residences in the vicinity. Calculating the helicopter noise levels at the closest point of the OPGW alignment to each of the two identified residences is appropriate because the helicopter flight path from the designated temporary landing zones would generally follow the existing PG&E transmission line alignment and would avoid flying over residences when transporting material and crews. The results of the calculations are presented in Table 12 (Refer to Attachment D for the calculation worksheet).

Table 12. Estimated Helicopter Operational Noise Levels at Closest Residences

	Ambient Daytime Noise	Calculated Helicopter Noise
	L_{eq}	
King Street Residence		
Hovering Helicopter Within Alignment	56	56
Helicopter Fly-Over Along Alignment		52
Twisselman Road Residence		
Hovering Helicopter Within Alignment	56	46
Helicopter Fly-Over Along Alignment		42

As indicated in Table 12, helicopter operations associated with installation of the OPGW line are not anticipated to exceed ambient noise levels at the only two residences within 3 miles of the OPGW alignment. Consequently,

helicopter noise impacts would be less than significant. With respect to noise associated with ground-based construction equipment during OPGW installation, it should be noted that the reported helicopter noise of 76 dBA L_{eq} at 500 feet (hovering) would equate to 96 dBA L_{eq} at 50 feet (using the point source exterior noise attenuation rate of 6.0 dBA for each doubling of distance from the source, as explained in Section 1.4.1.1 of the Noise Technical Report). According to the FHWA (RCNM 2006) the sound levels for various ground-based construction equipment that could be employed for the OPGW installation range from 78 dBA L_{max} (backhoe) to 84 dBA L_{max} (auger drill rig) at 50 feet. Because the helicopter noise level would be at least 10 dBA L_{eq} higher than any other construction equipment noise level used for the OPGW installation, combined noise from a helicopter hovering over ground-based construction equipment would have the same sound level as the helicopter by itself. This is because decibels are expressed as logarithmic values, and addition of such values must employ logarithmic equations; when two decibel levels differ by more than 10, the sum of the two is equal to the value of the larger level. Consequently, helicopter use combined with ground equipment and vehicle use associated with the OPGW line would be less than significant.

OPGW Line Plus Project

The highest construction noise levels from all phases of the Pelican Jaw Solar Project were predicted to be no greater than 40 dBA L_{eq} at ST1 (Dudek 2023d). Table 13 presents the results of adding helicopter construction operations noise levels to the highest noise levels from any construction phase at ST1 (the closest residence to the major OPGW line plus Project construction activities).

Table 13. Estimated Construction Noise Levels Including Helicopter Operations at Closest Residence

	Construction Without Helicopter	Construction Including Helicopter	Ambient Daytime Noise
L_{eq}			
Twisselman Road Residence			
Hovering Helicopter Within Alignment	40	47	56
Helicopter Fly-Over Along Alignment		44	

As indicated in Table 13 and in the doubling distance noise attenuation standard discussion above, construction noise levels including helicopter operations and OGPW line related ground equipment and vehicles at the closest residence to the OPGW line would remain well below the existing ambient noise levels at this residence. Consequently, the use of a Hughes 500 helicopter and associated ground equipment and vehicles to support installation of the OPGW line as proposed would result in construction noise levels that are less than significant.

Incorporation of the OPGW line would result in an incremental addition of noise impacts, compared to the previous Project analysis. The OPGW line would introduce additional noise impacts at the King Street residence, but they are not expected to exceed ambient noise levels in this location. At the closest residence to the OPGW line plus Project noise levels were estimated to be 40 dBA L_{eq} without use of the helicopter necessary for OPGW install compared to 44 and 47 dBA L_{eq} depending on if the helicopter is hovering within the OPGW line alignment or flying along the OPGW line alignment. However, the OPGW line plus Project construction noise levels (including helicopter operations and associated ground equipment and vehicles) at the closest residence would remain well below the

existing ambient noise level of 56 dBA Leq. Regardless, the OPGW line plus Project would further reduce noise levels with implementation of MM 4.13-1 through 4.13-4 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Noise Technical Report.

Significance Threshold 2: Result in generation of excessive groundborne vibration or groundborne noise levels.

The Noise Technical Report concluded the Project would result in less than significant noise impacts, and no mitigation is warranted. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Noise Technical Report.

OPGW Line

As discussed in Section 3.1.4 (Vibration Methodology) of the Noise Technical Report, groundborne vibration generated from construction equipment would be attenuated to 0.12 in/sec PPV at a distance of no greater than 350 feet from construction activity. Caltrans uses a human annoyance significance threshold for transient vibration (applicable to construction) of 0.2 in/sec PPV. Caltrans uses a building damage significance threshold of 0.12 in/sec PPV for fragile buildings. Consequently, for construction activities that are no closer than 350 feet from vibration sensitive uses, including residences, construction-related vibration levels would remain below the significance threshold. The closest existing vibration-sensitive use (the King Street residence, which is approximately 6,540 linear feet from the OGPW line alignment) is located a distance greater than 350 feet from the OPGW line alignment. Therefore, OPGW construction-related vibration levels would be less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of vibration impacts, compared to the previous Project analysis. The OPGW line plus Project vibration impacts would remain less than significant.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Noise Technical Report.

3.5 Geology and Soils

OPGW Line Baseline Conditions Statement

A Geological Desktop Assessment was prepared for the Project and submitted to Kern County on February 20, 2023 (Ninyo & Moore 2023a). The baseline environmental setting conditions discussed in the Geological Desktop Assessment apply to the OPGW line; additional baseline environmental setting conditions are provided below for consideration of the OPGW line.

Ninyo & Moore conducted a geological desktop assessment for the OPGW line alignment in May 2023 (Ninyo & Moore 2023b).

Surface and near-surface soils at the OPGW line alignment are primarily mapped as alluvial basin and fan deposits. In the western portion of the OPGW alignment near the Arco Substation, geologic materials are mapped as the San Joaquin and Etchegoin Formations. The San Joaquin and Etchegoin Formations generally consist of shale, mudstone, and sandstone. Fill materials associated with the construction of the existing roadways, the California Aqueduct, utilities, as well as agricultural topsoil are also anticipated. Geotechnical constraints related to soils are:

- Soft Ground – Areas with soft ground or loose soils can be found throughout the OPGW line alignment.
- Expansive Soils – The soils within the OPGW line alignment are expected to have a moderate potential for expansion.
- Fill Soils – Man-made fill soils placed without engineering supervision may be loosely or inadequately compacted, may contain oversized materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills.
- The closest known major active fault is the Great Valley 14 Fault, which is located approximately 16 miles west of the OPGW line alignment. Geotechnical constraints related to faulting and seismic events are:
 - Ground Shaking – The OPGW line alignment area has a moderate potential for strong ground motions due to earthquakes on nearby active faults.
 - Liquefaction – Fan or basin deposits (where shallow groundwater is present) may be subject to seismic settlement or liquefaction during a nearby seismic event.
- Shallow groundwater or perched water may occur beneath portions of the OPGW line alignment area.
- The potential for landsliding within the OPGW line alignment area is considered low.
- Portions of the OPGW line alignment area adjacent to the Kern River Channel are located within an area considered subject to inundation by the 1% annual chance flood.
- Based on previous work in the general vicinity of the OPGW line alignment area, the soils may be corrosive.

Significance Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of known fault.

The Geological Desktop Assessment concluded the Project would not result in impacts related to adverse effects involving rupture of a known earthquake fault, and no mitigation is warranted. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment.

OPGW Line

The closest known major active fault is the Great Valley 14 Fault, which is located approximately 16 miles west of the OPGW alignment. Due to the distance from the nearest active fault to the OGPW line, the potential for surface fault rupture is considered negligible. No impacts would occur.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of earthquake fault impacts, compared to the previous Project analysis. No OPGW line plus Project impacts would occur.

The impacts discussed in Threshold 1(i) (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

ii. Strong seismic ground shaking

The Geological Desktop Assessment concluded the Project would result potentially significant impacts related to adverse effects involving ground shaking, which are expected to be mitigated to a less than significant level with implementation of recommendations set forth in the Geological Desktop Assessment (subsurface evaluation, laboratory testing to inform final engineering design). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment with implementation the same mitigation (labeled as MM 4.7-1 in the County's mitigation measure list).

OPGW Line

The OPGW line alignment area has a moderate potential for strong ground motions due to earthquakes on nearby active faults. The OGPW line is a communication line which would be installed within and attached to an existing transmission line, which is not expected to increase ground shaking effects. In the event structure replacement is necessary to accommodate the OGPW line, if not properly designed to withstand ground shaking, damage to the existing transmission line could occur. Implementation of PG&E's standard best management practices and avoidance and minimization measures, and compliance with the California Building Code (CBC) would reduce potentially significant impacts related to ground shaking by ensuring that any structures associated with the OPGW line are properly designed to withstand ground shaking.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of ground shaking impacts, compared to the previous Project analysis, if structure replacement is necessary and not designed properly. However, the OPGW line plus Project would reduce potentially significant ground shaking impacts with implementation of MM 4.7-1 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 1(ii) (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

iii. Seismic related ground failure, including liquefaction.

The Geological Desktop Assessment concluded the Project would result potentially significant impacts related to adverse effects involving seismic related ground failure, which are expected to be mitigated to a less than significant level with implementation of recommendations set forth in the Geological Desktop Assessment (subsurface evaluation and laboratory testing to inform final ENGINEERING design). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment with implementation the same mitigation (labeled as MM 4.7-1 in the County's mitigation measure list).

OPGW Line

The existing conditions of the OPGW line alignment are similar to the Project. The areas associated with OPGW line alignment and Project may be considered susceptible to liquefaction and settlement based on the measured

shallow groundwater in nearby groundwater monitoring wells. Fan or basin deposits (where shallow groundwater is present) may be subject to seismic settlement or liquefaction during a nearby seismic event. The OGPW line is a communication line, which would be installed within and attached to an existing transmission line that is not expected to introduce new structures that would be subject to seismic settlement. In the event structure replacement is necessary to accommodate the OGPW line, if not properly designed to withstand seismic related ground failure/liquefaction damage to the existing transmission line could occur. Implementation of PG&E's standard best management practices and avoidance and minimization measures, and compliance with the CBC would reduce potentially significant impacts related to seismic related ground failure/liquefaction by ensuring that any structures associated with the OGPW line are properly designed to withstand seismic related ground failure or liquefaction.

OPGW Line Plus Project

Incorporation of the OGPW line may result in an incremental addition of seismic related ground failure/liquefaction impacts, compared to the previous Project analysis, if structure replacement is necessary and not designed properly. However, the OGPW line plus Project would reduce potentially significant seismic related ground failure/liquefaction impacts with implementation of MM 4.7-1 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OGPW line.

The impacts discussed in Threshold 1(iii) (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

i. Landslides

The Geological Desktop Assessment concluded the Project would not result in impacts related to adverse effects involving landslides, and no mitigation is warranted. It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment.

OPGW Line

The potential for landsliding within the OGPW line alignment area is considered low. In accordance with the Geological Desktop Assessment that was prepared by Ninyo & Moore for the OGPW alignment, the OGPW is not located in an area where landslides have been mapped or reported in the available literature review (Ninyo & Moore 2023b). The OGPW line would not include any habitable structures, and the potential hazard due to landslides from adjacent properties to affect the OGPW line is considered remote as there are no steep slopes on adjoining properties. No impacts would occur.

OPGW Line Plus Project

Incorporation of the OGPW line would not result in an incremental addition of landslide impacts, compared to the previous Project analysis. No OGPW line plus Project impacts would occur.

The impacts discussed in Threshold 1(iv) (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

Significance Threshold 2: Result in substantial soil erosion or the loss of topsoil.

The Geological Desktop Assessment concluded the Project would result potentially significant impacts related to soil erosion or the loss of topsoil, which are expected to be mitigated to a less than significant level with implementation of recommendations set forth in the Geological Desktop Assessment (final engineering design to comply with the CBC and industry standards). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment with implementation the same mitigation (labeled as MM 4.7-1 (final engineering design in compliance with the CBC) and 4.10-1 (preparation and implementation of a Stormwater Pollution Prevention Plan) in the County's mitigation measure list).

OPGW Line

Areas with soft ground or loose soils can be found throughout the OPGW alignment. In addition, man-made fill soils placed without engineering supervision may be loosely or inadequately compacted, may contain oversize materials unsuitable for reuse in engineered fills, and may contain unsuitable organic or expansive materials and debris that may preclude their use in engineered fills. However, the OGPW line is a communication line which would be installed within and attached to an existing transmission line, which is not expected to introduce new structures that would result in soil erosion or loss of topsoil. Temporary work areas may result in minor ground disturbance in the form of drive and crush, no grading. In the event structure replacement is necessary to accommodate the OPGW line, soil erosion or loss of topsoil could occur because of grading and if not designed properly. Implementation of PG&E's standard best management practices and avoidance and minimization measures, and compliance with the CBC would reduce potentially significant impacts related to soil erosion and loss of topsoil.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of soil erosion and loss of topsoil impacts, compared to the previous Project analysis, if structure replacement is necessary and not designed properly. However, the OPGW line plus Project would reduce potentially significant soil erosion and loss of topsoil impacts with implementation of MM 4.7-1 and 4.10-1 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

Significance Threshold 3: Be located on 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.

See Threshold 1(ii) and (iii) above.

Significance Threshold 4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

The Geological Desktop Assessment concluded the Project would result potentially significant impacts related to expansive soils, which are expected to be mitigated to a less than significant level with implementation of recommendations set forth in the Geological Desktop Assessment (final engineering design to comply with the CBC

and industry standards). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment with implementation the same mitigation (labeled as MM 4.7-1) in the County's mitigation measure list).

OPGW Line

The soils within the OPGW alignment are expected to have a moderate potential for expansion. Expansive soils may lead to damage to foundations and engineered structures. If expansive soils exist within the OPGW line alignment area, the following recommendations may be implemented during construction: the soils may be removed from sensitive areas and placed in deeper fill areas; the soils may be excavated and removed from the site; or the expansive soils may be treated (i.e., lime treatment) to mitigate their potential for expansion. The extent of expansive soils and recommended mitigation measures may be evaluated by subsurface exploration and laboratory testing. However, the OGPW line is a communication line which would be installed within and attached to an existing transmission line which is not expected to introduce new structures that would be subject to expansive soils. In the event structure replacement is necessary to accommodate the OGPW line, expansive soil impacts could occur if not designed properly. Implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts related to expansive soils.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of expansive soil impacts, compared to the previous Project analysis, if structure replacement is necessary and not designed properly. However, the OPGW line plus Project would reduce potentially significant expansive soils impacts with implementation of MM 4.7-1 and 4.10-1 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

Significance Threshold 5: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The Geological Desktop Assessment concluded the Project would result potentially significant impacts related to use of septic tanks or alternative waste water disposal systems where sewer are not available because septic may be constructed as part of the Project's Operations & Maintenance facility bathrooms, which are expected to be mitigated to a less than significant level with implementation of recommendations set forth in the Geological Desktop Assessment (final engineering design to comply with the CBC and industry standards). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Geological Desktop Assessment with implementation the same mitigation (labeled as MM 4.7-2 – obtain permits and approvals from Kern County Environmental Health Services Division for design and siting of septic systems) in the County's mitigation measure list).

OPGW Line

The OPGW line is a communication line which would not entail use of septic tanks or alternative waste water disposal systems. Portable restroom facilities would be used during construction of the OPGW line, and no restroom facilities would be required during operation of the OPGW line. No impacts would occur.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of septic impacts, compared to the previous Project analysis.

The impacts discussed in Threshold 5 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Geological Desktop Assessment.

3.6 Paleontological Resources

OPGW Line Baseline Conditions Statement

A Paleontological Resources Review was prepared for the Project and submitted to Kern County on February 20, 2023 (Dudek 2023e). The baseline environmental setting conditions discussed in the Paleontological Resources Review generally apply to the OPGW line; additional baseline environmental setting conditions for geologic formations not included in the previous Paleontological Resources Review are provided below for consideration of the OPGW line.

The OPGW alignment is located within the southern portion of the Great Valley geomorphic province (California Geological Survey [CGS] 2002). This geomorphic province is characterized by a depositional basin that has received sediments since the Jurassic Period (~ 160 million years ago [mya]) and is split into the Sacramento Valley in the north and the San Joaquin Valley in the south where the OPGW line alignment is located (CGS 2002).

More specifically, the northwestern traversing portion of the OPGW line alignment is underlain by Holocene (less than 11,700 years ago; geological ages from Cohen et al. [2023]) basin deposits (map unit Qb), according to surficial geological mapping at a scale of 1:250,000 by Smith (1964). The southwest traversing portion of the OPGW line alignment is underlain by Holocene basin deposits, Holocene alluvial deposits (map unit Qa), Pleistocene (approximately 11,700 years ago to 2.58 million years ago [mya]) nonmarine deposits (map unit Qc), late Pliocene (approximately 2.58 mya to 3.6 mya) San Joaquin Formation (map unit Tsj), and the Pliocene (approximately 2.58 mya to 5.3 mya) Etchegoin Formation (map unit Te), according to surficial geological mapping by Smith (1964) and Dibblee and Minch (2006) at a 1:24,000 scale.

A paleontological records search specific to the OGPW line was requested from the Natural History Museum of Los Angeles (NHMLA) and the results were received on May 28, 2023 (Attachment C). The NHMLA did not report any fossil localities within the OPGW line boundaries; however, they reported numerous invertebrate and vertebrate fossil localities from the San Joaquin and Tulare Formations that are detailed in Table 14 below (NHMLA 2023).

Table 14. NHMLA Paleontological Records Search Results

Locality Number	Location	Formation or Unit	Taxa	Depth (ft bgs*)
LACM IP** 18069 and 18065	West flank south Dome in the Kettleman Hills	San Joaquin Formation	Invertebrates: clam (<i>Mya</i> , <i>Anadara</i> , <i>Chione</i> , <i>Pseudocardium</i> , <i>Tellinidae</i>) and scallop (<i>Euvolva</i> and <i>Pectinidae</i>)	Surface
LACM IP 18161, 18150, 18193, 18067	Southwest flank of south Dome in the Kettleman Hills	San Joaquin Formation	Oyster shells and uncatalogued invertebrates	Surface
LACM VP*** 4526, 5458, 5914, 5763, 7434; LACM IP 18024, 4886, 18025, 18172	North Dome of the Kettleman Hills	Tulare Formation	Fish (Osteichthyes, Teleostei), pack rat (<i>Neotoma</i>), Earred seal (<i>Otariidae</i>), oysters and other mollusks	Surface
Approximately 250 localities	North and middle domes of the Kettleman Hills	Sandstone and silty sandstone beds within the San Joaquin Formation	Wide variety of invertebrates, including bivalves, gastropods, and barnacles	Surface

Notes:

* below the ground surface

** Invertebrate Paleontology

*** Vertebrate Paleontology

Significance Threshold 1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The Paleontological Resources Review concluded the Project would result potentially significant impacts to paleontological resources, which are expected to be mitigated to a less than significant level with implementation MM-GEO-1 (paleontological monitoring). It is anticipated Kern County expects to draw the same significance conclusion after having reviewed the Paleontological Resources Review with implementation the same mitigation (labeled as MM 4.7-3) in the County's mitigation measure list).

OPGW Line

The Society of Vertebrate Paleontology (SVP) categorizes rock units as having high, low, undetermined, or no paleontological sensitivity (SVP 2010). Based on the criteria outlined in SVP (2010), deposits within the OPGW alignment have low paleontological sensitivity on the surface due to the young age of the sediments; however, paleontological sensitivity increases with depth where the sediments are old enough to contain and preserve fossils. Areas of the OPGW alignment underlain by Pleistocene nonmarine sediments have a high potential to yield significant paleontological resources. Pleistocene, or Ice Age, fossils are well documented throughout California. In his compilation of Quaternary vertebrates from California, Jefferson (1991) lists several Pleistocene fossil localities from Kern County. These localities yielded fossil specimens including fish, amphibian (frogs and salamanders), reptiles (turtles, lizards, and snakes), birds, and mammals (rodents, rabbits, ground sloths, cats, dogs, horses, camels, mammoths, mastodons, deer, and bison). The Etchegoin Formation also has a record of producing

significant paleontological resources, including fossil echinoids, brachiopods, pelecypods, gastropods, sea otter, and beaver (Berta and Morgan 1985; Kellogg 1911; Rathbun 1908).

The OGPW line is a communication line which would be installed within and attached to an existing transmission line, which is not expected to introduce new structures that would require subsurface ground disturbance. Temporary work areas may result in minor ground disturbance in the form of drive and crush, no grading. In the event structure replacement is necessary to accommodate the OGPW line, impacts to paleontological resources could occur because of grading and excavation necessary to install replacement structures. However, grading and excavation for replacement structure install is expected to occur within the same previously disturbed area where the existing structure was located. Regardless, implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts related to paleontological resources.

OPGW Line Plus Project

Because the OGPW line will be added to existing infrastructure within an already disturbed corridor, its impacts on such resources are expected to be much lesser than the activities considered in the previous Project analysis. Thus, incorporation of the OGPW line may result in an incremental addition of impacts to paleontological resources, compared to the previous Project analysis, but the OGPW line plus Project would reduce potentially significant paleontological resource impacts with implementation of MM 4.7-3 the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OGPW line.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance conclusion contained in the previously prepared and submitted Paleontological Resources Review.

3.7 Hazards and Hazardous Materials

OPGW Line Baseline Conditions Statement

The baseline environmental setting conditions discussed in the Project's Initial Study generally apply to the OGPW line; additional baseline environmental setting conditions related to hazardous materials sites, nearby schools and airports, and wildfire hazard areas specific to the OGPW alignment are provided below for consideration in framing OGPW line-related impacts.

Based on a review of the Department of Toxic Substances Control (DTSC) Cortese List Data Resources, there are no hazardous materials sites located within the OGPW line alignment. Hazardous materials sites listed on the State Water Resources Control Board's GeoTracker database and DTSC Envirostor show an open-inactive case (04/28/2016) related to a Shell pipeline and contaminated soil from crude oil (DTSC 2023) located approximately 0.1-mile (approximately 530 feet) west of the OGPW line alignment.

The closest schools to the OGPW line alignment are Lost Hills Elementary School, A.M. Thomas Middle School, and Wonderful College Prep Academy, each located approximately 10.5 miles south of the southernmost part of the OGPW line alignment at 14821 Primary Court, Lost Hills, California 93249, 20979 Lobos Court, Lost Hills, California 93249, and 14848 Lamberson Avenue, Lost Hills, California 93249, respectively.

The nearest public airport to the OPGW line alignment is the Kern County Lost Hills Airport located approximately 8 miles south of the OPGW line alignment. The OPGW line alignment is not located within any safety or noise zones for the Kern County Lost Hills Airport.

According to the California Department of Forestry and Fire Protection (CalFire), the OPGW line alignment is located within a Local Responsibility Area. According to the CalFire Local Responsibility Area, the OPGW alignment is within an area that is unzoned and moderate regarding wildfire hazard (CalFire 2007a; 2007b).

Significance Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The Initial Study concluded the Project would result potentially significant impacts to hazardous materials, which would be evaluated further in the Project's EIR. It is anticipated Kern County expects to conclude hazardous materials impacts would be less than significant with implementation mitigation measures MM 4.9-1 and 4.9-2 (preparation and implementation of the Hazardous Materials Business Plan and stipulations for herbicide use).

OPGW Line

Although field equipment used during construction activities could contain various hazardous materials (i.e., hydraulic oil, diesel fuel, grease, lubricants, solvents, adhesives, paints, etc.), these materials are not considered to be acutely hazardous, would be used in accordance with the manufacturer's specifications, and all applicable regulations. Construction and operation of the OPGW line may include the accidental release of storage materials, such as cleaning fluids and petroleum products including lubricants, fuels, and solvents. In addition, hazardous fuels and lubricants used on field equipment would be subject to a Construction Waste Management Plan and, if required, a Spill Prevention, Containment and Countermeasure Plan. Waste that would be generated during construction of the OPGW line would be non-hazardous, and would consist of materials such as cardboard, wood pallets, copper wire, scrap steel, common trash, and wood wire spools.

The operation of the OPGW line would not involve the routine transport, use, or disposal of any hazardous materials as defined by the Hazardous Materials Transportation Uniform Safety Act. During construction, the OPGW would include the transport of general construction materials (i.e., concrete, wood, metal, fuel, etc.) as well as materials necessary to install the line.

The proposed OPGW line would be subject to all applicable state, and federal plans related to hazardous material use. Additionally, a Safety Data Sheet would be made readily available to on-site personnel for all applicable materials present on site during construction. Nonhazardous construction debris would be generated and disposed of in approved facilities. During construction of the OPGW line, human waste would be managed using portable toilets located at reasonably accessible on-site locations. Impacts would be less than significant.

Since the OPGW line will be collocated with an existing PG&E transmission line, it is assumed that inspections and maintenance of the OPGW line would occur simultaneous with existing transmission line inspections and maintenance that already occur and therefore would not increase hazardous materials transport, use, or disposal.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts related to hazardous materials, compared to the previous Project analysis if hazardous materials are not used and managed in accordance with applicable federal, state, and local requirements. However, the OPGW line plus Project would reduce potentially significant hazardous materials impacts with implementation of MM 4.9-1 and 4.9-2 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 2: 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.

See Threshold 1 above. The discussion and analysis included in Threshold 1 applies to Threshold 2.

Significance Threshold 3: Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The Initial Study concluded the Project would result in no impacts with respect to emitting or handling hazardous materials or waste within one-quarter mile of a school.

OPGW Line

Construction and operation of the OPGW line would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There are no schools within 5 miles of the OPGW line alignment. Therefore, the proposed OPGW line alignment would not emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school. There would be no impact.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of hazardous materials impacts within one-quarter mile of a school, compared to the previous Project analysis.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 4: Be located on a site that 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.

The Initial Study concluded the Project would result in less than significant impacts with respect to be located on a listed hazardous materials site.

OPGW Line

Based on a review of the Department of Toxic Substances Control (DTSC) Cortese List Data Resources, there are no hazardous materials sites located within the OPGW line alignment. Hazardous materials sites listed on the State Water Resources Control Board's GeoTracker database and DTSC Envirostor show an open-inactive case (04/28/2016) related to a Shell pipeline and contaminated soil from crude oil (DTSC 2023) located approximately 0.1-mile (approximately 530 feet) west of the OPGW line alignment. It does not appear that this or any other hazardous materials conditions would affect the OPGW line alignment since installation of the OPGW is expected to occur by attaching the OPGW to existing or improved transmission structures or the select replacement of transmission structures to accommodate the OPGW line. Ground disturbance for installation of the OPGW would be limited since the largest temporary workspace necessary would be approximately 150 feet by 100 feet and the hazardous material site is approximately 530 feet from the OPGW line alignment. There would be no impact.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impacts related to listed hazardous materials sites, compared to the previous Project analysis.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 5: For a project located within the adopted Kern County Airport Land Use Compatibility Plan, result in a safety hazard or excessive noise for people residing or working in the project area.

The Initial Study concluded the Project would not result in airport safety hazard impacts.

OPGW Line

Due to the nature of the proposed land use, impacts from air traffic hazards or excessive aircraft noise are not anticipated to occur for people residing or working in the OPGW area with respect to the OPGW alignment's proximity to an airport. The nearest airport is located approximately 8 miles south of the OGPW line alignment and is not located within any airport safety or noise zones or within any Airport Land Use Compatibility Plan. In accordance with Federal Aviation Administration (FAA) Part 77, warning light requirements only apply to structures taller than 200 feet, unless in close proximity to an airport. As the nearest airport is approximately 8 miles south of the OPGW line and the towers will be less than 200 feet tall, FAA warning lights do not apply.

Helicopter use would comply with all FAA requirements regarding air traffic. Helicopter operations would be coordinated with the local airports and the FAA before and during project construction and would not create any new hazards. The helicopter flight path from the designated temporary landing zones would generally follow the existing PG&E transmission line alignment and would avoid flying over residences when transporting material and crews to the extent feasible. Helicopters would maintain a safe height in accordance with FAA regulations when passing over residential areas. The helicopter would generally be stationed overnight at a public or private use airport in the vicinity. Implementation of PG&E's standard best management practices and avoidance and minimization measures would reduce potentially significant impacts related to helicopter use hazards. See Section 3.4, Noise, of this memorandum for a discussion of helicopter noise impacts.

Impacts related to helicopter use hazards would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts related to helicopter use hazards, compared to the previous Project analysis, which did not consider helicopter use and concluded no impact. However, the OPGW line plus Project would reduce potentially significant hazardous materials impacts with implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 5 (OPGW line plus Project) differ from the significance determination Kern County intends to conclude (i.e., less than significant impacts due to helicopter use with the OPGW line compared to no impact as considered in the Initial Study).

Significance Threshold 6: Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

The Initial Study concluded the Project would not result in impacts related to impairing or physically interfering with an emergency response or evacuation plan.

OPGW Line

Road access would be maintained throughout OPGW line construction, and appropriate detours would be provided in the event of potential road closures. Therefore, no impacts related to impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would occur during installation of the OPGW line.

There would be no new operational work force for the OPGW line and therefore there would be no generation of traffic volumes during an emergency evacuation scenario that could complicate area-wide emergency evacuation efforts. The OPGW line would be installed within an existing transmission corridor that includes an access road, which would not affect designated emergency evacuation routes in the Kern County Emergency Operations Plan (EOP) or County of Kings Office of Emergency Management EOP (Kern County 2022; Kings County 2015). Since the OPGW line will be collocated with an existing PG&E transmission line, it is assumed that inspections and maintenance of the OPGW line would occur simultaneous with existing transmission line inspections and maintenance that already occur and would therefore not add operational traffic. No impacts are anticipated.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impacts related to impairing or physically interfering with an emergency response or evacuation plan, compared to the previous Project analysis.

The impacts discussed in Threshold 6 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 7: Expose people or structures, directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

The Initial Study concluded the Project would result in potentially significant impacts related to wildland fires, which would be evaluated further in the Project's EIR. It is anticipated that Kern County expects to conclude wildland fire impacts would be less than significant with implementation mitigation measures MM 4.14-1 (preparation and implementation of a Fire Safety Plan).

OPGW Line

OPGW line construction and maintenance/operations would comply with applicable existing codes and ordinances related to the maintenance of mechanical equipment, handling and storage of flammable materials, and cleanup of spills of flammable materials. Further, OPGW line-related construction would adhere to all applicable federal, state, and local regulations to safeguard human life, prevent personnel injury, preserve property, and minimize downtime due to fire or explosion. The OPGW line performs the same function as a shield wire, which is to protect the transmission line by providing a path to ground, as well as containing optical fibers that will be used for telecommunications. As the OPGW line would not carry high voltage, it would not present a material fire risk. Accordingly, the OPGW line is not anticipated to expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Impacts related to wildland fires would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts related to wildland fire, compared to the previous Project analysis if federal, state, and local fire safety requirements are not adhered to. However, the OPGW line plus Project would reduce potentially significant wildland fire impacts with implementation of MM 4.14-1 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 7 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 8: Generate vectors (flies, mosquitoes, rodents, etc.) or have a component that includes agricultural waste.

The Initial Study concluded the Project would result in potentially significant impacts related to generation of vectors, which would be evaluated further in the Project's EIR. It is anticipated Kern County expects to conclude there will be less than significant impacts.

OPGW Line

The OPGW line would not result in features or conditions that could potentially provide habitat for vectors such as mosquitoes, flies, cockroaches, or rodents. During construction and operation, workers would generate small quantities of solid waste (i.e., trash, food containers, etc.) that would be stored in enclosed containers, then transported to and disposed of at approved disposal facilities. Construction and operation of the OPGW line would not produce uncontrolled wastes that could support vectors and would not generate any standing water or other

features that would attract nuisance pests or vectors. Since the OPGW line will be collocated with an existing PG&E transmission line, it is assumed that inspections and maintenance of the OPGW line would occur simultaneous with existing transmission line inspections and maintenance that already occur. Impacts would be less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts related to vectors, compared to the previous Project analysis if trash and food containers are not properly stored and disposed of. However, the incremental effect of the OPGW line would be minimal because the potential for vectors would be limited to the temporary construction timeframe, between 12 to 16 weeks within the same 12-month period as construction of the PG&E switching station.

The impacts discussed in Threshold 8 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

3.8 Hydrology and Water Quality

OPGW Line Baseline Conditions Statement

The baseline environmental setting conditions discussed in the Project's Preliminary Hydrology and Hydraulic Technical Study and the Project's Water Supply Assessment, both prepared and submitted to Kern County on February 20, 2023 generally apply to the OPGW line (Dudek 2023e; 2023f); additional baseline environmental setting conditions related to hydrology and water quality specific to the OPGW alignment are provided below for consideration in framing OPGW-related impacts.

Portions of the OPGW line alignment are within a 100-year flood area (Zones A, 1 percent annual chance of flooding), which is an area as mapped by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Rate Maps.

Significance Threshold 1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

The Preliminary Hydrology and Hydraulic Technical Study concluded the Project would result in less than significant impacts related to water quality, with adherence to County and State design requirements (e.g., Kern County's NPDES permit and CVFPB's Title 23 Standards) that ensure preservation of site hydrology and water quality. It is anticipated Kern County expects to conclude the same; water quality impacts would be less than significant with implementation mitigation measures MM 4.10-1 and 4.10-2 (preparation and implementation of a SWPPP and a hydrologic study and final drainage plan).

OPGW Line

Construction of the OPGW line would be subject to State and federal water quality regulations. The OPGW line alignment is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). Construction associated with the OPGW line would comply with all state and federal water quality regulations. Because construction activities would be limited to just over 10 acres of disturbance, most of which would be drive and crush except for auguring for any replacement structures and undergrounding the OPGW line as it approaches

the Arco Substation and proposed Dry Lake Switching Station, the OPGW work has limited potential to result in erosion, sedimentation, and discharge of construction debris that could result in the discharge of wastewater and runoff. During construction, potable water would be brought to the OPGW line alignment for drinking and domestic needs during construction. Non-potable water would be used during construction for soil compaction and dust-suppression purposes. Water would be provided from the same sources as previously analyzed in the Water Supply Assessment for the overall Project including on-site groundwater at the Project site, import of water from the Buena Vista Water Storage District, use of the Lost Hills Utility District metered hydrant, and/or a commercial water hauler. . Impacts related to water quality would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts related to water quality, compared to the previous Project analysis. However, the incremental effect of the OPGW line would be minimal because the potential for water quality impacts would be limited to the temporary construction timeframe, between 12 to 16 weeks within the same 12-month period as construction of the PG&E switching station.

Construction of the OPGW line will occur within an existing disturbed utility corridor. Ground disturbance would be limited to just over 10 acres of disturbance, most of which would be drive and crush except for auguring for any replacement structures and undergrounding the OPGW line as it approaches the Arco Substation and proposed Dry Lake Switching Station.

The OPGW line plus Project would reduce potentially significant water quality impacts with implementation of MM 4.10-1 and 4.10-2 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 1 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 2: Decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

The Water Supply Assessment concluded the Project would result in less than significant impacts related to groundwater supplies because the Project has enough water, through use of on-site groundwater, import of water from the Buena Vista Water Storage District, use of the Lost Hills Utility District metered hydrant, and/or commercial water hauler to support both the construction and operational demands of the Project over the next 20 years, even in multiple dry-year conditions. It is anticipated Kern County expects to conclude the same after review of the Water Supply Assessment.

OPGW Line

Water necessary for construction of the OPGW line would be minimal for compaction and/or dust suppression. During construction, potable water is would be brought to the OPGW line alignment for drinking and domestic needs during construction. Non-potable water would be used during construction for soil compaction and dust-suppression purposes. Water would be provided from the same sources as previously analyzed in the Water Supply Assessment

for the overall Project including on-site groundwater at the Project site, import of water from the Buena Vista Water Storage District, use of the Lost Hills Utility District metered hydrant, and/or a commercial water hauler. There would be no operational water use related to the OPGW line. The amount of water to be used for construction of the OPGW line has been accounted for in the previously provided Water Supply Assessment for the overall Project; the OPGW line does not warrant changes to the water supply assessment prepared for the overall Project. Impacts would be less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts to groundwater supplies, compared to the previous Project analysis. However, the incremental effects of the OPGW line would be minimal because water would be limited to the OPGW construction timeframe, water use would be minimal, and the water use required for construction of the OPGW line has been accounted for in the Water Supply Assessment. Impacts would remain less than significant.

The impacts discussed in Threshold 2 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 3: 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?

The Preliminary Hydrology and Hydraulic Technical Study concluded the Project would result in less than significant impacts related to existing drainage conditions, because the existing hydrologic condition will be preserved in the final Project design through minimal use of impervious surfaces, implementation of on-site retention basins (as required by Kern County), and restrictions on impacts to flood stage in the Kern River Channel (as required by the Central Valley Flood Protection Board). It is anticipated Kern County expects to conclude the same; drainage impacts would be less than significant with implementation mitigation measures MM 4.10-1 and 4.10-2.

Construction and operational activities associated with the OPGW line would not alter existing drainage conditions or create impervious surfaces that would have the potential to result in an increase in the rate or amount of surface runoff during storm events. Construction of the OPGW line will occur within an existing disturbed utility corridor. Ground disturbance would be limited to just over 10 acres of disturbance, most of which would be drive and crush except for auguring for any replacement structures and undergrounding the OPGW line as it approaches the Arco Substation and proposed Dry Lake Switching Station. Because the OPGW line will be added to existing infrastructure within an already disturbed corridor, its impacts to existing drainage conditions and potential create impervious surfaces that would result in an increase in the rate or amount of surface runoff during storm events are expected to be much lesser than the activities considered in the previous Project analysis.

During construction and following installation of the OPGW line, the areas would remain as a pervious surface since the OPGW line will either be attached to the existing transmission structures within the corridor or attached to replaced transmission structures. There would be no new impervious surface created therefore storm water infiltration would be similar post construction compared to the existing conditions. No discharges to or alterations of any municipal stormwater drainage systems are proposed. Similarly, no component of the OPGW would generate a substantial source of polluted runoff. Impacts related to drainage conditions would be less than significant with implementation of PG&E's standard best management practices and avoidance and minimization measures.

OPGW Line Plus Project

Incorporation of the OPGW line may result in an incremental addition of impacts to existing drainage conditions, compared to the previous Project analysis. However, the incremental effect of the OPGW line would be minimal because the potential for drainage impacts would be minor due to the minimal ground disturbance required by the OPGW line and limited to the temporary construction timeframe. The OPGW line plus Project would reduce potentially significant drainage impacts with implementation of MM 4.10-1 and 4.10-2 for the Project, and implementation of PG&E's standard best management practices and avoidance and minimization measures for the OPGW line.

The impacts discussed in Threshold 3 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 4: In flood hazard, tsunami, seiche zones, risk release of pollutants due to project inundation.

The Preliminary Hydrology and Hydraulic Technical Study concluded the Project would result in less than significant impacts related to flood hazards, because the Project will be designed in accordance with CVFPB's Designated Floodway (Kern River Channel) and FEMA's 100-year flood zone to be sufficiently elevated above floodwaters and will not release pollutants during flooding and prepare a Final Drainage Study to demonstrate that proposed fencing within the Designated Floodway will not impede debris carried in flood waters (e.g., logs) and serve as a blockage to flow. It is anticipated Kern County expects to conclude the same; flood hazards impacts would be less than significant with implementation mitigation measures MM 4.10-2.

OPGW Line

The OPGW line alignment is not located near an ocean or enclosed body of water, and therefore would not be subject to inundation by seiche or tsunami. Mudflows are a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflows are often triggered by heavy rainfall and soil that is not able to sufficiently drain or absorb water; the super-saturation causes soil and rock materials to become unstable and slide away. Due to the relatively flat topography of the OPGW line alignment and surrounding area, the potential to be inundated by mudflow is considered remote.

Portions of the OPGW line alignment are within a 100-year flood area (Zones A, 1 percent annual chance of flooding), which is an area as mapped by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Rate Maps. However, since the OPGW line will be attached to existing transmission structures or to replacement structures within an existing transmission line corridor, there will be no new infrastructure that would be impacted by, impede, or redirect flood flows. No impacts would occur.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impacts to flood hazards, compared to the previous Project analysis.

The impacts discussed in Threshold 4 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

Significance Threshold 5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The Water Supply Assessment concluded the Project would result in less than significant impacts related to conflicting with or obstructing implementation of a water quality control plan or sustainable groundwater management plan. It is anticipated Kern County expects to conclude the same after review of the Water Supply Assessment; impacts related to conflicts with a water quality control plan or sustainable groundwater management plan would be less than significant and no mitigation is required.

OPGW Line

The OPGW alignment within Kern County is located within the San Joaquin Valley Groundwater Basin (SJVGB) within the Kern Groundwater Authority (KGA) boundaries. The OPGW alignment within Kings County is also located in the SJVGB within Tri-County Water Authority and Southwest Kings boundaries. The SJVGB is designated in accordance with the Sustainable Groundwater Management Act (SGMA) as a high priority basin and has developed a groundwater sustainability plans (GSP) to become sustainable (KGA 2022). The Project site is within the service area of the Lost Hills Water District, which participates as a member of the Westside District Water Authority (WDWA), who in turn is a member of the KGA.

The Water Supply Assessment concluded the Project does not conflict with the applicable goals and sustainability criteria identified in the KGA GSP or the Westside District Water Authority "Chapter GSP" because: It would not result in exceedance of minimum thresholds or interfere with the achievement of measurable objectives identified in either GSP; It would not physically or administratively conflict or interfere with any of the Project and Management Actions identified in either GSP; and It would not deplete surface water supplies or adversely impact groundwater-dependent ecosystems because the pumping would occur below the Corcoran Clay layer.

The amount of water to be used for construction of the OPGW line has been accounted for in the previously provided Water Supply Assessment for the overall Project; the OPGW line does not warrant changes to the water supply assessment prepared for the overall Project. Thus, the OGPW line would also not conflict with the applicable goals and sustainability criteria identified in the KGA GSP or the Westside District Water Authority "Chapter GSP" for the same reasons discussed above for the Project. Water necessary for construction of the OPGW line would be minimal for compaction and/or dust suppression. During construction, potable water is would be brought to the OPGW line alignment for drinking and domestic needs during construction. Non-potable water would be used during construction for soil compaction and dust-suppression purposes. Water would be delivered via truck from an off-site source. There would be no operational water use related to the OPGW line. Impacts would be less than significant.

OPGW Line Plus Project

Incorporation of the OPGW line would not result in an incremental addition of impacts to a water quality control plan or sustainable groundwater management plan, compared to the previous Project analysis.

The impacts discussed in Threshold 5 (OPGW line plus Project) are consistent with the significance determination Kern County intends to conclude.

4 References

- Berta, A. and G.S. Morgan. 1985. A New Sea Otter (Carnivora: Mustellidae) From the Late Miocene and Early Pliocene (Hemphillian) of North America. *Journal of Paleontology* 59(4): 809 – 819.
- California Geological Survey (CGS). 2002. California Geomorphic Provinces: Note 36. 4 pp.
- Cohen, K.M., S.C. Finney, P.L. Gibbard, and J.-X. Fan. 2023. The ICS International Chronostratigraphic Chart. Episodes 36: 199--204. 2013; updated. Available at: <https://stratigraphy.org/ICSchart/ChronostratChart2021-05.jpg>.
- CAL FIRE (California Department of Forestry and Fire Protection). 2007a. Draft Fire Hazard Severity Zones in LRA. Kern County. Accessed May 2023. https://osfm.fire.ca.gov/media/6686/fhszl06_1_map15.pdf.
- CAL FIRE. 2007b. Draft Fire Hazard Severity Zones in LRA. Kings County. Accessed May 2023. https://osfm.fire.ca.gov/media/6689/fhszl06_1_map16.pdf.
- Dibblee, T.W. and J.A. Minch. 2006. Geologic Map of the Avenal Gap Quadrangle, Kings and Kern Counties, California. Dibblee Geological Foundation, Dibblee Foundation Map DF-283, 1:24,000.
- DTSC (California Department of Toxic Substances Control). 2023. EnviroStor [interactive GIS map viewer]. Accessed May 2023. <https://www.envirostor.dtsc.ca.gov/public/>.
- Dudek. 2023a. Pelicans Jaw Hybrid Solar Air Quality, Greenhouse Gas Emissions, and Energy Technical Report. February.
- Dudek. 2023b. Pelicans Jaw Hybrid Solar Biological Resources Technical Report. February.
- Dudek. 2023c. Pelicans Jaw Hybrid Solar Archaeological Resources Inventory Report. February.
- Dudek. 2023d. Pelicans Jaw Hybrid Solar Noise Technical Report. February.
- Dudek. 2023e. Pelicans Jaw Hybrid Solar Preliminary Hydrology and Hydraulic Technical Study. February.
- Dudek. 2023f. Pelicans Jaw Hybrid Solar Water Supply Assessment. February.
- Jefferson, G.T. 1991. A Catalog of Late Quaternary Vertebrates from California. Natural History Museum of Los Angeles County, Technical Reports 7:1-174. Unpublished revision: 18 May 2012.
- Kellogg, L. 1911. A Fossil Beaver From the Kettleman Hills, California. University of California Publications, Bulletin of the Department of Geology 6(17): 401 – 402.
- Kern County. 2022 Emergency Operation Plan. Available: <https://www.kerncounty.com/home/showpublisheddocument/8407/637859766134270000>. Accessed: May 2023.

Kings County. 2015. Office of Emergency Management Emergency Operations Plan.

<https://www.countyofkings.com/home/showpublisheddocument/15207/636165315566800000>.

Accessed: May 2023.

Natural History Museum of Los Angeles County (NHMLA). 2022 (Confidential Attachment B). Paleontological Resources for the Pelican Jaws Solar Project (PN 11438). Unpublished Records Search Results Letter from A. Bell with the Natural History Museum of Los Angeles County, Los Angeles, California, dated April 16, 2022.

Ninyo & Moore. 2023a. Geological Desktop Memorandum, Pelicans Jaw Hybrid Solar Project. February.

Ninyo & Moore. 2023b. Geological Desktop Memorandum, Pelicans Jaw Hybrid Solar Project – Optical Ground Wire. May 18.

Rathbun, M.J. 1908. Description of Fossil Crabs From California. Proceedings of the United States National Museum 35: 341 – 349.

Smith, A.R. 1964. Geologic map of California: Bakersfield sheet: California Division of Mines and Geology, scale 1:250,000.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. 11 p. Available; https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf

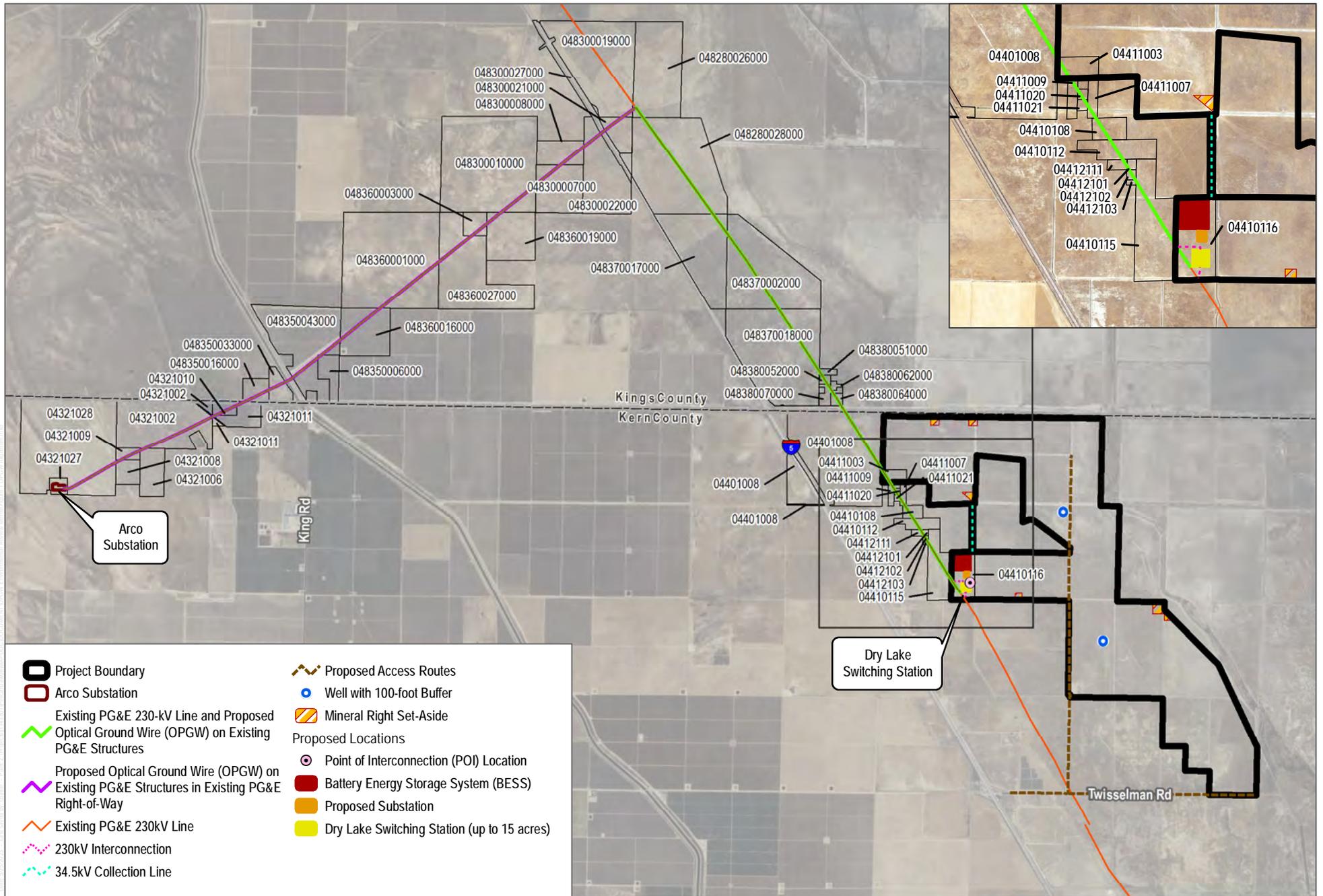
Swiss Confederation. 2015. Guidance on the Determination of Helicopter Emissions. December.

https://www.bazl.admin.ch/dam/bazl/de/dokumente/Fachleute/Regulationen_und_Grundlagen/guidance_on_the_determinationofhelicopteremissions.pdf.download.pdf/guidance_on_the_determinationofhelicopteremissions.pdf.

Urbana Preservation and Planning LLC. 2019. Department of Parks and Recreation Primary Record for P-15–020558. On file at Southern San Joaquin Valley Information Center.

US Department of Transportation (DOT). 1977. Helicopter Noise Measurements Data Report, Volume I. April 1977.

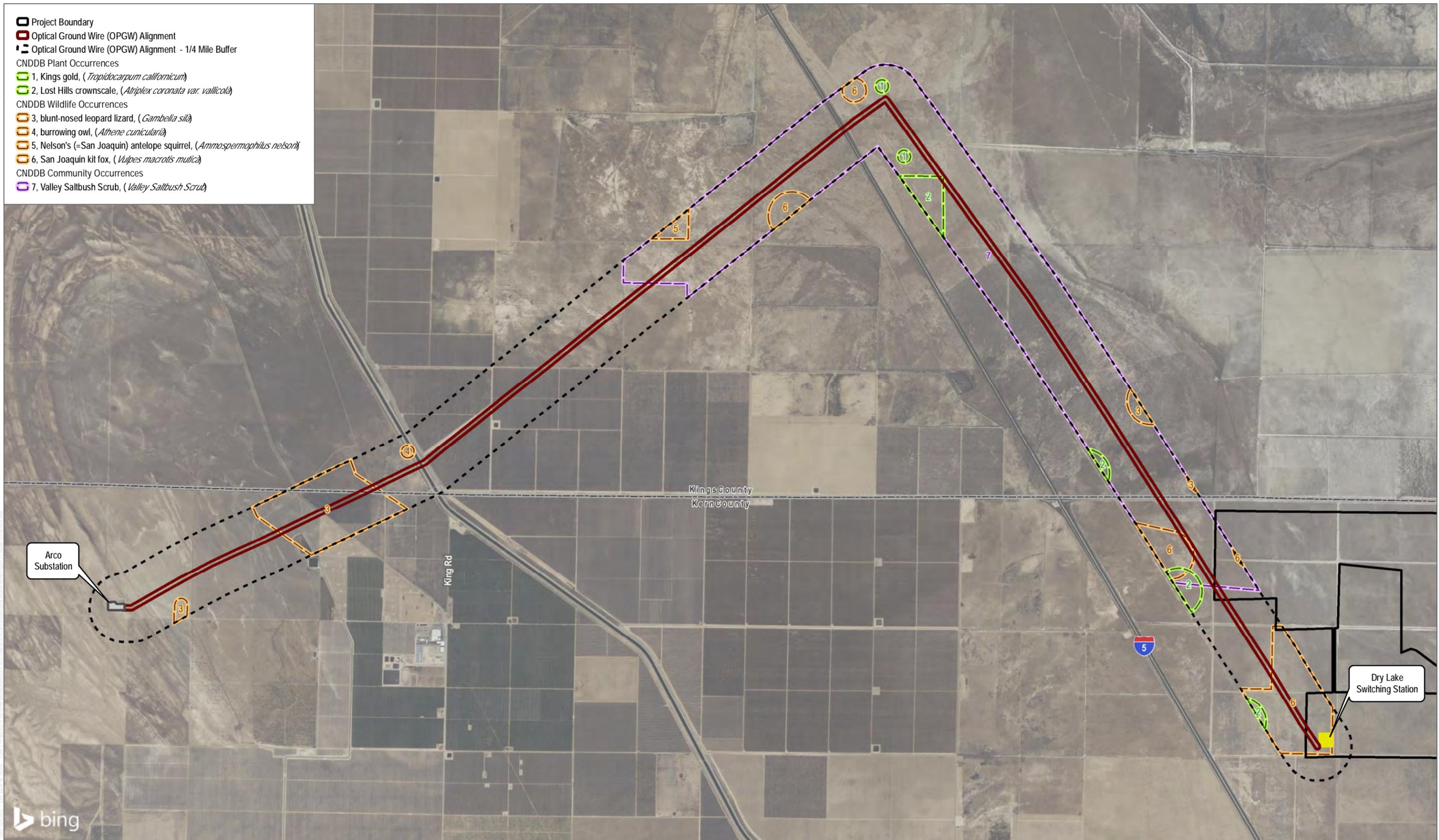
US Army Corps of Engineers. 2015. Draft Environmental Impact Statement, Panoche Valley Solar Facility, San Benito County, CA. Volume I. September. https://www.spk.usace.army.mil/Portals/12/documents/regulatory/eis/SPN-2009-00443/DEIS/Panoche_DEIS-Volumel.pdf



SOURCE: Bing 2022, Samsung 2022, County of Kern 2020



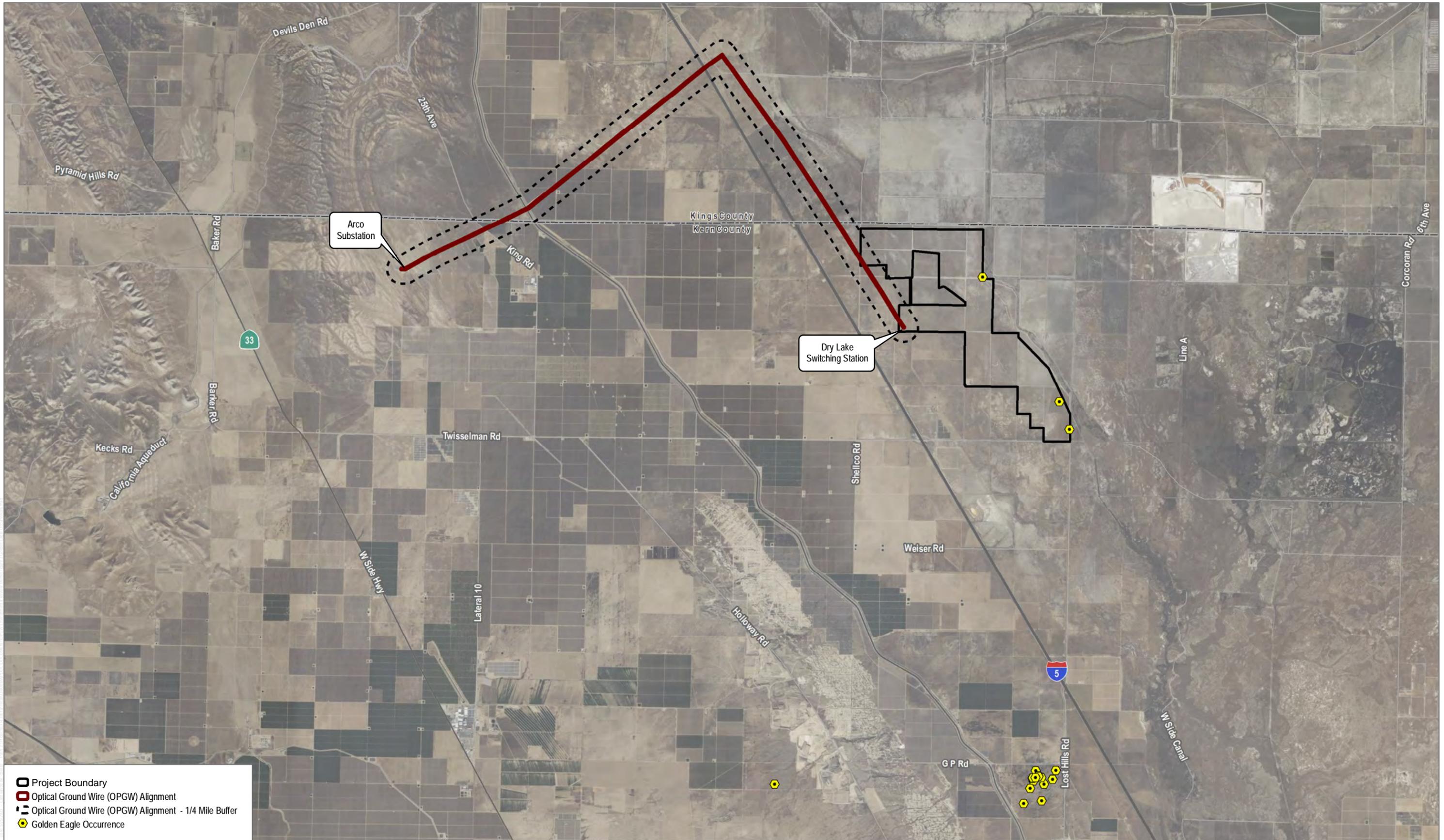
FIGURE 1
Optical Ground Wire (OPGW) Alignment
Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 2
CNDDB Occurrences
Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 3
 Golden Eagle Occurrences
 Pelicans Jaw Hybrid Solar Project

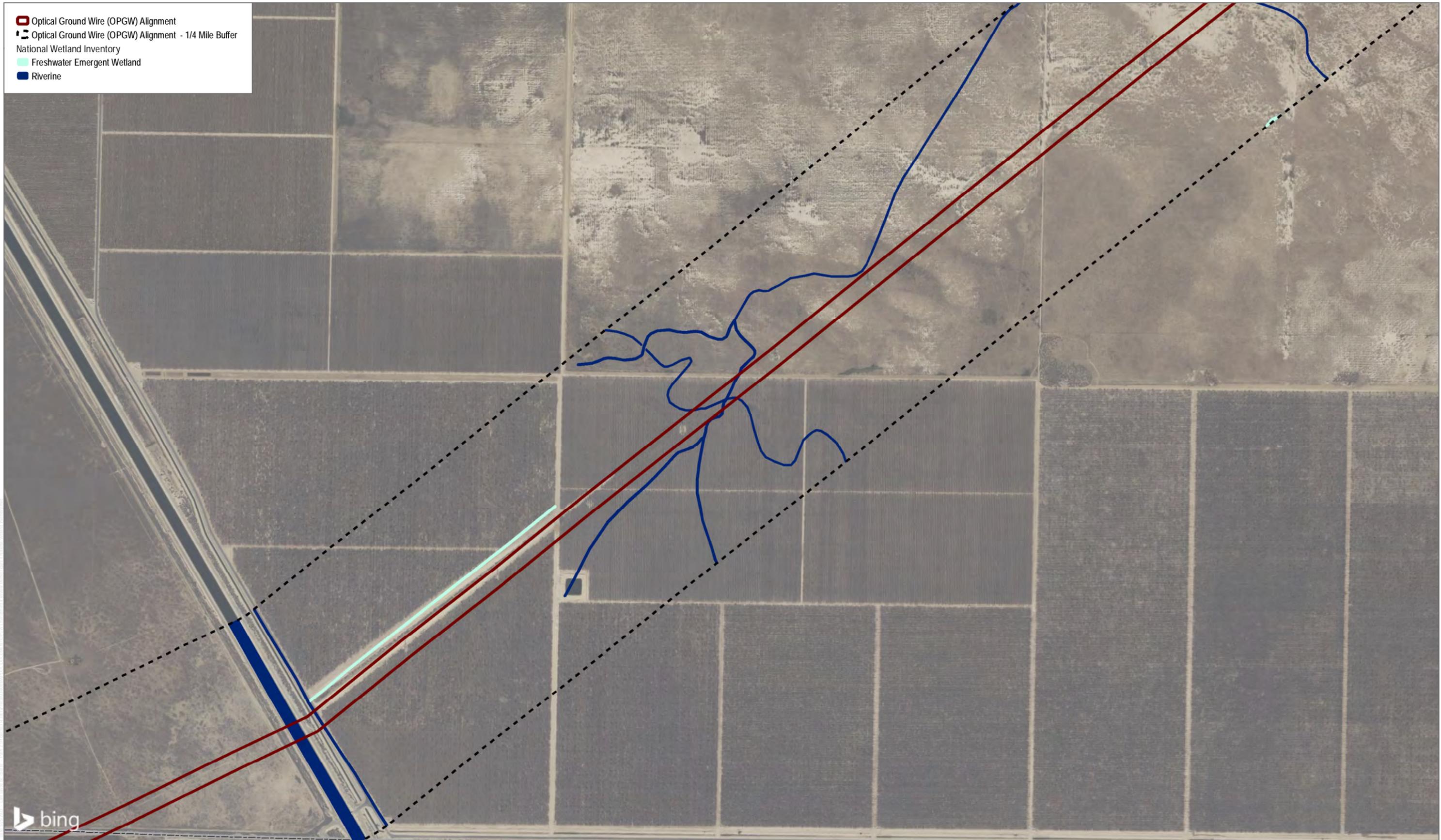


- Optical Ground Wire (OPGW) Alignment
- Optical Ground Wire (OPGW) Alignment - 1/4 Mile Buffer
- Arco Substation
- National Wetland Inventory
- Freshwater Emergent Wetland
- Freshwater Pond
- Riverine

SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



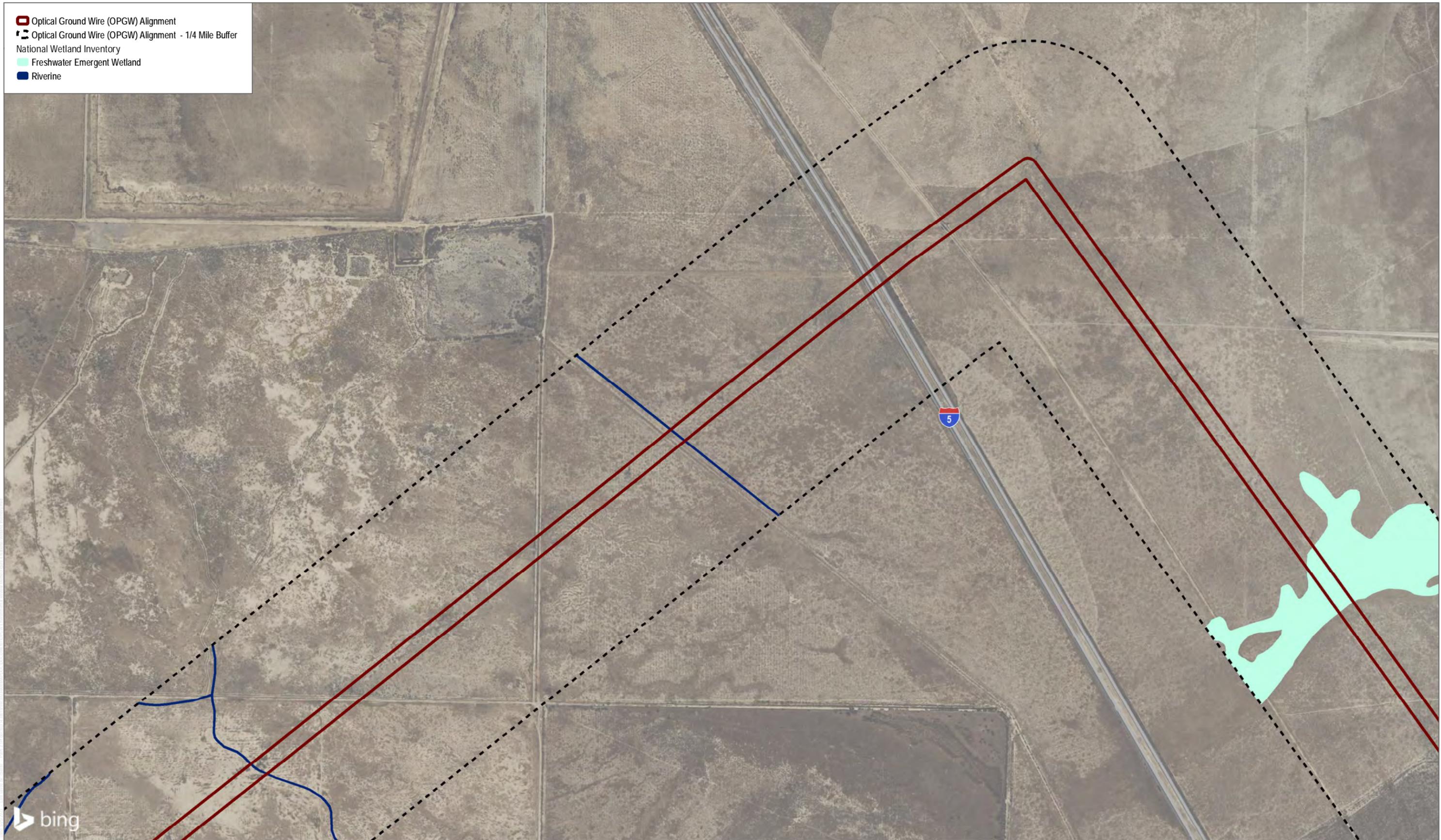
FIGURE 4-1
National Wetland Inventory
Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



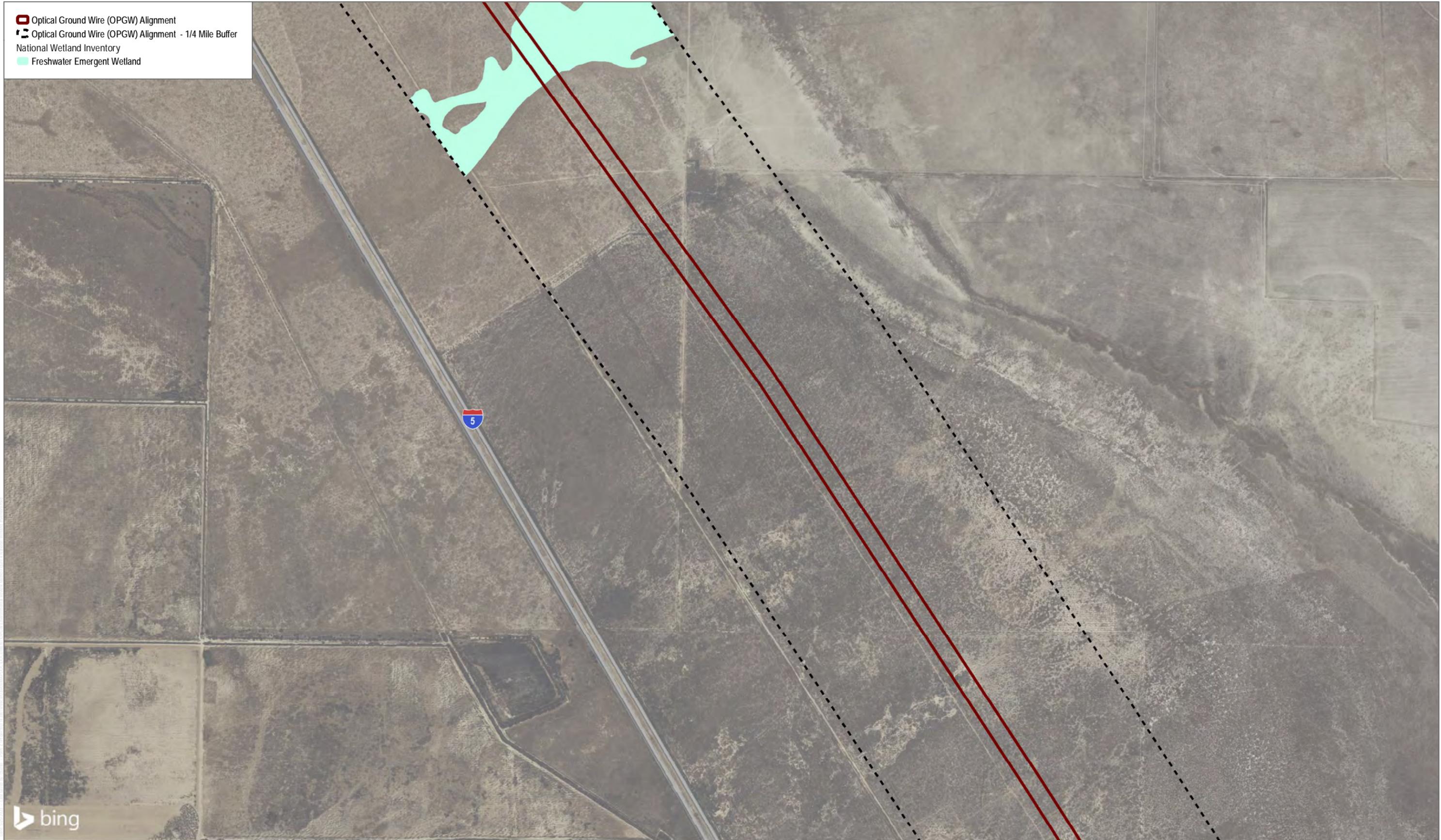
FIGURE 4-2
 National Wetland Inventory
 Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 4-3
 National Wetland Inventory
 Pelicans Jaw Hybrid Solar Project



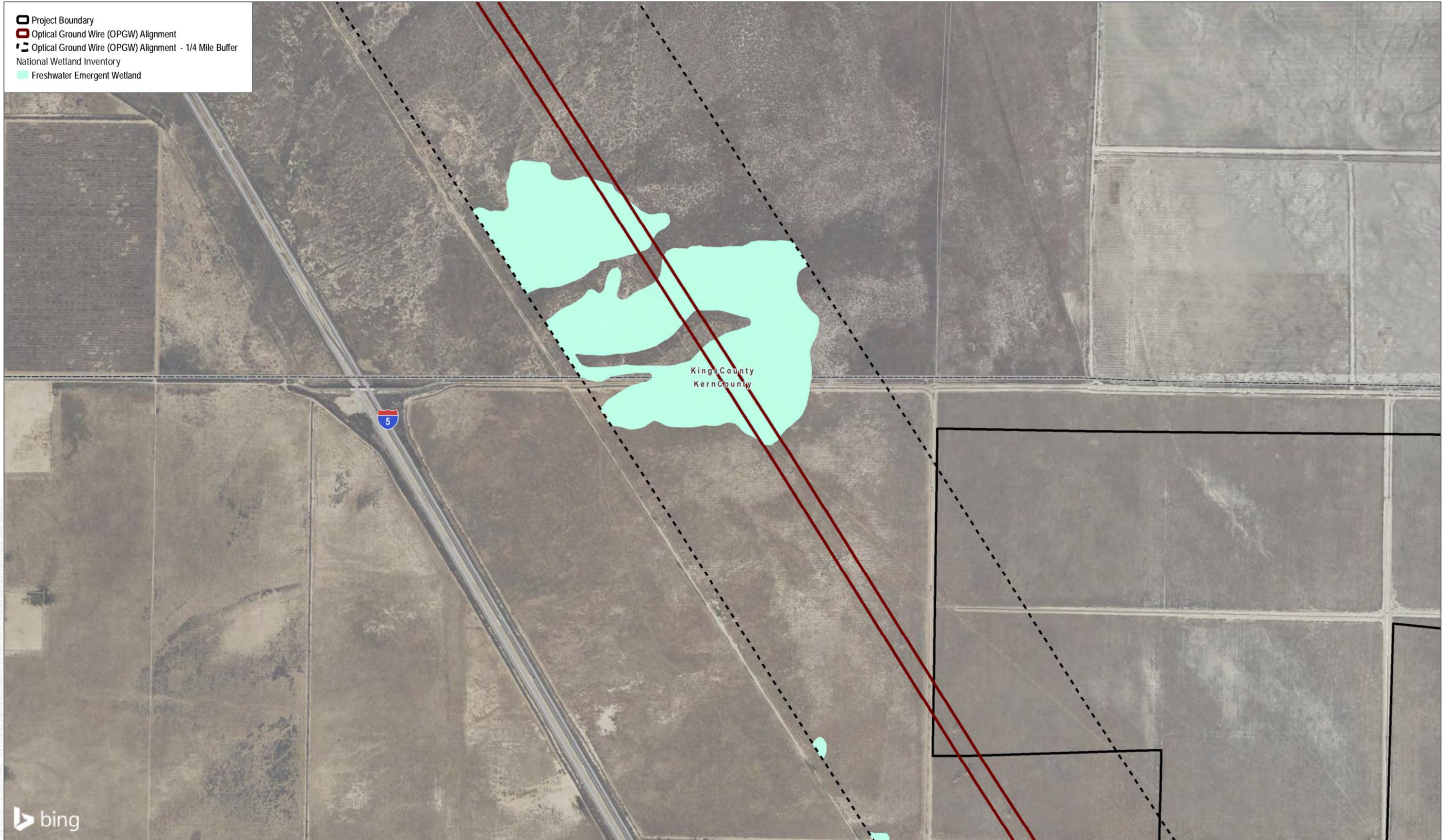
Optical Ground Wire (OPGW) Alignment
Optical Ground Wire (OPGW) Alignment - 1/4 Mile Buffer
National Wetland Inventory
Freshwater Emergent Wetland

bing

SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021

DUDEK 0 500 1,000 Feet

FIGURE 4-4
National Wetland Inventory
Pelicans Jaw Hybrid Solar Project



- Project Boundary
- Optical Ground Wire (OPGW) Alignment
- Optical Ground Wire (OPGW) Alignment - 1/4 Mile Buffer
- National Wetland Inventory
- Freshwater Emergent Wetland

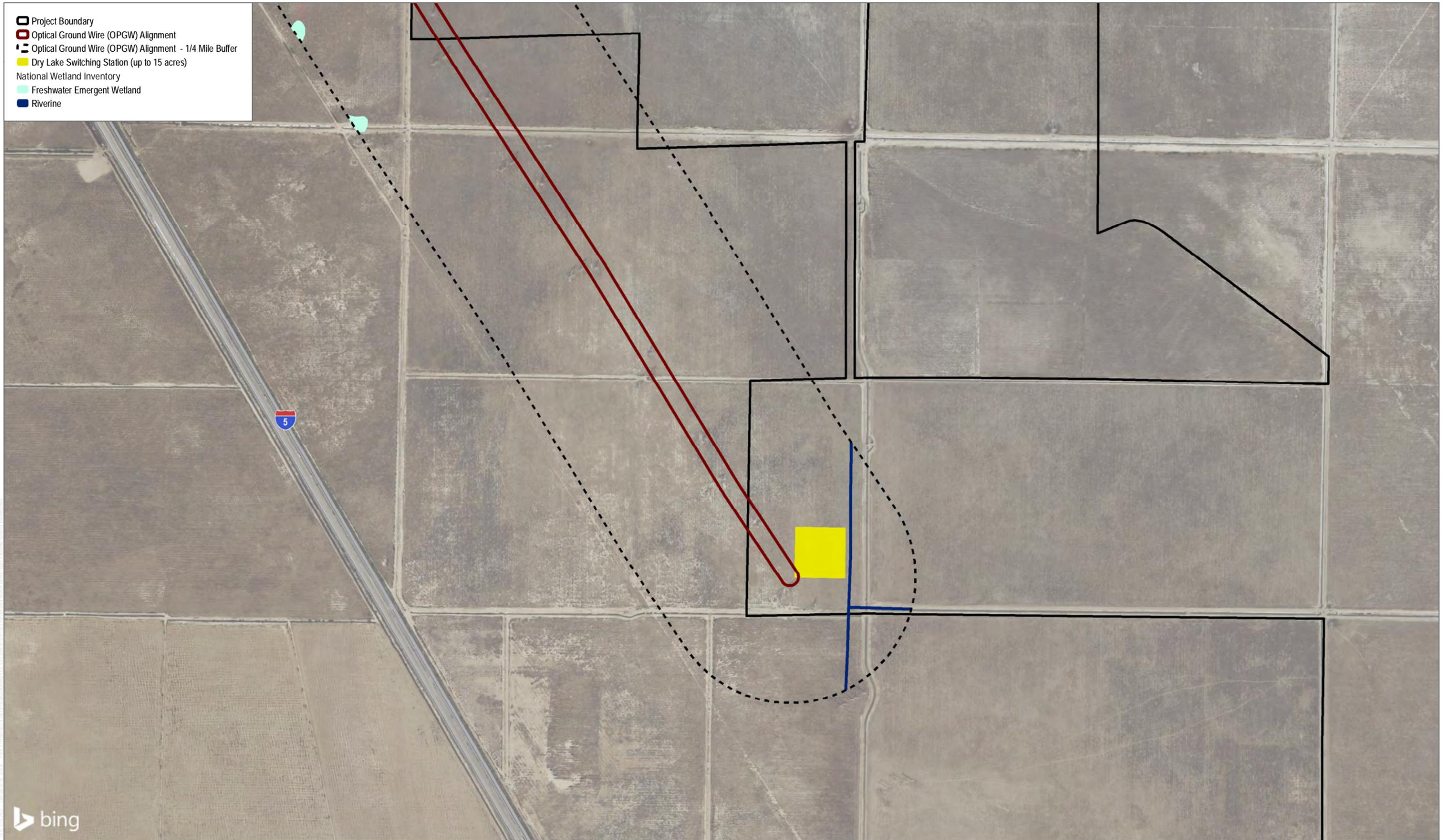
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SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 4-5

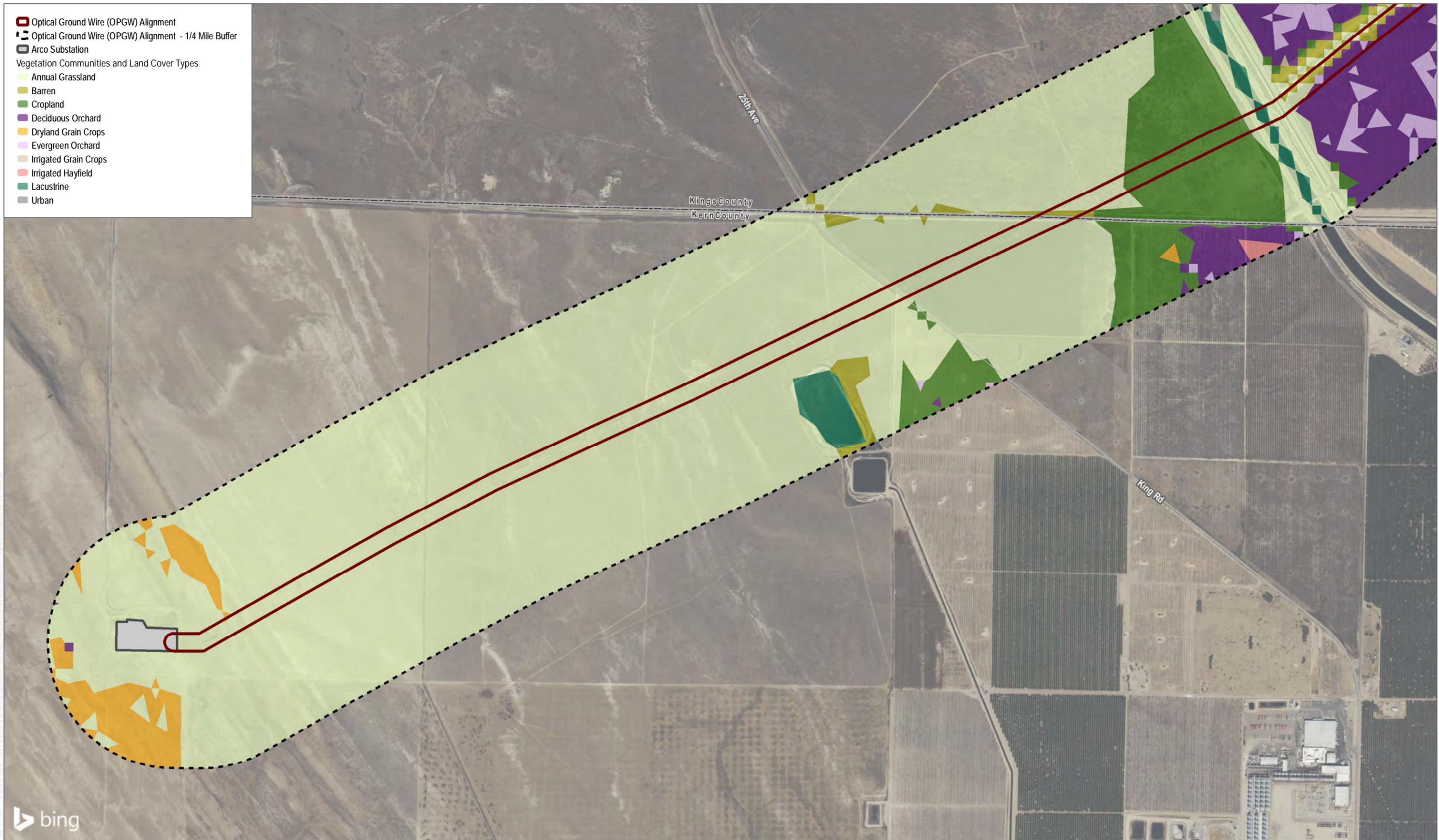
National Wetland Inventory
Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



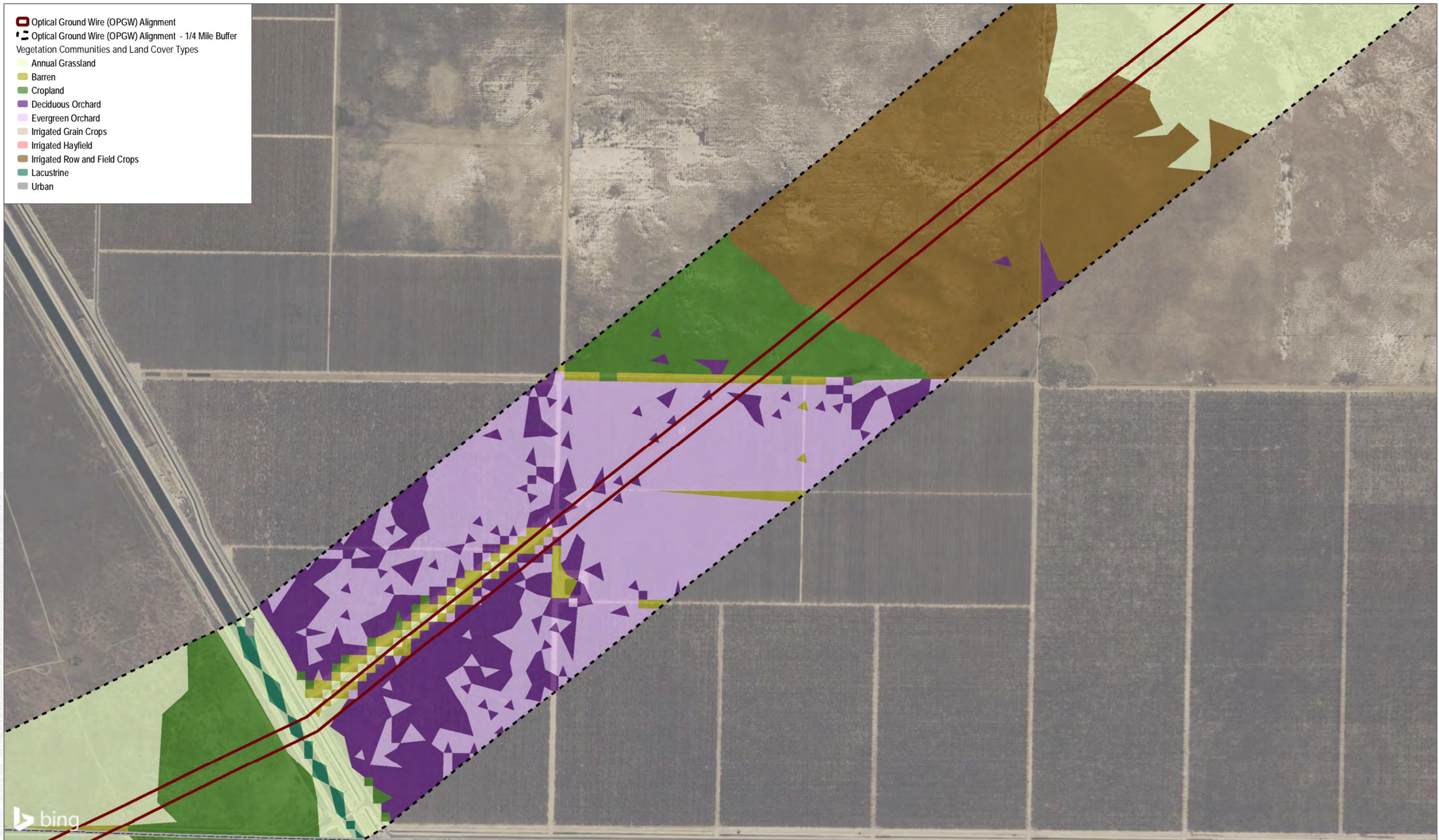
FIGURE 4-6
 National Wetland Inventory
 Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



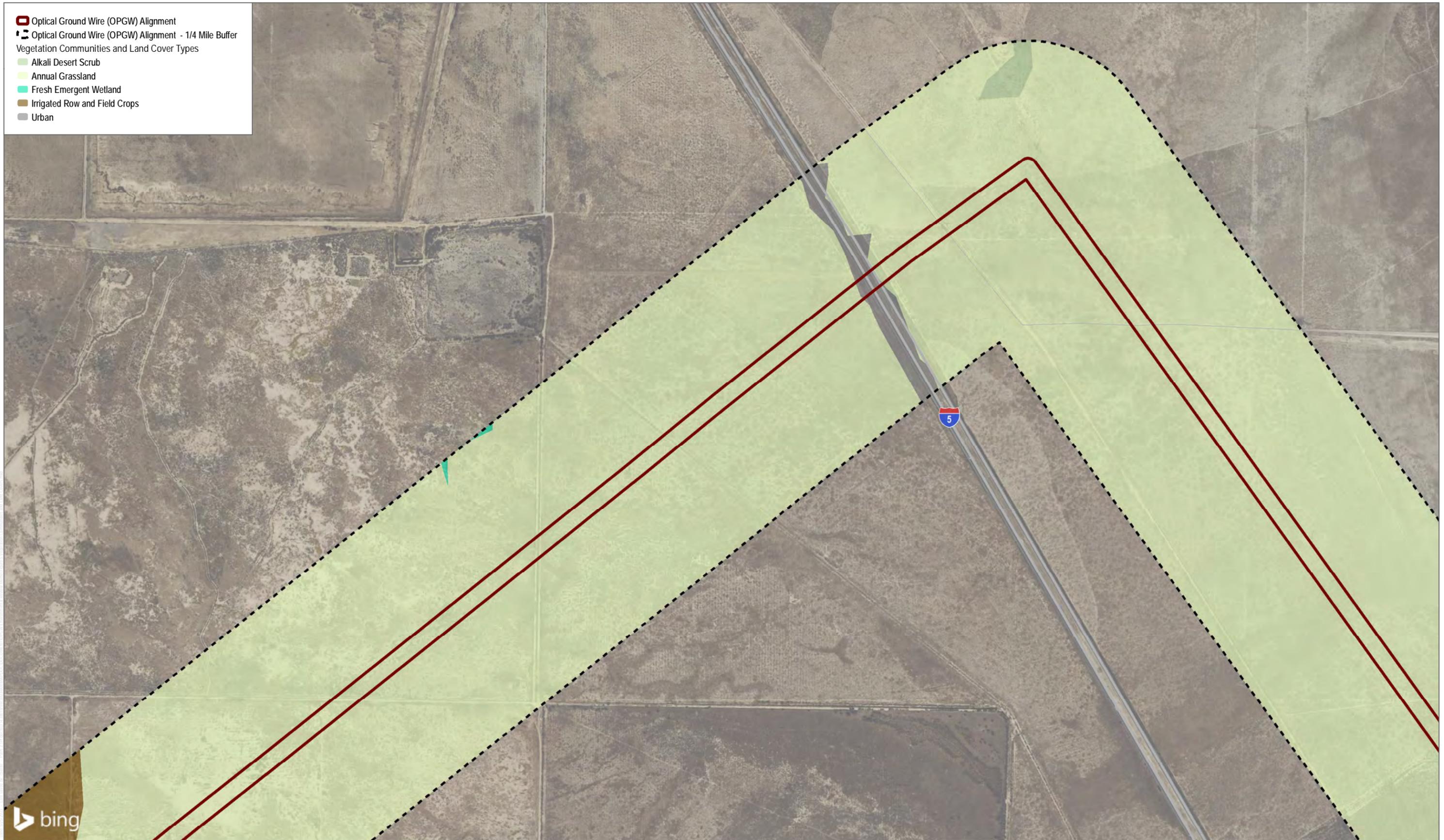
FIGURE 5-1
Vegetation Communities and Land Covers
Pelicans Jaw Hybrid Solar Project



- ▬ Optical Ground Wire (OPGW) Alignment
- Optical Ground Wire (OPGW) Alignment - 1/4 Mile Buffer
- Vegetation Communities and Land Cover Types
- Annual Grassland
- Barren
- Cropland
- Deciduous Orchard
- Evergreen Orchard
- Irrigated Grain Crops
- Irrigated Hayfield
- Irrigated Row and Field Crops
- Lacustrine
- Urban

SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021

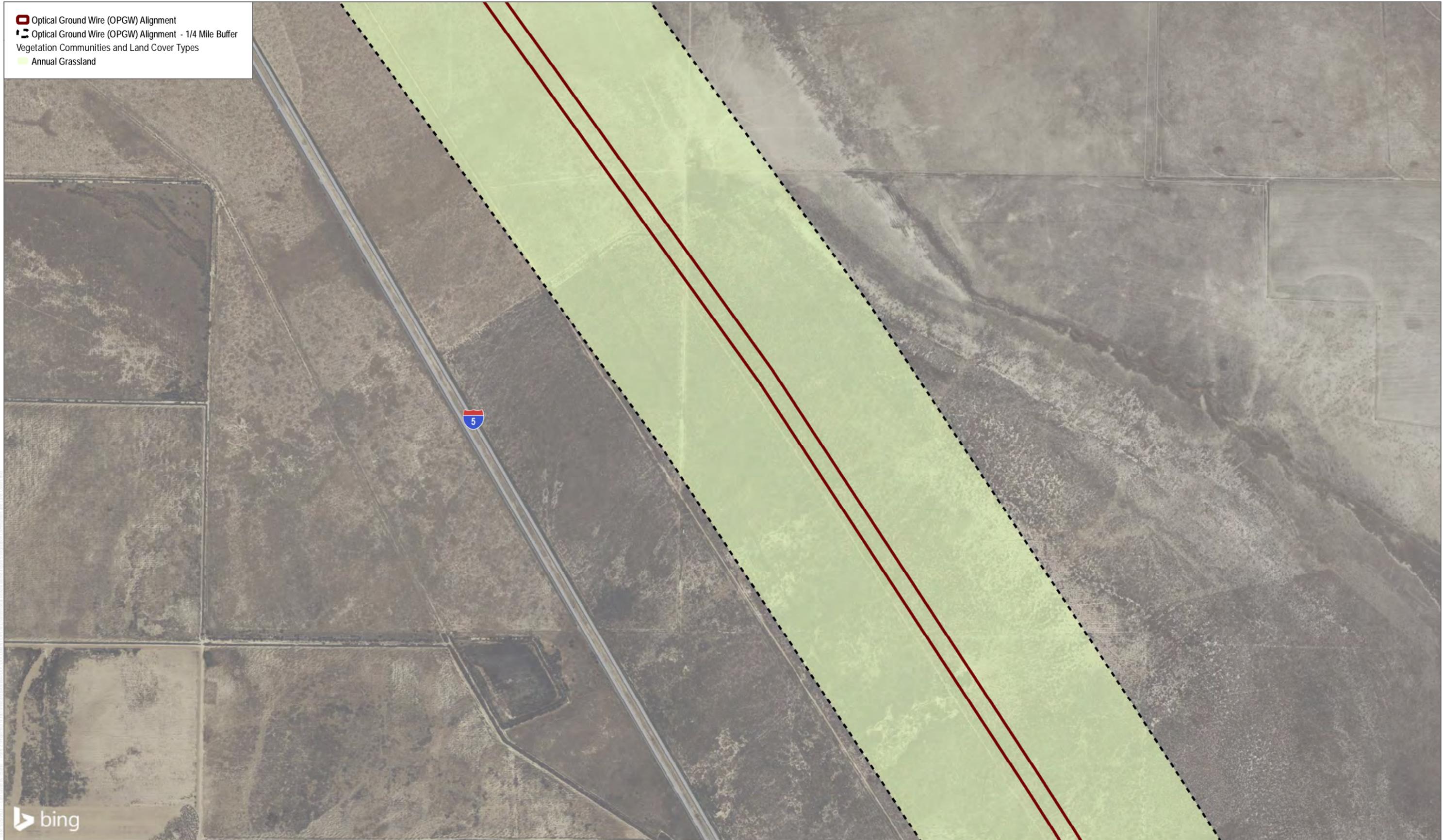
FIGURE 5-2
Vegetation Communities and Land Covers
Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 5-3
Vegetation Communities and Land Covers
Pelicans Jaw Hybrid Solar Project



▬▬ Optical Ground Wire (OPGW) Alignment
 Optical Ground Wire (OPGW) Alignment - 1/4 Mile Buffer
 Annual Grassland
 Vegetation Communities and Land Cover Types

SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021

DUDEK 0 500 1,000 Feet

FIGURE 5-4
 Vegetation Communities and Land Covers
 Pelicans Jaw Hybrid Solar Project



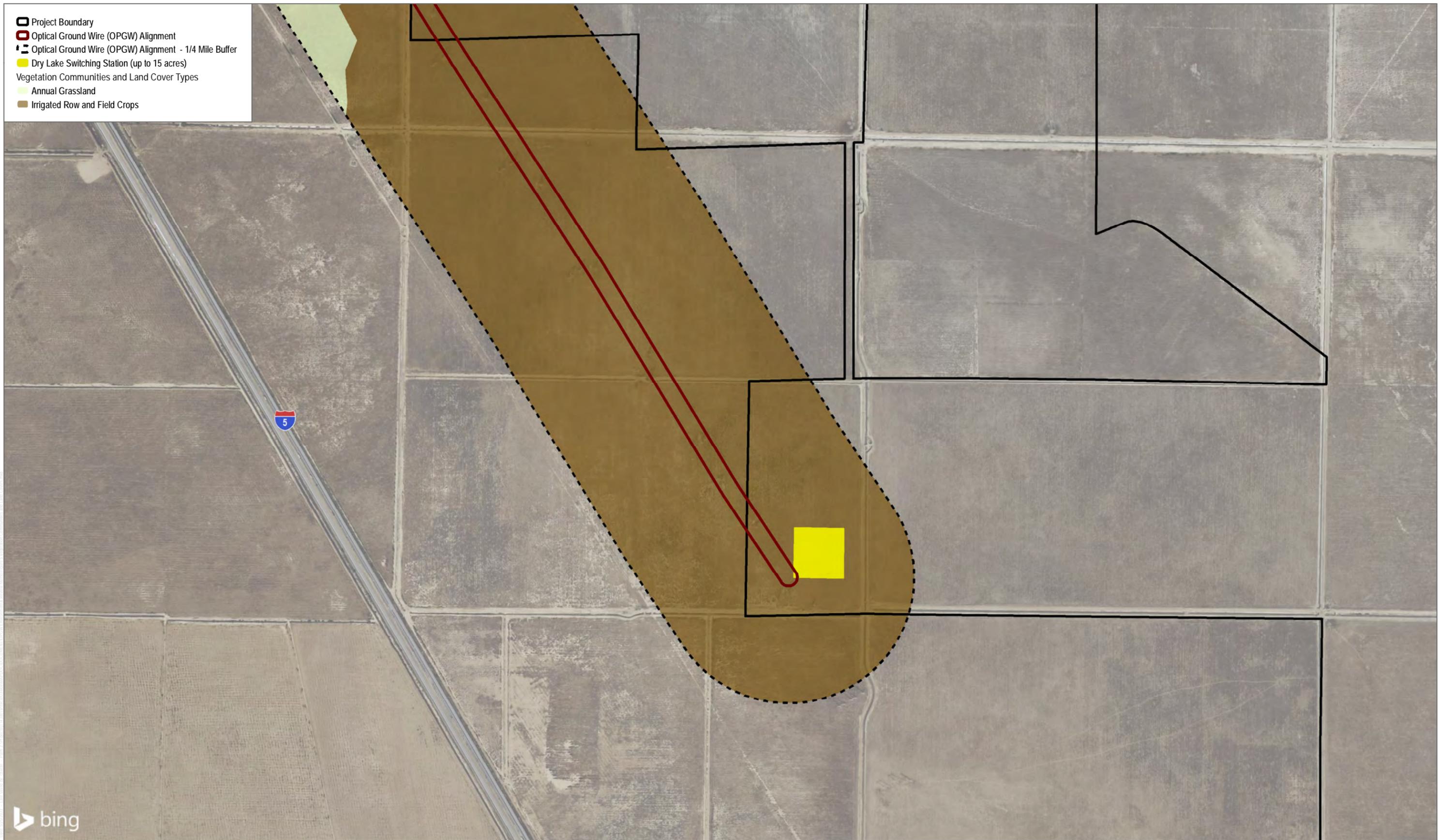
SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021



FIGURE 5-5

Vegetation Communities and Land Covers

Pelicans Jaw Hybrid Solar Project



SOURCE: Bing Maps 2021; CA Dept. of Fish and Wildlife 2021

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Appendix E
SJVAPCD and SCAQMD Amicus Curiae Brief

Appendix

San Joaquin Valley Air Pollution Control District and South
Coast Air Quality Management District *Sierra Club v. County
of Fresno* Amicus Curiae Briefs

SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

SUPREME COURT
FILED

APR 13 2015

Francis A. McGuire, Clerk
Deputy

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality

conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM10), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)¹, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

¹ San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).² In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.³ Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.⁴ For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.⁵

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

² See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

³ Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

⁴ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

⁵ See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).⁶ The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

⁶ CEQA does not require speculation. See, e.g., *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

**AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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 (“CEQA”).....*passim*

OTHER AUTHORITIES

United States Environmental Protection Agency,
Ground-level Ozone: Basic Information,
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I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.¹ Once formed, ozone can be transported long distances by wind.² Because of the complexity of ozone formation, a specific tonnage amount of NO_x or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO_x or VOCs can have high levels of ozone concentration simply due to wind transport.³ Conversely, the San Francisco Bay Area has six times more NO_x and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

¹ See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

² *Id.*

³ *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.⁴

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.⁵ While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.⁶ Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO_x) and NO_x.⁷ Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO_x, SO_x and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

⁴ *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).

⁵ United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particulatepollution/basic.html> (visited March 10, 2015).

⁶ *Id.*

⁷ *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.⁸

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.⁹ Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and VOCs) and the atmospheric chemistry and meteorology of the Valley.¹⁰ At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

⁸ See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

⁹ *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

¹⁰ *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM_{2.5} Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf (visited March 19, 2015).

emissions Valley wide.¹¹ Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.¹²

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.¹³ The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.¹⁴ This "offset"

¹¹ *Id.*

¹² Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/currnrules/Rule22010411.pdf> (visited March 19, 2015).

¹³ *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20rules/GAMAQJ%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

¹⁴ *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.¹⁵ In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

¹⁵ ¹⁵ *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO_x inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.¹⁶ Running the photochemical grid model used for predicting ozone attainment with the

¹⁶ *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)¹⁷ The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)¹⁸ The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

¹⁷ Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

¹⁸ Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the

opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4th at 536.¹⁹

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

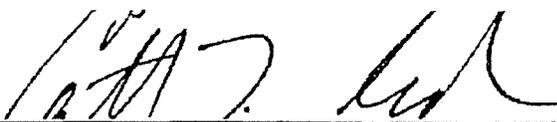
For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

¹⁹ *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015



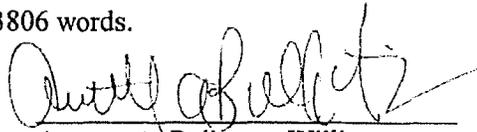
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SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

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Dated: April 2, 2015



Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

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Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al

Supreme Court of California Case No.: S219783

Fifth District Court of Appeal Case No.: F066798

Fresno County Superior Court Case No.: 11CECG00726

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S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire Clerk

Deputy

After a Published Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

**APPLICATION OF THE SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT FOR LEAVE TO FILE
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY
AND [PROPOSED] BRIEF OF *AMICUS CURIAE***

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RECEIVED

APR - 8 2015

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**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE
SUPREME COURT:**

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this *amicus* brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed *amicus* brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

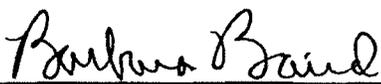
CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT
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Attorneys for [proposed] Amicus Curiae
SOUTH COAST AIR QUALITY
MANAGEMENT DISTRICT

BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [“*Laurel Heights I*”]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)¹). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

¹ The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,

allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)²

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

² Particulate matter (PM) is further divided into two categories: fine particulate or PM_{2.5} (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM₁₀) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.³

³ The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.⁴ SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

⁴ The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR's conclusions but rather its sufficiency as an informative document. (*Laurel Heights I*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) <http://www.aqmd.gov/home/library/documents-support-material;> "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms> ; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants⁵, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO_x and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

⁵ See discussion of types of pollutants, *supra*, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.⁶ The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).⁷ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

⁶ (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

⁷ The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM_{2.5})⁸, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM_{2.5}. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM_{2.5} in the District, up to 2.82 tons/day (5,650 lbs/day of PM_{2.5}, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM_{2.5} health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.⁹ (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

⁸ SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM_{2.5}” or particulate matter less than 2.5 microns in diameter.

⁹ Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM_{2.5} increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM_{2.5} emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.¹⁰

¹⁰ Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.¹¹ Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

¹¹ In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,¹³ containing two levels of inquiry that should be judged by different standards.¹⁴

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

¹³ Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

¹⁴ Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its sufficiency as an informative document." (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.¹⁵)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

¹⁵ The substantial evidence standard recognizes that the courts “have neither the resources nor the scientific expertise” to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.¹⁶

¹⁶ We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project." *Bakersfield, supra*, 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR" (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”¹⁷) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,¹⁸ neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

¹⁷ Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

¹⁸ E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.¹⁹ Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).²⁰

¹⁹ We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

²⁰ Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)²¹

districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

²¹ In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.

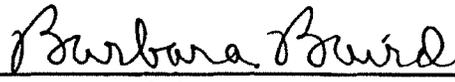
CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

DATED: April 3, 2015

Respectfully submitted,

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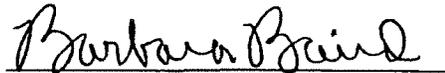
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,


Barbara Baird

PROOF OF SERVICE

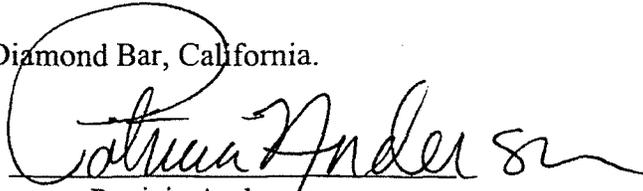
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND [PROPOSED] BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.


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